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HUMAN RESOURCE MANAGEMENT IN THE KNOWLEDGE ECONOMY: CURRENT TRENDS

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In the article modern trends in Human Resource Management, its main characteristics and the urgency of the application in the modern world are described.

The world of work is rapidly changing. As a part of organization, Human Resource Management (HRM) must be prepared to deal with the effects of changing world of work. For the HR people it means understanding the implications of globalization, work-force diversity, changing skill requirements, corporate downsizing, continuous improvement initiatives, re-engineering, the contingent work force, decentralized work sites and employee involvement for which all and more have the financial implication to organization. Let alone on the employees side where engagement, satisfaction, motivation, retention, absenteeism, turnover have to be checked. As a rule human resource management has to venture into new trends in order to remain relevant corporate development partner. Look at the new trends bellow:

1. Work-force Diversity

In the past HRM was considerably simpler because our work force was strikingly homogeneous. Today, the staff consists of people of different sex, age, social class, sexual orientation, values, personality characteristics, ethnic origin, religion, education, language, marital status, lifestyle, beliefs, ideologies, and the list goes on. Where there are a variety of blooms, the potential benefits from the best of creativity, and decision making, and greater innovation can be used to help companies improve competitiveness. One way to achieve this is a package of benefits the organization. It includes HRM proposals that fall under the category of family organization. Family organization is one that has a flexible work schedule for employees and provides a variety of benefits for child care. In addition to the diversity of gender and nationality, HRM must be aware of the generational differences that exist in the modern workforce. HRM must teach people of different age groups, to effectively manage and work with each other, respect the diversity of opinion that each of them offers.

2. Changing skill requirements

Updating and development of a skilled workforce is essential for any company interested in competitiveness, productivity, quality and efficiency of the management of a diverse workforce. The deficit of skills leads to significant losses for the company in terms of workmanship, reduced productivity, increased accidents among employees and customer complaints. Since an increasing number of jobs require a high level of education and a higher level language, HRM practitioners and specialists must inform educators and group leaders, etc. Strategic planning of human resources will identify all the shortcomings of the skills of personnel management department and will have to develop appropriate training and short-term programs to address skills gaps.

3. Continuous improvement programs

Continuous improvement programs focus on the long term well-being of the organization. It is a process whereby an organization focuses on quality and builds a better foundation to serve its customers. This often involves a companywide initiative to improve quality and productivity. The company changes its operations to focus on the customer and to involve workers in matters affecting them. Companies strive to improve everything that they do, from hiring quality people, to administrative paper processing and meeting customer needs.

Unfortunately, such initiatives cannot be easily implemented, and not dictated at all levels in the organization. They are more like the broad development of the organization and must be accepted and supported by senior management, are driven jointly, for each site in the organization. HRM plays an important role in the continuous improvement programs.

Lifelong learning is a priority in the field of education in the socio-economic development of Belarus until 2020.

4. Re-engineering work processes for improved productivity

Although continuous improvement initiatives are positive starts in many of our organizations, they typically focus on ongoing incremental change. Such action is intuitively appealing – constant and permanent search to make things better. Yet many companies function in an environment that is dynamic - facing rapid and constant change. As a result continuous improvement programs may not be of the best interest of the organization. The problem with them is that they may provide a false sense of security. Ongoing incremental

change avoids facing up to the possibility that what the organization may really need is radical or quantum change. Such drastic change results in the re-engineering of the organization.

Reengineering business processes are fundamental rethinking and radical redesign of business processes to achieve the maximum effect of production and economic, financial and economic activities, the appropriate organizational and administrative and regulatory documents. Reengineering using specific means of representation and processing of information problem clear both managers and developers of information systems.

Reengineering occurs when more than 70% of working processes in organizations are evaluated and changed. It requires participants and organizers to rethink what kind of work needs to be done, how it should be done and how best to implement these solutions. Reengineering shows how organizations do their business, as well as a direct impact on employees. Reengineering can be frustrating and angering some members, because of the uncertainty. Accordingly, HRM must have special mechanisms to work with the staff, so that they receive the appropriate direction, know what to do and what to expect, as well as have the opportunity to receive the necessary assistance in resolving the conflict that may arise in the organization. To reverse engineer to draw up its advantages, HRM needs to offer skills training for their employees. Whether this new process will improve technology, teamwork, possession of greater powers in the decision-making, or something like that, employees must obtain new skills as a result of the reorganization process.

5. Technology

In the case of attracting a large number of specialists at various levels, which are usually observed in large companies, experts recommend to use information technology in personnel management. This approach will provide the most effective control over the distribution of job duties and powers. Professionalism of staff, good differentiation of the load and the assignment of responsibility for the result, is the main key to the competitiveness of any rapidly growing company that seeks to take a decent niche in the market.

Consider the scope of application of information technologies in personnel management. In recent years, there has been an intensive change in all areas where the use of human resources takes place. The revolutionary nature of the changes entails a radical shift and departure from the prevailing professional stereotypes. The harmonization of the organization and coordination of the activities of various organizational structures of the enterprise should be conducted at all levels and stages of activity. The use of a set of tools aimed at the automation of production and personnel records of the process, can effectively build a job with employees.

Human Resources Management. To ensure the efficient operation of the service personnel in small enterprises it is necessary to create information systems. Such software carries several of the following functions: personnel accounting, records of transactions in the payment of wages, human resources management (recruitment, performance evaluation, training).

A more detailed version can cover almost all levels of management of the organization, such as for example: operating, tactical, strategic.

Very often these systems are abbreviated as HRMS (Human Resource Management Systems).

Since the introduction of information technology in the enterprise management process automation has begun active work of personnel services. Modern personnel services are different programs that can be divided into the following groups:

1. Information and referral systems. In general, such systems do not apply to systems with human resource management functions, but they are very actively used in the work of personnel services. The most popular in this area laws are guides, especially those containing consulting basis.

2. Programs that provide automation of individual sections of the work of personnel service.

3. Modules as part of a product for the enterprise.

4. Specialized integrated systems.

Highly specialized software. To perform specific tasks computer programs that provide processing and analysis of certain data have been designed. The program can be attributed to similar products for: personnel records (leave, seniority, etc.); payroll; recruitment; certification; testing; evaluation of training and development, and others.

The level of effectiveness of the product depends on the professionalism of its development and, consequently, prices. Methods of treatment at different stages of information range from the primitive to the most advanced.

The above information technology in personnel management is most commonly implemented in the activities of small organizations to solve simple problems relating to human and financial accounting.

Full-featured system. In the case of attracting a large number of professionals of different levels, there is a need for a more careful approach to personnel management. In this case, to the aid of a full-featured HRM-system. They are able to satisfy the highest demands, and usually include modules to handle the following main areas of activity:

– organizational management;

– personnel accounting;
– HR workflow;
– time attendance;
– payroll;
– regulated reporting;
– compensation package;
– human resource planning;
– planning payroll;
– personnel assessment;
– motivation of management;
– learning Management;
– personnel;
– personnel reserve;
– self-service information;
– analyst.

Thus, when information technologies are introduced to human resource management, covering all possible areas of activity, it is possible to better control and build a decision support system. This is due to the presence of a single information space, high performance and functionality.

New approaches to the management of the staff are a variety of state, the change in skill requirements, continuous improvement programs, reengineering, the use of information technology.

Today, the state is very diverse according to different criteria. And this diversity can help organizations to increase competitiveness. This is facilitated by the presence of certain privileges in the organization, training of people of different age groups, a variety of views and opinions.

A skilled workforce is essential for any company. The deficit of skills (skills) leads to a significant loss to the organization. Strategic planning of human resources should be identified as the skill of shortcomings. Human Resources Department should provide proper training and short-term programs to address skills gaps.

Programs focus on continuous improvement in the long term. This process includes improving the quality and productivity of the whole company. This changes the course of the company to focus on customers and attracts employees in matters affecting their interests.

Reengineering is the radical changes in business processes and uses of specific means of representation and processing of information problem, clear to both managers and developers of information systems.

Use of information technologies in personnel management is recommended in case of attracting a large number of specialists at various levels, which are usually observed in large companies. Likewise, it provided the most effective control over the distribution of job duties and powers. With the introduction of information technology it is possible to build a decision support system, due to the presence of a single information space, high performance and functionality.

The highest efficiency in personnel management will be achieved by the combination of these approaches.

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Economics

UDK 657.47

COSTS (EXPENSES) OF ORGANIZATIONS: THE MAIN DIRECTIONS OF OPTIMIZATION

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The article presents theoretical aspects of such economic categories as "costs (expenses) of organizations" and "financial leverage". Theoretical aspects of their relationship have been revealed. Basic analytical activities of the analysis of the above-mentioned categories have been defined, which can be found in the works of scholars.

In the course of business, a company incurs various monetary costs, the composition of which depends on many factors: the organizational-legal forms of business, industry, financial and accounting policy and legally established rules and principles of behavior of economic entities in the tax, credit, insurance and securities sectors.

You should pay attention to the content of the terms "costs" and "expenses".

Table 1 – Theoretical aspect of category "costs"

Author	Definition
Raizberg B. A.	Expressed in monetary form, the cost to businesses, entrepreneurs, and private producers for the production, conversion and marketing of products
Economic Dictionary	The valuation of resources consumed by the organization in the process of production and sales of goods, products, works, services
Ivashkevich V. B	Expressed in monetary form of the aggregate costs of living and materialized labour in the process of business activities for a certain period of time
KarpovT. P.	The set of expenses for production (works, services) and its implementation, expressed in monetary form
Wroblewski N. D.	The expenses of the organization for the creation of inventories of material and technical resources and services (work) providers, including consumed in the production process part
Bahrushina M. A.	Funds spent on the acquisition of the resources available, and recorded in the balance sheet as assets that can bring income in the future

Source: [1–3].

Having summarized everything mentioned above, under the cost you should understand the monetary value of cost of material, labor, financial, natural, information and other resources on the production and sales of products for a certain period of time.

Table 2 – Theoretical aspect of the category "expense"

Author	Definition
T.V. Fedorovich	Expenses are considered to be the costs of resources or services consumed in the process of earning income. So it is a part of the cost incurred by an enterprise in connection with receipt of income
Economic Dictionary	The decrease in economic benefits as a result of disposal of assets (monetary funds, other property) and (or) occurrence of obligations leading to the reduction of the organization ' s sources , except for the reduction of contributions upon decision of participants (proprietors of property)
B.A. Raizberg, L.S. Lozovskiy, E.B. Starodubtseva	These are costs in the process of economic activity, leading to the decrease of funds or increase in its debt obligations
S.S. Molchanova	Expenditure represents unspent resources which are impossible to use in the future

Source: [1–3].

Thus, it is possible to note the similarity of the views of all researchers on the concept of costs, despite some differences in interpretation. So, expenses are expenses that are involved in the formation of the profits of a particular period, leading to the increase in accounts payable and payments of the organization.

One of the main differences in expenses from the costs is that the costs are included in the calculation of the financial performance of the company during the reported period and are recognised in the statement of financial performance. In contrast costs are costs at the time of their recognition affecting profit.

Measures to reduce costs are the following [3]:

1. The reduced cost of maintaining inventory. The reduction of this expenditure increases logistics and production risks in crisis increase. This period is associated with the work suspension and even closure of the company. If such problems appear, vendors for enterprise failures can occur [2].

2. The cost of advertising. Reduction of expenses on advertising will not lead to tactical and strategic losses only if an enterprise finds other, cheaper and conditionally free methods of advertising, promotion, informing customers, consumers, partners about their business proposals. The lack of financial resources must be replaced by smart, innovative creative solutions, serious creative work of the staff of the enterprise. In no case should spending on advertising be given up especially if it works well for those proven channels of communication with consumers, which has proved its effectiveness. Spending on advertising and marketing, in this case, we need to reallocate in favor of these effective tools [4].

3. Reduction of maintenance cost, repair. The reduction of this expenditure is also increases production risks over time, putting into question the production processes. For example how much the company could lose from the outage of a line or more costly equipment repairs, saving little money in the costs of maintenance. In addition, working without repairs and depreciation during the crisis, when the equipment at the beginning of the economic recovery is already unworkable, will certainly sooner or later overcome crisis period. When the economy starts to grow, the company will not be able to use the advantages and opportunities of economic growth [4].

4. Reduction of expenses on the maintenance staff. The cost of maintaining the staff is necessary to reduce primarily in those industries where during the economic boom preceding the crisis there was an unfounded hyper-growth of salaries not supported by productivity growth and growth efficiency. The decrease in these expenses was primarily due to lower premiums and allowances. However, if the material incentives do not provide other alternatives, there may be a sharp drop and low productivity: employees will go to work. Alternatives to the wage incentive of key employees can be involved in the ownership of the company, remuneration for rationalization proposals, awards for special achievements, intangible measures and so on[5].

5. Costs that should be reduced.

– universal expenses, which can be safely reduced without any significant loss in the short term;

– elimination of manufacturing losses are: economy of fuel, electricity, raw materials, implementation of lean manufacturing technologies;

– reduction of expenses on the maintenance of high status. This may be a move to less prestigious and less expensive office. Seal of services, departments, personnel in occupied premises, the rejection of superfluous squares and putting them in lease, sublease and so on;

– hidden or implicit costs, which all forget – the costs or lost profits;

– the cost of the acquired enterprise parts, materials. Enterprises with suppliers sign not only contracts and contracts for supply, but a long-term agreement on the quality of goods (control and development) and graphics gradual reduction of the purchasing cost of components [6].

6. The organization of the control. Regular and sudden inspection contributes to the growth of the discipline in all areas of the production process. In order to effectively reduce costs, they must continuously monitor. Identification of shortages, attrition, technological losses help us to develop plans to mitigate them. Audit, inventory, inventories - these instruments of control have a positive effect on detection and suppression of losses in the company.

7. Analysis of losses. All that is not analyzed is impossible to consider and to draw conclusions. If your company receives a negative result, it is necessary to collectively discuss and work out measures in order not to repeat such experience in future, the costs of treatment will be reduced. Marriage, defects, cost of rework need to be analyzed with special care, since these facts entail not only cost overruns but also the loss of time, reducing a company's reputation and brand in the market.

8. The reduction of production costs. The cost is the sum of all costs that were spent on production and promotion of goods on the market. The cost is always expressed in money and contains an estimate of the unit cost of the product and refers to the cost of the enterprise [3].

If you are going to reduce costs, you should begin with the establishment of concrete plans, with specific percent reduction in cost for each item [4].

The action plan for the reduction of the cost is set by defining [5]:

– percentage reduction in direct production, overhead and general expenses per unit of production and promotion costs;

– list of specific actions to reduce costs and assign responsibility and deadlines of the plan;

– the net effect of each item of savings, expressed in monetary form.

9. Financial leverage (financial leverage) is the ratio of borrowed capital to equity, it characterizes the stability of the company. The less leverage is, the more stable the situation is. On the other hand, borrowed capital allows to increase the rate of return on equity, i.e. to get additional return on equity [6].

The indicator, reflecting the level of additional revenue if you use borrowed capital is called financial leverage effect [5].

Financial leverage describes the influence of capital structure on size of profit of the enterprise, and different methods of inclusion of credit costs in the cost price render influence the level of net profit and net return on equity [4].

The effect shows that the use of borrowed capital of the enterprise JSC "Vitebskdrev" has allowed to increase profitability by 19%. The effect of financial leverage shows the efficiency of using borrowed capital to increase efficiency and profitability. Increasing profitability allows us to reinvest in the development of production, technology, human resources and innovation capacity. All this allows to increase the competitiveness of the enterprise. Illiterate management of borrowed capital can lead to rapid growth of insolvency and the occurrence of the bankruptcy risk.

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URBAN PUBLIC TRANSPORT, LOGISTIC APPROACH TO THE TRANSPORT MANAGEMENT

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In modern condition further development and improvement of economy are based on progressive transport maintenance.

Urban public transport has a special place at social life. It's a part of social infrastructure sector such as spheres connected with the reproduction of labor force and livelihoods of citizens along with health, education, housing and communal services and other spheres of social life in the city.

Urban public transport has a great impact on economic and social development of *territorial administrative units*. Urban transport is also a means of acceleration and deceleration of the city development, it provides or, conversely, prevents from getting some vital services by population [1].

Logistic approach to creating technical infrastructure of urban public transport is to provide the shortest links between main passenger forming items, to equip these items with all necessary facilities, to take into account the volume of passenger traffic and requirements of comfortable travel when logistics operators carry out the calculation and selection of the correct transport equipment.

The structure of logistic system of passenger transportation is the combination of three components, which match certain levels of transport service. These components are pre-transport, transport, post-transport services. [2]

Pre-transport service includes trip planning, comfortable access to transport stops.

Transport service is passenger deliver by certain transport from the point of departure to destination with high comfort level.

Post-transport service includes timely transfer to other transport or a convenient way out from transport stops.

The next categories of citizens travelling are more perspective for introduction of logistics management techniques:

– labor trips from the place of mass living building to large enterprises;
– trips, connected with mass culture pursuits and entertainments;
– trips on religious holidays (to church or cemetery);
– travel from station to residential areas and on the contrary;

The systems of urban transport's management may be divided into two groups based on operational principles: traditional and logistic systems.

The main goal of using logistics at systems of urban public transport is to ensure passengers that their travel will be short and thro as possible.

Traditional system provides trips between city destinations which were evenly or accidentally distributed.

Logistic system provides mass travel of citizens, who has the same goal of trip. Such system has common with such logistic system as Just in Time: between fixed city destinations at fixed moment of time. In accordance with this principle logistic approach fits when the point of departure to destination is known.

Our team has analyzed the passenger turnover of Molodechno in the work on the project. And, as a result, we have known that city's carriages of passengers are provided by «Minoblavtotrans» and its affiliate «Bus Fleet № 4» [3].

We have used Pareto rule in our estimate [4].

The population of Molodechno is about ninety-four thousand people. Twenty-six thousand and sixty-seven cars are owned by physical entities. Given this, sixty-eight thousand citizens need urban public transport. But thirty-eight percent of citizens are pensioners and one thousand one hundred citizens are unemployed, it means that these citizens don't need daily use of public transport.

$$P_н = 68 – 68 \cdot 0{,}38 – 1{,}1 = 41 \text{ thousand people.}$$

By Pareto rule, eighty percent of that number of people uses the urban public transport daily on working days. It means:

$$P_{w.d} = 41 \cdot 0{,}8 = 32{,}2 \text{ thousand people.}$$

The main population movements go from place of living (point A) to place of work or study and to railway station (point B).

Accept that it was eighty percent of general flow, other citizens move randomly.

Pa b = 32,2 · 0,8 = 25,8 thousand people.

Next picture presents the scheme of bus city's route of Molodechno.

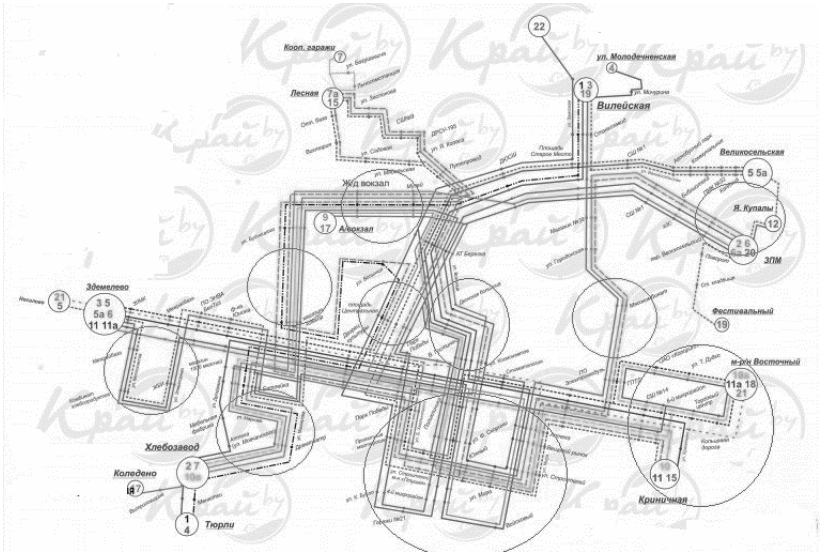

Fig.1. The scheme of bus city's route of Molodechno

Also there are routes in this picture, that serve the main passenger flows.

Most flows are going in rush hour: 7–9, 14–15, 17–19 o'clock. To the place of work from 7 to 9 o'clock and to the place of living at the period from 14 to 15 and 17 to 19 o'clock.

For example:

$I_{7–9}$ = 25,8 · 0,8 = 20,6 thousand people;

$I_{13–15} = I_{17–19}$ = 10,3 thousand people.

The equipment must meet the requirements for the capacity as much as possible based on the rate of flow and the character of passenger flows.

The power of passenger's flow is set in the survey. It depends on rush hours, because during these periods passengers' flows can vary to a high degree. So it is necessary to use the public transport of different capacity.

An appropriate interval of movement on a route is an important selection criterion for rational transport's capacity. The interval value is given by various restrictions. For example, the movement's interval couldn't be too large because passengers are waiting for the transport too long. Such perspective makes the passengers choose another way to get to the place. They call a taxi, choose an indirect route with few transport's changes.

One of the most important and main requirements for organization of passenger carriage is to use comfortable and safe buses on a route.

The transport equipment of large capacity doesn't appropriate to use on the route with low passenger's flows, because the level of use of the transport is low and it can lead to cost increase. And, on the other hand, the transport equipment of small capacity is not appropriated to be used on the route with high passenger's flows. In this case, transport should go more often to carry all passengers on the route and then the interval of movement will decrease, so we need to use a larger number of transport equipment on this route. But even though the carrier has the necessary number of vehicles, it will lead to cost increases (oil and lubricant, salary for drivers etc.).

The buses with large capacity such as MAZ-105 with nominal capacity as one hundred and sixty people are used on the previously identified routes.

The calculation of required frequency of bus traffic is shown below:

Tmv7-9 = 180 / (20600 / 9 / 160) = 12,6 = 13 min;

Tmv13–15 = Tmv17–19 = 26 min.

It is appropriate to perform the change of transport equipment to avoid a break-even activity and to satisfy needs of customers during the intermediate periods. For example, we can modernize and change existing

transport to buses such as MAZ-205 with nominal capacity as one hundred and seventy-five people, this action will reduce the total number of buses.

The calculation of this activity's effectiveness is shown below:

Tmv7–9 = 180 / (20600 / 9 / 175) = 13,7 = 14 min;

Tmv13–15 = Tmv17–19 = 28 min.

So then the intervals of movement will correspond to the norms and the necessary number of buses on each route will drop by one. In this way, it is possible to decrease bus depot by 24.4 percent.

The lack of logistical approach to urban public transport management creates the next problems with its effective use:

– passenger's carriage planning, in the first place, based on reporting and time permitting without proper economic justification;

– little explored factors, that determine the volume and structure of passenger's carriage;

– significant omissions are allowed in planning of the transport work, cost price of carriage and operating personnel, engaged in this process of passenger carriage;

– tariff system contains a special item, which deforms a real pricing.

– opportunities of public transport are used not fully, especially this is about increasing the operational speed, productivity, profitability, culture of transport services; decreasing carriage cost. [5]

New developments in the sphere of auto industry are used in the world practice to solve the problem of logistic approach at passenger's carriage. They are as follows:

– the use of electric buses;

– the use of ground subway;

– BelFort – it is a software and hardware system, which works on the basis of satellite technology such as GLONASS and GPS. This complex is designed to control the movement of various type of transport, equipment, workers;

– satellite-based monitoring system «Resource control»;

– CityPoint – it is a multifunctional system to control inter-city or international passenger's carriage;

In this way, during our scientific work the transport network and passengers' flows of Molodechno have been reviewed and the analysis technique based on principle of Pareto has been proposed. Also we have touched upon the subject of logistic approach and modern systems, which help this approach work.

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EVOLUTION OF INNOVATION DEVELOPMENT OF THE REPUBLIC OF BELARUS

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This article reflects the approach to the assessment of the level of innovative development of the Republic of Belarus on the basis of the Global Index of innovative development indicators in comparison with indicative indicators of innovation development of the State Program on Development for 2016–2020, approved at a meeting of the Council of Ministers Presidium, September 22, 2015.

The terms of innovation and innovative development came not only in the field of industrial, scientific and social sectors of governmental activity, but also in everyday life and it is possible to hear these words. In this regard, arises the question what the innovation and innovative development is, what spheres of activity these concepts involve and what they mean in various fields.

Based on the literal translation of the term "innovation" from the Latin – it is "in the direction of changes" – and means that innovations may involve completely any areas where there is movement towards the use of new techniques, methods, systems, techniques, processes, and development. In other words, innovation – is the creation and use of novelty and bringing it to a finished product of any kind.

The search of new methods of industrial production organization, education institutions and research organizations, the adoption of legal acts in the financial and legal lists - is an innovative development at the state level. These actions are the foundation and impetus for the development of innovations at the industry level, and in some branches of science, in application of new forms and programs of education. In its turn, at the level of individual enterprises, institutions and organizations they are formed: innovation product, innovation process, specialist with the skills of innovative thinking and able to close the spiral of innovative development and to transfer it to a new level and therefore to a new technological mode.

Conventionally, innovative development process can be presented in Figure 1.

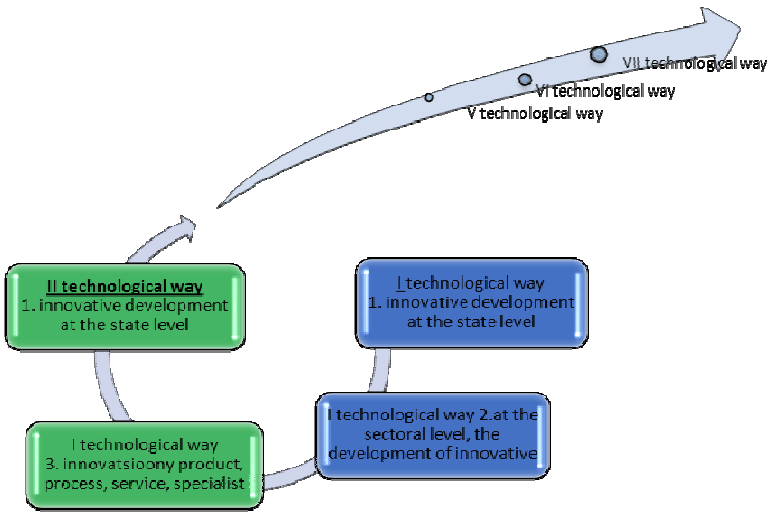

Fig. 1. Innovative development process

Program documents on forming a platform for innovative development in Belarus are the state innovation development programs for 2007–2010 and for 2011–2014 years. The results achieved in the implementation of these programs are significant, but still these results do not allow to realize the main goal of the State policy in the sphere of innovative development till 2015 – the creation of competitive, innovative, high-tech, energy and resource -saving, ecologically friendly economy. [1]

In the continuation of the program approach in the direction of innovative development of the Republic of Belarus adopted the Concept of the State Program of innovative development of Belarus for 2016–2020.

Practical and successful implementation of the Concept and Innovative Development Program is expressed in rising of economic development and living standards level. The process of implementation is in indicators characterizing innovation and key indicators of innovation activities of organizations. This suggests that there may be a situation when the indicators of innovation activity are at a high level, but the results achieved in innovation field, do not have a direct positive impact on social and economic development and on the innovative development rating of the Republic of Belarus in the world.

Table 1 – Selected Indicators of Innovation Union Scoreboard (IUS–2014) for the Republic of Belarus

Economic effect	2012	2013	2014	2015
1.Part of employed in science- intensive activities (Production and Services) to total employment, percentage(End of year)	27,36	27,36	28,49	28,49
2. Export part of mid and high-tech products in the total export of goods, percent	34,6	28,5	27,3	30,3
3. The export part of science-intensive services in total services exports, percent	27,8	26,8	29,6	33,4
4. Sales of new Innovations to market and firms in total trade turnover, percent	17,45	17,28	13,33	12,34

Source [2].

The data presented in the table show sufficiently high economic effect of innovation results, but in fact by the middle of 2016 the level of innovation Development in the Republic of Belarus has decreased. According to the "Global Innovation Index" published since 2007, together with the World Organization of innovation index, Cornell University and business school INSEAD, the Republic of Belarus has lost 26 positions and following the results of 2016 it ranked the 79th out of 128 countries. [3]

In 2016 evaluation of the Global Index of innovative development [3] carried out on the basis of 82 indexes. All the studied parameters are divided into two major groups: resources of innovation – 55 indexes and results of innovation – 27 indexes.

In turn, to:

Innovation resources are divided into the following groups of indicators: institutions, human capital and science, infrastructure, domestic market development, business development

Results of innovation to: the development of technology and science-based economy, the development of creative activity.

The ratio of the index values of innovation results to the resources of innovation is expressed by the coefficient of innovations efficiency.

Dynamics of the major groups of indicators for the Global Innovation Index for 2013–2016 are shown in Table 2.

Table 2 – Dynamics of the major groups of indicators of the Global Innovation Index for 2013–2016 years

Global index of innovation development	2013	2014	2015	2016
1. Resources of innovation	77	58	53	79
1.1. institutions	75	70	55	64
1.2. human capital and Science	107	105	94	77
1.3. infrastructure	43	38	32	35
1.4. the development of the internal market	74	56	60	63
1.5. business development	47	86	32	89
2. The result of innovation	10	114	94	81
2.1. development of technology and knowledge-based economy	79	50	58	103
2.2. creative activity development	54	30	32	49
3. The coefficient of innovation efficiency	102	84	94	124

Source [3].

These tables show that sustainable development is observed only in the group of indicators institutions, which are referred to sub index of resources innovation. Decreasing of the level of index for Innovation resources was 9 points, when the level of index for innovation result decreased on 45 points, consequently, the

potential resource of Belarus is still high enough, but the result of innovations application and their introduction to life has a very low speed and efficiency.

Let us go back to Figure 1 of this article and look at it from another angle in Figure 2:

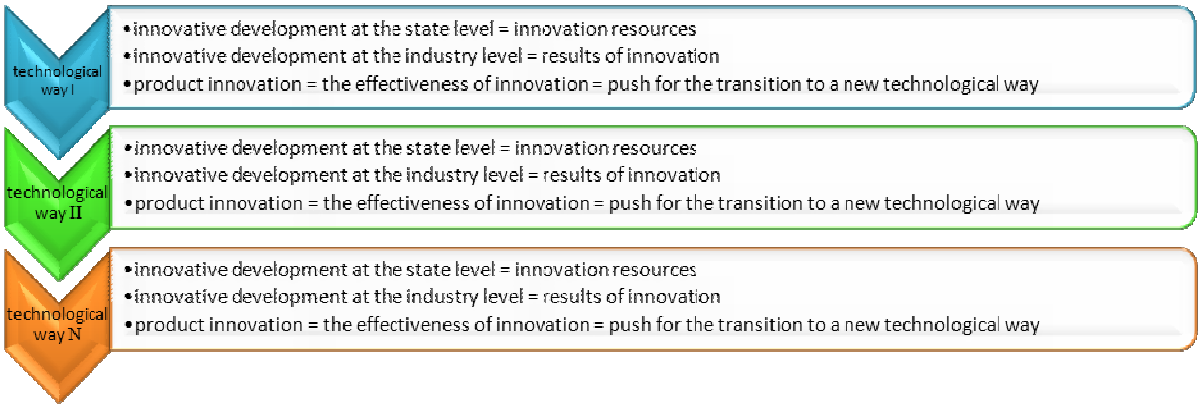

Fig 2. The level of implementation and development of innovations in the state

Figure 2 shows the relationship between the levels of development and implementation of innovations in the state and the chain of resources innovation transfer in the indicator of their effectiveness. Importance of clarity and quick organization of this chain work is in the final result, which allows innovation resources – innovations in the shortest period to be introduced in the form of a breakthrough innovation product, which will further accelerate the innovation development.

The information mentioned above shows that the important role is played by the process of transformation of innovative resources in innovative results with a simultaneous process of "deflating" of innovation in everyday life and mass production. At the same time analysis of indicative parameters of the State program Table 3 is based on innovation resources indicators, group of innovation indicators is represented by only one indicator "The share of high technology exports and high-tech products in the total volume of Belarusian exports".

The emphasis on innovation resources development in innovative development of the Republic of Belarus is confirmed by the values of the indicators groups of the Global Index of innovative development, presented in Table 2.Wherein, the purpose of the Concept of the State program of Belarus Innovation Development for 2016–2020 years is "Providing quality growth and the competitiveness of the national economy with a concentration of resources on building its high-tech sectors, based on V and VI technological structures' production [1], it involves not only the innovative potential presence, but the result and the effectiveness of innovative development.

Table 3 – National Indicative Program

Indicator	years	
	2015 (prognosis)	2016
Specific weight of innovation-active organizations in the total number of organizations, the main economic activity which is the production of industrial products, the percentage	19	26
specific weight of delivered innovative products in the total products volume, the main economic activity of which is industrial production, the percentage	13	21
Number of researchers per 10 thousand people.	20	22
The share of extra-budgetary sources in the internal costs for research and development, the percentage	55	60
Domestic expenditure on research and development of per cent of GDP	0,54	1,5
The share of exports of high technology and high-tech products in the total volume of the Belarusian export, the percentage	15	20
The share of high-tech activities in manufacturing, the percentage	2,5–3	4–6

Source [1].

It should be noted that innovation implies something new and modern technology development and knowledge level in combination capable to produce new ideas virtually non-stop, the question remains just how fast this innovation idea – resource can reach its transformation point as the result of innovations and innovations

efficiency. Considering that the annual statistical digest of science and innovation activity in the Republic of Belarus for 2015 was signed on 30 July 2016, and two months later the international community has already published the Global Index of innovative development for 2016, our gap in the evaluation of innovative activity is at least 10 months.

Thus on the basis of all mentioned above it can be concluded that the Republic of Belarus has the potential for innovation, but we need the system of transformation of this potential in the results of innovation development. For the development of this system it is required to take the following primary preventive measures:

1. Make emphasis on assessment not only of innovative development resources, but on the assessment of results and effectiveness of innovative development. Comprehensive assessment of the three trends of these indicators will allow making more accurate and precise steps and assessing their weaknesses.

2. Reduce the time for collecting, processing and provision of data on innovative development that will accelerate innovative development in general.

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UDC 338.43

THE COMPETITIVENESS OF BREAD: THE ANALYSIS AND THE WAYS TO IMPROVE

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In the article the essence of competitive products was examined and the conclusion based on research connected with search of improvement the competitiveness of bread on the example of Novopolotsk mechanized bakery was made.

In modern world free market relations with competition as its main characteristics dominate. Production of competitive products of a high quality is a serious problem not only for individual companies, but also for the national economy as a whole. The ability to produce competitive products at low cost depends on the pace of industrial development of the country.

Bread is traditionally considered to be at a core of any cuisine. This product is present on the table in every household. Bread is eaten on a daily basis, so it is very important that it was not only delicious, but also healthy. In order to compare the Novopolotsk bakery two main competitors were selected: Resttreyd and Eurotorg. For the research several criteria were chosen with the most similar performance (weight, composition, shape, etc.) Products from the following manufacturers:

– Rye-wheat bread "White Tower", weighing 0.85 kg, the producer of Novopolotsk mechanized bakery;

– Rye-wheat bread "Kupala", weighing 0.9 kg, the producer of Eurotorg;

– Rye-wheat bread "Rye", weight 0.9 kg, the producer of Resttreyd.

A survey of 25 people, the potential consumers of the analyzed products, was carried out for the most accurate and objective assessment. The respondents were mainly the residents of Novopolotsk, who have a stable income and bread-based diet. The following results were obtained after conducting market research:

- Buyers use bread every day with preference given to rye-wheat and dietary bread of Novopolotsk mechanized bakery;
- When buying bread consumers are attracted by the appearance and color of bread, the taste and smell of bread, as well as the package;
- Consumers assess the quality of bread paying attention to the taste and smell of the crumb, appearance, as well as the surface of the bread;
- Buying bread, buyers are guided by the criteria: quality and price, the availability of the package; The quality of bread produced at the Novopolotsk mechanized bakery rated as good;
- Buyers prefer to buy bread in the package;
- The consumers are satisfied with the price, but not with the range of product;
- The majority of customers believe that Novopolotsk mechanized bakery needs further improvement and expansion of the range.

The radar of competitiveness of rye-wheat bread of Novopolotsk mechanized bakery and competitors Eurotorg and Resttreyd is given in Figure 1.

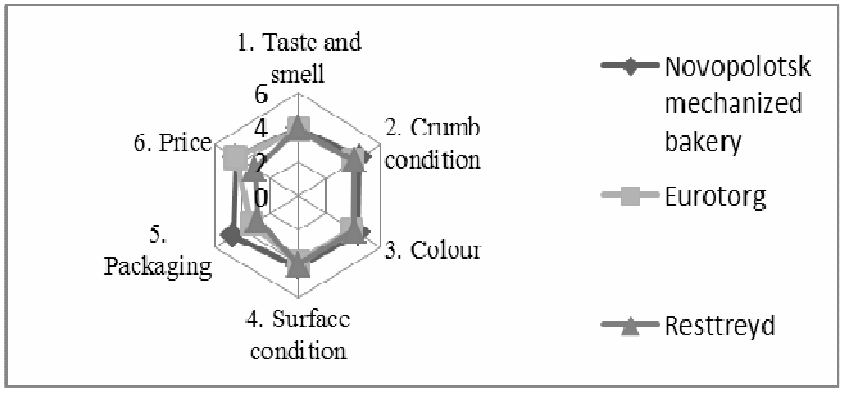

Fig. 1. The radar of competitiveness of rye-wheat bread Novopolotsk mechanized bakery, Eurotorg and Resttreyd

Source: developed by the author on the basis of [1].

Novopolotsk mechanized bakery produces competitive products of relatively high quality. To date, the bakery factory produces 12 types of rye-wheat bread pan and hearth, 3 types of wheat bread, a large number of bakeries. The factory is constantly working on updating the product range, improving technology in order to improve product quality and increasing the range of bread without preservatives and additives.

On the basis of the constructed table of competitiveness it can be concluded that the products of the Novopolotsk mechanized bakery are attractive for users in all respects. However, despite the slight advantage over its competitors, it requires constant work to improve the product to retain and expand its market share.

The main ways to improve the competitiveness of bread are shown in Figure 2.

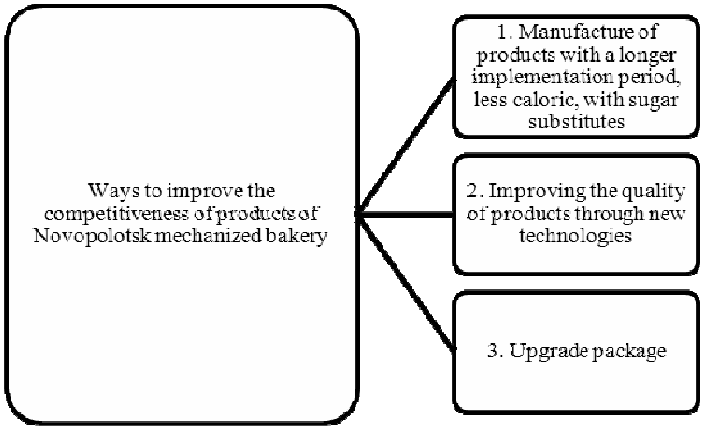

Fig. 2. Ways of improving the competitiveness of bread in Novopolotsk mechanized bakery

Source: developed by the author.

The proposed measures will positively affect the quality of products, to expand the range and enhance its visiual attractiveness to the consumers.

The examination of the competitiveness of products in Novopolotsk mechanized bakery showed that there is a huge potential in improving the competetivenss of bread on market in the Republic of Belarus.

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Economics

UDC 657.476

THE ANALYSIS OF THE IFRS EXPERIENCE ON THE DERIVATIVES ACCOUNTING FOR APPLICATION IN THE ACCOUNTING PRACTICE IN THE REPUBLIC OF BELARUS

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The article considers the approaches to the accounting of derivatives based on the IFRS provisions. The accounting treatment of hedge relationship is presented in the article. The outcomes of applying of the hedge accounting on the profit or loss are compared with outcomes of ordinary accounting.

Introduction. The current status of the derivatives accounting in the Republic of Belarus can be described as follows: in the banking system of Belarus there is a number of regulations based on international financial reporting standards (IFRS), while for the accountant of industrial or commercial enterprises it is quite difficult to make the accounting entries for forwards or other derivatives according to the standards of the Instruction approved by the Ministry of Finance of the Republic of Belarus № 164 dated 22.12.2006 [1]. That's why for the wide usage of derivatives by nonfinancial organizations in the Republic of Belarus it is necessary to develop transparent provisions for the accounting of transactions with derivatives. Therefore, we consider it appropriate to use the experience of IFRS. Moreover, IFRS will come into effect on the territory of the Republic of Belarus from 1 January 2017 as technical normative acts [2, 3]. In this article it will be considered what accounting treatments can be used for derivatives according to the provisions of IFRS.

According to IFRS a financial instrument is an agreement which causes a financial asset for one enterprise and a financial liability or equity instrument for another [4, p. 2]. And a derivative (alias derivative financial instrument or derivative instrument) is a financial instrument or some other contract with *all* of the following characteristics [5, p. 16]:

a) Its value changes in response to changes in a set interest rate, financial instrument price, commodity price, foreign exchange rate, index of prices or rates, credit rating or credit index, or some other variable, provided that in the case of a non-financial variable this variable is not specific to either party of the contract.

b) It requires no initial investment, or an initial investment that is smaller than would be required for other types of the contracts which would be expected to have a similar response to changes in market factors.

c) It is settled at a future date.

It is possible to distinguish between two types of derivatives according to the purpose they were entered into: purchased (entered into) to hedge unpredictable movement of prices and other variables, or entered into for speculation in order to profit from potential changes in market indicators. The main peculiarity of hedging is that it allows to guarantee a certain level of paid or received amount, but does not guarantee that these amounts will be more favorable than the amount received in a situation where hedging is not used. Hedging (from the English hedge − to protect, to insure yourself against possible losses) is a futures (forward) transaction for insurance against the possible fall in price when making long-term deals. And hedge, accordingly, is a position, which is used as a temporary replacement for a future position in another asset (obligation) or to protect the value of the current position of the asset (obligation), while this position may not be eliminated [6, p. 200].

In addition, an organization can buy or sell products using contracts with the deferral of the contract execution, which have similar trappings with the definition of derivatives in IFRS, but the goal of entering into such contracts is for the purpose of receipt or delivery of commodities in accordance with the entity's normal purchase or sale requirements (it is not expected that the organization will sell the contract; it is not planned for the received item to be sold shortly after delivery so as to profit from short term price changes; in the terms of the contract the physical delivery of goods is provided, while the net settlement isn't permitted). Commodity contracts that aren't considered as derivative contracts are called «own-use contracts» (or «normal purchase and normal sale» under US generally accepted accounting principles). These contracts also have the element of hedging relationship, because they fix the future sale or purchase price, but such method of accounting as «hedge accounting» in accordance with IFRS is not suitable for them. Own-use contracts are not fair valued, but accounted for using the accrual method.

There are several particular standards in IFRS that are relevant for hedging. The main standard connected with derivatives and hedging is IFRS 9 «Financial Instruments», which replaces IAS 39 «Financial Instruments: Recognition and Measurement» and establishes accounting principles for recognition, measurement and disclosure of financial assets and liabilities. Standard IFRS 9 «Financial Instruments» is a complex standard, remarkably wide in scope and interacts with other standards. IFRS 9 «Financial Instruments» in relation to derivatives allows the entity opportunity to defer financial results from derivatives in profit or loss. But it is possible only if all obligatory criteria established in IFRS 9 are met.

For hedging, in addition to standard IFRS 9, the following standards presented in Figure 1will be relevant.

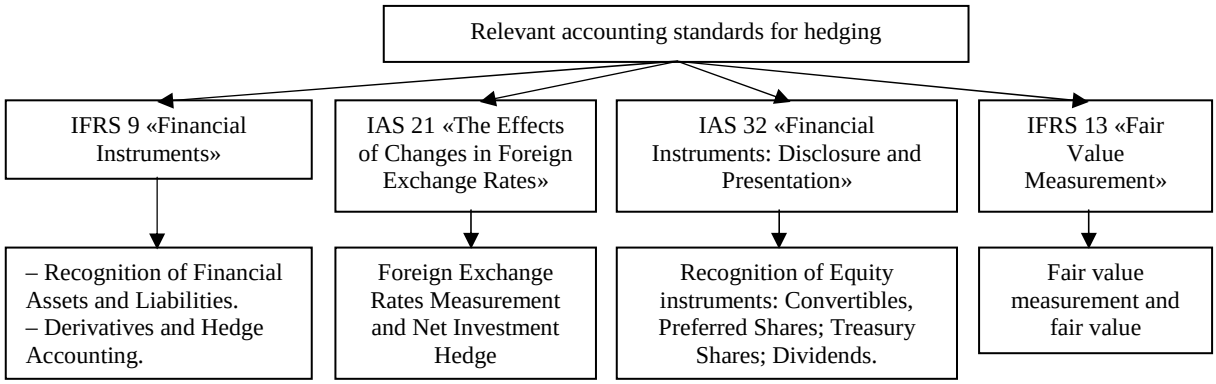

Fig. 1. The provisions of IFRS that are relevant for hedging

Source: [7, p. 1, fig. 1.1].

On the basis of the IFRS provisions it is possible to allocate the derivatives themselves, which are measured at fair value, and hedge accounting is applied for derivatives, the changes in fair value of derivatives are deferred until offsetting cash flows are obtained. It means that all derivatives are recognized in the balance sheet at fair value, no matter whether or not they are part of a hedge accounting relationship. There are two types of derivatives: undesignated for hedge accounting or speculative derivatives, which require the revaluation of fair value at the reporting date, and those, for which the hedge accounting is implemented. Such implementation requires formal designation of hedging relationship for each specific derivative, as well as hedge effectiveness criteria should be met.

Fair value is a price that might be received while selling an asset or paid to transfer a liability when conducting operations on a voluntary basis in the principal (or most advantageous) market at the measurement date under current market conditions (i.e. an exit price) regardless of whether that price is directly observable or is estimated using another valuation technique [8, p. 3]. The best indicator of fair value for a financial instrument is a published quote price, which is set on relevant stock exchanges.

In addition, IFRS and US GAAP for distinguishing commodity derivatives, purchased for the purposes of hedging or speculation, from simple contracts with future delivery establish specific terms such as «own-use contracts» (in IFRS) or «normal sale and normal purchase» (in US GAAP). These contracts don't require fair valuation like derivatives and are recorded on an accrual basis (the results of transactions and other events that are recognized when they occur (not when the receipt or payment of cash or cash equivalents takes place), are reflected in the accounting entries and are included in the financial statements of the periods which they relate to). The terms of settlement can be a reliable criterion for determining whether a particular contract is a derivative or own-use one: for own-use contracts physical delivery must be provided, but the organization must actually use the product for its current activities, and there shouldn't be the practice of selling the product soon after obtaining to profit from short term price changes.

Such concept as hedge accounting mentioned above is one of the key provisions of IFRS 9. Hedge accounting – is a method of accounting that changes the normal basis of recognition gains and losses associated with the hedging instrument and the hedged item to enable such gains and losses to be recognized in profit or loss in the same period when the offsetting cash flows occur. It should be noted that in the hedging relationship there are two elements [7, p. 24].

1. The hedged item – is the item that exposes the entity to a market risk. It is the element that is designated as being hedged.

2. The hedging instrument – is the element that hedges the risk to which the hedged item is exposed. Frequently, the hedging instrument is a derivative.

There are three types of hedge relationship [3, par. 6.5.2].

A. Fair value hedge: a hedge of the exposure to changes in fair value of a recognized asset or liability or an unrecognized firm commitment, or a component of any such item, that is attributable to a particular risk and could affect profit or loss.

B. Cash flow hedge: a hedge of the exposure to variability in cash flows that is attributable to a particular risk associated with all, or a component of, a recognized asset or liability (such as all or some future interest payments on variable-rate debt) or a highly probable forecast transaction, and could affect profit or loss.

C. Hedge of a net investment in a foreign operation as defined in IAS 21.

But in fact the hedge accounting can be divided into two forms [7, p. 24].

1. Fair value hedge – recognizing gains or losses in respect of both the hedging instrument and hedged item in earnings in the same accounting period.

2. Cash flow hedge or net investment hedge – deferring recognized gains and losses in respect of the hedging instrument on the balance sheet until the hedged item affects earnings.

For example, suppose that an entity enters in 20X0 into a derivative to hedge risk exposure of an item that is already recognized in the balance sheet. The derivative matures in 20X1 and the hedged item settles in 20X2. The comparison of the impacts of cash flows in hedge relationship on profit or loss when applying, or not applying, hedge accounting is given in Table 1.

Table 1 – The comparison of applying or not applying hedge accounting

Without hedge accounting:	20X1	20X2	Total
Hedging instrument	1,000		1,000
Hedged item (realized gain)		<1,000>	<1,000>
Net profit / (loss)	1,000	<1,000>	-0-
With fair value hedge:	20X1	20X2	Total
Hedging instrument	1,000		1,000
Hedged item (unrealized gain)	<1,000>		<1,000>
Net profit / (loss)	-0-	-0-	-0-
With cash flow hedge:	20X1	20X2	Total
Hedging instrument (after deferral in equity)		1,000	1,000
Hedged item (realized gain)		<1,000>	<1,000>
Net profit / (loss)	-0-	-0-	-0-

Source: [7, p. 25].

It should be noted that for the application of hedge accounting in the beginning and throughout the period of the hedging relationship the hedge must meet very strict requirements. In general, these requirements are the following: in the relationship there should be only a qualified hedged item and hedging instrument (additional requirements); by the beginning of the hedge relationship the entity should develop formal documentation on this issue; the hedge relationship should meet the requirements of hedge effectiveness.

Conclusion Thus, in connection with the adoption of IFRS as the technical normative acts in the Republic of Belarus, the analysis of these provisions in accounting for derivatives is important for applying IFRS in practice, especially for organizations that report under IFRS. Such analysis will also help to improve the national legislation. In this paper general approaches to the accounting of derivatives according to IFRS have been described, and as the result the following aspects can be noticed: IFRS 9 requires all derivatives (but for some commodity own-use contracts) to be measured in the balance sheet at fair value. It is possible to distinguish between two types of derivatives: undesignated for hedge accounting or speculative derivatives which require the revaluation of fair value at the reporting date and those, for which the hedge accounting is implemented. Such implementation requires formal designation of hedging relationship for each specific derivative, and hedge effectiveness criteria should be met. Depending on the type of hedge relationship changes in fair value of derivatives can be recognized in different ways.

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PROBLEMS AND WAYS TO IMPROVE THE COMPETITIVENESS OF THE BELARUSIAN ECONOMY

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In the article the essence of the concept "competition" and the role of competition in the market economy are disclosed, problems of competitive environment formation in the economy of the Republic of Belarus are revealed, the directions of the competitiveness increase in the Republic of Belarus at the national level and the level of the enterprises are defined.

Issues of the competitiveness have big relevance both at macroeconomic and microeconomic level today. Urgency is that the competition represents the macroeconomic problem that makes the most direct and strongest impact on each economic system – from the enterprise to the industry, region and national economy. The competition is a powerful factor of economic development. The relations of the competition promote establishment of more effective mode of use of limited resources by means of their distribution between accounting entities on the basis of operation of economic laws [1].

Interpretation of the concept "competition" in economic science has passed several stages. In the classical economic theory behavioral approach was identified. In particular, A. Smith understood the essence of competition as a set of the interconnected attempts of different sellers to establish control in the market. Since the end of the XIX century the structural concept of the competition has began its formation. Among its authors there were F. Edgeworth, A. Kurno, J. Robinson, E. Chamberlin. Positions of these scientists in modern western economic science are so strong that the term "competition" is most often used in structural understanding. The market is called competitive when the number of the firms selling a homogeneous product is so big and the share of a specific firm in the market is so small that independently no one can significantly influence the goods price by changing in sales volume.

Except behavioral and structural interpretation of the competition, in the economic theory there is still a functional approach to the competition and the characteristic of the competition as "procedures of opening". Functional approach to the determination of the competition is connected, in particular, with the name of the Austrian economist J. Schumpeter. In the theory of economic development, it defined the competition as fight of old with new. This fight is conducted by entrepreneurs – the organizers of production laying the new ways and performing new combinations of resources. According to Schumpeter, a task of the entrepreneur is to enable the realization of innovations, to fight against a routine, not to do what is done by others, to become "the creative destroyer". Then he can win in competitive struggle, having driven those entrepreneurs who use outdated technologies out of the market or turn out not best-selling products. Another Austrian economist and a political philosopher - F. fon Hayek considered the competition even more widely, understanding it as "the procedure of opening". In his opinion, for entrepreneur it is important, being guided by increase or drop in prices on resources and the benefits made with their help, to understand in what direction it is necessary to work as well as for whom to make. Only "procedure" of the competition "opens" what resources and in what quantity need to be used, how much, and to whom to sell [2, p. 39–40].

The competition in market economy works not by itself. It should be supported and be constantly guided by the state. In some countries due to the lack of the competition as first-priority there is a problem of competitive environment forming in production and trade.

For the development of the competition it is important to allocate and consider a ratio of three activities: measures for creation and development of the competition, or the stimulating measures; restriction of monopolism; suppression of the actions breaking the normal competition [7, p. 274–275].

Transformation of the Belarusian economy in the direction of market model of managing caused carrying out institutional reforms. It is dictated by the requirement of creation of competitive production that in its turn assumes modern competitive environment formation based on innovative work and intellectual capital [4]. In the Republic of Belarus forming of competitive production is possible at implementation of the corresponding innovative model of competitiveness which implementation in turn demands change of industry structure, the prevailing development of high-technical production, accurate determination of the priority industries providing reproduction of a public product and return of investments. Further increase in production of goods of low and average knowledge intensity at high materials consumption and power consumption of production is unpromising. It leads to creation of goods which are not competitive in price, and development of priority factors of competitiveness – development of science, implementation of new technology [5] in the long term detains.

The share of material costs and growth rates of export are characteristic of the Belarusian export enterprises which are provided with updating technologies. In the long term preserving of competitiveness of these enterprises is complicated owing to high wearout of the fixed business assets, full load of production capacities, by insufficiency of means for the investment activity.

In the conditions of a transition period many CIS countries used the model combining development of export-oriented and import-substituting production. It is also used in the Republic of Belarus [6, p. 345]. Nevertheless, today into the forefront of market fight steps there is not so much price competition, as the competition of new goods and services is very urgent and problematic for the enterprises, for example, of the textile industry of Belarus. At most enterprises there are difficulties in ensuring productions with the modern equipment, use of new technologies without what it is initially impossible to do competitive products. Wearout of the equipment, for example, of the textile industry of Belarus is more than 70%. For comparison: in the USA – on average 15 – 20%. The operating mechanism of replacement of means of production at most the enterprises of the Republic of Belarus is not adequate to the changed nature of management, and has no necessary properties for the solution of the questions connected with providing the desirable quality level of products, not using all economic reserves and opportunities. Many production workers due to fear of economic risk prefer to apply already tested technologies of production. The vicious circle turns out: to make new, competitive products, money is necessary and to receive it – it is necessary to sell qualitative products. In this situation it is important for enterprises to wait not so much for the help from the state how much to production workers to lead active marketing strategies: scrutinize demand, market capacity, dynamics of competitiveness of similar goods, to react instantly to market changes, etc. [7, p. 31].

Nevertheless, Belarus has a potential for favorable development. Occupying 0,15% of the territory in the world, having 0,18% of population, the Republic produces 11% of world production of potash fertilizers, 0,6 – of chemical fibers and threads, 0,15 – of steel and cement, 1,3 – of refrigerators, 0,4 – of TVs, 1,8 – of woolen fabrics, 0,8 – of footwear, 8,7 – of flax fibers, 0,4 – of meat in lethal weight, 1,1% – of milk. However in the next years these reserves will be already reduced and only internal accumulation will not provide required accumulation of potential production, especially regarding release of products, competitive in the world market [8, p. 109].

Drawing a conclusion, one may say, that in the Republic of Belarus competitive environment is not properly created, despite the favorable potential for development and, in our opinion, it leads to enormous losses not only for consumers, but also for national economy in general.

In the Republic of Belarus transition to market economy and the market relations happens in the conditions of large-scale monopolism and deficiency of the majority of goods markets. The main objective of the antimonopoly policy is to create and constantly support competitive market.

The main directions of state policy on forming of competitive environment in this country are: creation of organizational, legal and economic premises for demonopolization of economy and development of entrepreneurship. For this purpose, the Ministry of the antimonopoly policy was transformed into the Ministry of entrepreneurship and investments.

Forming of competitive environment in the Republic of Belarus is performed by liquidation of the unions and associations (during privatization) limiting independence of the enterprises; allocation of structural divisions of the operating enterprises and their transformation to independent subjects; creation of new, private enterprises, small and medium, joint-stock companies.

Today the main problems of development of the competition in the country are: considerable dependence of entrepreneurship on the state, inability of the Belarusian goods to compete with foreign, a small number of joint-stock companies, slow reforming of economy, lack of radical changes in organizational forms etc.

The mechanism of creation of effective competitive environment in consumer market of the Republic and increase in its level of intensity should be adjusted by public authorities. This step should not be considered as return to strengthening of methods of administrative influence on subjects of the market and to creation of trade barriers.

The following conditions are necessary for increase in competitiveness in the Republic of Belarus:

– complete isolation of producers as owners of means of production and the made product (main premise);

– plurality of producers of homogeneous products (it is reached by creation of new economic structures in the monopolized industries), development of small and medium businesses, disaggregation of associations, concerns and other unions;

– interest of subjects in business activity; economic freedom and complete independence in a productive and business activity of an accounting entity (the choice of a type of activity, organizational forms, determination of financing sources, methods and management structures production, sale, etc.), absence of dictatorship from the government (state);

– availability of the market of the soil and real estate, accurate precepts of law, steady monetary and financial systems, the stimulating tax, credit, price and foreign trade policy (the reasonable protectionist policy of the state in the field of domestic market performed by introduction of temporary quantitative restrictions of import of separate types of products, the special, anti-dumping and compensatory duties);

– liquidation of barriers for entrance on the market for new accounting entities;

– overcoming monopolism of the government managerial institutions; control of monopolistic activity of accounting entities and suppression of anti-competitive actions; state regulation of natural monopolies; providing free access to information on goods and the prices [9, p. 255–266].

Besides, for increase in competitiveness the Belarusian enterprises need to solve the following problems:

1. Improve a marketing activity. For this purpose:

– hold events for improvement of the organization of marketing;

– perform search of market niches, reveal perspective segments of the market, carry out positioning of goods in the market;

– reveal needs of buyers and to constantly increase product competitiveness, implement new goods;

– pursue flexible price policy, applying different price levels in different markets, to different segments, apply system of discounts;

– carry out the analysis and perform search of the perspective markets and sales channels and to master foreign markets;

– perform an effective advertising campaign, actions for sales promotion directed to forming of consumer preferences and commitment to the enterprise and its products.

2. Improve a financial state. For this purpose:

– develop the actions directed to cost reduction;

– accelerate turnover of current assets;

– at the choice of management decisions to perform cost optimization.

3. Improve management. For this purpose:

– to accurately define the purposes;

– develop strategies (the general for the enterprise, for marketing, for marketing elements, for finances, for production);

– improve the organization of enterprise management;

– develop system of motivation of workers to effective activity.

The solution of these tasks in a complex will allow to increase competitiveness of domestic enterprises both on internal, and on external markets, and it, in return, will allow to increase export volumes and receipts of a currency earnings in the State currency fund for the solution of such tasks as support of a rate of national monetary unit, repayment of an external debt [9, p. 19].

Competitive environment in the Republic of Belarus should be formed step by step, starting with the emergence of the competition between subjects and finishing by forming of structural elements for its providing.

At the first stage there is a formation of the competition between domestic manufacturers of one industry for sales markets and raw materials, between banks:

– for long-term lending of production programs, between trade to the organizations;

– for establishment of communications with producers.

At the second stage the cross-industry competition for a profit margin forms, there is a formation of non-commodity forms of the competition between concerns, holdings, and financial groups for financial leadership.

At the third stage equal partnership between domestic and foreign manufacturers is provided.

The role of the state as the regulating authority constraining monopolistic tendencies and encouraging the competitive relations consists not in prohibition of monopolies as such, and in creation of system of the measures encouraging competitiveness in the market, stimulating business activity, supporting respect for the principle of equal opportunities [9, p. 256].

Experience of the developed foreign countries says that the main objectives of competition policy of the state are: ensuring economic growth and the international competitiveness of economy, assistance to technical progress, control of activity of monopolistic subjects, replacement from the market of the unprofitable enterprises. At the same time the main strategic task of the state consists in creation of the legal framework of the competitive relations, and a new economic mechanism oriented at competition stimulation.

The leading directions of the state competition policy come down to development and improvement of the legislation of the competition, control over structure of the market, prevention of abuses of the market power, to stimulation of business activity [9, p. 258].

For carrying out such state policy in the Republic of Belarus it is necessary for the supreme legislative and executive authorities to adopt a package of laws providing guarantees of full development of the competition in domestic economy and also protection it from departmental arbitrary behavior and bureaucracy.

Study of foreign experience of implementation of competition policy gives the grounds to consider that in Belarus it is also necessary to carry out institutional transformations - to perform structural adjustment of economy, to provide a rational combination of different patterns of ownership, decrease in level of monopolization of economy, financial improvement of the country and implementation of a land reform. Besides, it is necessary to re-structure the enterprises and to create the market infrastructure providing functioning of the main markets in the conditions of the competition and reasonable antimonopoly regulations.

Besides, support and help of the state should consist in development and strengthening of information base of consumer market; creation of a possibility of certification and quality control of goods and simplification of their procedure; creation of a credit system available to all subjects of the market; simplification of the procedure of the taxation; reduction of forms of the reporting for the business owners; increase in legal culture of participants of the market; ensuring compliance with the law by all participants of the market relations.

The analysis of foreign experience allows to specify the next ways of forming of competitive environment:

First, increase in number of the organizations performing homogeneous activity, making one-specific products or rendering identical services. The more enterprises offer homogeneous goods and services, the more they aim to attract clients and for this purpose improve quality, reduce costs and collectable rates. It is reached due to modernization of production, its technical improvement, reduction of excessive costs.

Secondly, support of small and medium entrepreneurship is necessary. It differs in high degree of flexibility, efficiency of response to the shifts in demand. Small business by the practice of direct contacts with the consumer puts pressure upon major companies, also forcing them to be guided by requests of the population constantly.

Thirdly, systematic comparison and public comparison of qualitative and price indexes of goods and the services rendered by different entrepreneurs are necessary. The state is designed to promote permanent holding reviews, tenders, exhibitions of goods, objective comparison of characteristics, to publish comparative information. With assistance of state bodies Chambers of Commerce and Industry, the unions of protection of consumer interests and other organizations are urged to carry out similar work.

Fourthly, permanent systems of promotion and encouragement of the best achievements and results are necessary. The state should develop and use effective acceptances of economic and moral encouragement of entrepreneurship. Maintenance of objective goodwill of firms by mass media, accounting of such indicators at distribution of the state investments and orders is important. At the same time the degree of satisfaction with the producer of public interests, requests of consumers [10] should become the main evaluation criterion.

The general activities on development of the competition in market economy are that they should find implementation in specific acceptances and decisions. Only at such state approach it is possible to increase competitiveness of the economy of the Republic of Belarus.

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STOCK MARKET OF THE REPUBLIC OF BELARUS: THEORETICAL AND PRACTICAL ASPECT

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The article deals with theoretical and practical aspects of the stock market of the Republic of Belarus. We examine the issues relating to the composition of the stock market. The legislation of the Republic of Belarus which regulates the processes in the stock market and the basic problems of functioning and development of the stock market are considered. Directions for improvement of the stock market in the Republic of Belarus are offered.

In modern conditions the security market is an integral part of a financial sector of economy, as it is based on the transition from accumulations and savings to investments. As a rule, the developed stock market in any country enriches and assumes the development of the financial sector in the future. The role of the stock market increases considerably at all levels of economy, from micro-up to mega-levels per year. Today, the development of the stock market, as an integral part of economy, should be the goal of any developing state.

The security market of the Republic of Belarus has a very short history, as it appeared with the creation of our independent state. At this stage of development of the financial sector, it is insufficiently effective against the background of a bank segment in the sphere of redistribution of the equity, demonstrating slow but stable growth. During the existence of the stock market of the Republic of Belarus the legal framework in the area of issuance and circulation of securities has been developed. The Republic of Belarus has mono-stock exchange system. There is only one All-Belarusian stock exchange where the purchase and the sale of securities may be carried out.

The stock market of the Republic of Belarus can be divided into five segments:

1. Government securities;
2. Municipal securities;
3. Corporate securities;
4. Securities of commercial banks;
5. Personal checks.

An important element of the security market of the Republic of Belarus is an appearance of the calculation and the publication of its own stock index, which is a required indicator for securities, by "SS/SB" ("State Securities/Short-term Bonds") of the National Bank.

Despite all the facts I have mentioned, the stock market of Belarus cannot still be considered sufficiently developed against the background of the Western states.

Let us consider the basic legal document which regulates the security market of Belarus.

In accordance with Presidential Decree №194 dated April 3, 2008, "On Making Amendments and Addenda to the Presidential Decree dated 28 April, 2006, №277", a legal entity can issue bonds to circulation under certain conditions:

1. The net asset value of the legal entity must not be less than 1 million euro.
2. You must not have a negative result from operating activity.

According to the given criteria, we can say that such conditions can only be satisfied by banks in our state, the organizations with large income do not put their securities on the stock market of Belarus, because the sum of deals is miserable against the background of the Western markets. So, it is more profitable to put the securities on the Western stock exchange, they think. It should also be noted that the second condition does not allow to solve financial problems by issuing securities, so it baffled the further development of the stock market. If we compare these conditions with the conditions in the US, it would be really interesting to pay attention – every organization has the right to place its shares, regardless of the results of the main activities.

So then, we will analyze the availability of securities on the All-Belarusian stock exchange.

So, according to this table we can say that the highest rankings take fully state-owned banks or commercial banks with the majority of state ownership.

Based on the analysis of securities for sale offered, we can draw the following conclusions:

1. The stock market of the Republic of Belarus is regulated by the state.
2. The profit from investments is mainly directed at the public sector.

Most of the securities offered for sale are purely state. Consider the rating of participants trading on the stock market in the period from January 2016 to December 2016. Data presented in Table 1.

Table 1 – Ranking the bidders in the stock market of the Republic of Belarus in the period from January 2016 on December 2016

January 2016		December 2016	
Name	**Rating**	**Name**	**Rating**
JSC "Savings Bank "Belarusbank""	**1**	JSC "Belagroprombank"	**1**
JSC "Belagroprombank"	**2**	JSC "Savings Bank "Belarusbank""	**2**
JSC "Paritetbank"	**3**	CJSC "MTBank"	**3**
JSC "Belgasprombank"	**4**	JSC "Belinvestbank"	**4**
CJSC "MTBank"	**5**	JSC "Belarusian development bank"	**5**
JSC "Belinvestbank"	**6**	JSC "Paritetbank"	**6**
CJSC "Aigenis"	**7**	Unitary enterprise "ASB Broker"	**7**
Unitary enterprise "ASB Broker"	**8**	JCS "BPS-Sberbank"	**8**
UE "Vneshpromttrade"	**9**	CJSC "Cepter bank"	**9**
JSC "Belarusian development bank"	**10**	JSC "Tehnobank"	**10**
CJSC "Cepter bank"	**11**	CJSC "BSB Bank"	**11**
CJSC "TK Bank"	**12**	Ministry of Finance of the Republic of Belarus	**12**
CJSC "BSB Bank"	**13**	Private enterprise "Diamondinvest"	**13**
Ministry of Finance of the Republic of Belarus	**14**	CJSC "TK Bank"	**14**
JSC "Tehnobank"	**15**	JSC "Eurotorginvestbank"	**15**
JCS "BPS-Sberbank"	**16**	CJSC "Alpha-bank"	**16**

The stock market of the Republic of Belarus is based on the sale of stocks and bonds. Futures are not very popular, although there have been cases where, due to the currency exchange, transactions in futures turned out with high profits.

Retarding factor in the development of the stock market of the Republic of Belarus is the high tax rate on security transactions (24%).

As for the practical aspects of the security market of the Republic of Belarus is that according to the statistics the volume of the issue of securities increases on the balance sheet date. But the greatest activity in the issuance of new securities was from 2011 to 2014, although the amount in millions of BYN raised in 2015–2016. According to the analysis of these trends it becomes clear that the development has not got good results. On the average, growth is observed only at 3 million of BYN, that is too little if we compare our market with the developed ones, where one transaction will be greater than the yearly increase in rubles for 5 years. When considering bonds in 2015-2016, their popularity is higher than the popularity of shares, however, the production and the sale of the shares begin to gain momentum, which is also a positive trend for the development of the security market. After all, the deposit invested in shares is returned with a risk probability in many times more than the permanence of bonds. People begin to realize this.

You can see the structure of the securities in circulation from 2011 to 2016. According to the picture below, we will note that the percentage of shares in 2011 was higher but the amount of transactions on the shares is higher today than it used to be. It leads to the developing of the debt market. The picture given below shows us how our security market is arranged. The darkest colour in the picture is the shares, while the dark-grey shows us the bonds. The colours on the left show us the percentage of the state securities on the market.

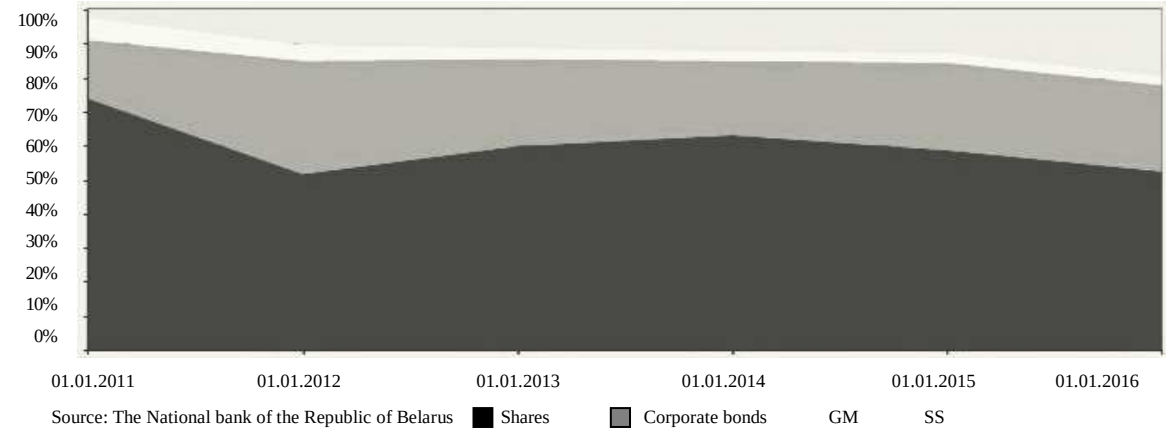

Fig. 1. The structure of the securities in circulation from 2011 to 2016

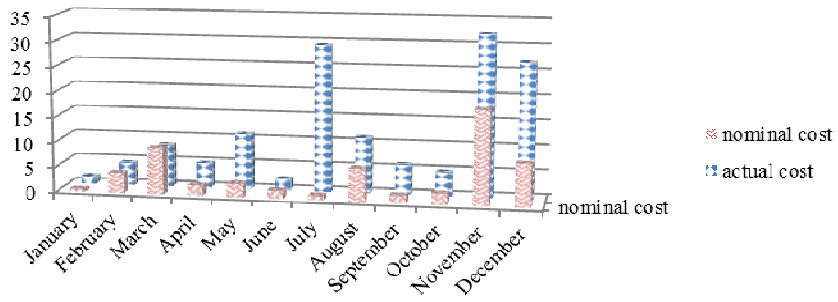

Fig. 2. Monthly volume of issuance of the shares in 2016, million. BYN

The problem of placement of securities on the territory of the Republic of Belarus is inflation. Despite state's anti-inflationary policies, it is still a serious threat to the financial stability. Another problem, according to the author's opinion, is a risk to buy securities. As noted earlier, large inflation rates are a deterrent factor for market participants, and it is not always a positive indicator of income of organizations. Protection against fraud or loss is not given by state, which, in its turn, is one of the ways to improve the insurance activity of the Republic of Belarus.

Based on the foregoing, the problems are highlighted by the author, the solution of which will improve the activity of the stock market in the Republic of Belarus. The basic directions for improving the stock market of the Republic of Belarus are written below:

1. The replacement of bank loans by attraction additional capital through the stock market;
2. The reduction of tax rates;
3. The reduction of the requirements for the issuance of securities by giving the possibility of entering to small and medium enterprises on the stock market, and, of course, organizations of private property should also be present;
4. Do not extract the interest income from state-owned enterprises due to transactions in the stock market.
5. The development of non-bank institutions;
6. Increasing the number of companies by type of activity (industrial sector, energy, retail, construction, pharmaceutical industry, telecommunications, etc.);
7. Pursue the policy of IPO, in large quantities (IPO – Initial Public Offering);
8. The creation of a common security market of the Union of Russia and Belarus, the Eurasian Economic Union, as well as close cooperation with the members of these organizations.

In author's opinion, one of the most promising solutions is a policy of initial public offerings, in large quantities. This IPO will help to "revive" the operation of securities circulation. IPO has been studied by many economists such as R. Miller, R. Michaeli, R. Smith, C. Rock, John Ritter, and others… The main principle of IPO is to attract additional funds through a nationwide advertising and access to securities. These funds are investments. Moreover, certain factors of the admission to trading have no meaning. IPO – it's initial public offering, which occurs when a company first sells its shares to the general investors. For most companies, this will be a big push forward. IPO will also allow to develop and to increase the capitalization of the stock market. In this research the author will discuss more, as well as the mechanism of action of an initial public offering.

To sum up, the stock market of the Republic of Belarus is developing. There are many obstacles which can be overcome. In connection with this, measures to overcome these problems are proposed: audits, simplification of the mechanism of purchase of securities, the reform of legal acts in relation to trafficking and the issuance of securities, the IPO policy, as well as an increase in the proportion of shares of private companies.

In 2014, the percentage of creating of GDP by small and medium businesses is estimated up to 21.7%. We can see that due to this percent the proportion of small and medium businesses is very high today, but still they have not claimed a share on the stock market.

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Economics

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THE DEVELOPMENT OF LOGISTICS AS A SCIENCE AND APPLIED MANAGEMENT CONCEPTS IN LOGISTICS SYSTEMS OF THE REPUBLIC OF BELARUS AND THE RUSSIAN FEDERATION IN THE CONTEXT OF GLOBAL INTEGRATION PROCESSES

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Relevance of the research lies in the fact that the development of logistics as a science and applied the concept of management is directly related to an increase in efficiency in all areas of production. The article discusses the various concepts of logistics, the main steps and factors of its development, puts the problem in its formation and development in the Republic of Belarus and the Russian Federation to develop measures to address them facts.

Logistics as a science is formed from the first mention of it in annals. From a military science, logistics retrained in the science of management of goods traffic flows and services.

In connection with the transition of planned economy to the market in the Republic of Belarus there have been significant changes. They began to use new management tools and application delivery technology goods and services. This began to develop actively such activities as logistics management concepts.

One of the main tasks of logistics is to achieve maximum effect with minimum cost in an unstable situation in the market. That is, the delivery of the goods must be made at the lowest cost and in minimum time. To global challenges also include simulation of logistics systems and the conditions for their proper functioning.

The main factors that led to the emergence and development of logistics:

1. Development of competition caused by the transition from a seller's market to a buyer's market;
2. The increasing complexity of the system of market relations and increase the quality requirements of product distribution processes;
3. The energy crisis of the 70s of the XX century;
4. Scientific and technological progress in the creation of flexible automated production;
5. Scientific and technological progress in the field of communication and informatics;
6. The development of systems theory and the theory of compromise;
7. Unification of the rules and regulations of foreign trade activities, standardization of hardware settings in different countries. [1]

There are the following stages of the logistics development as a science:

1. 1920–1950 – fragmentation period, the performance of individual logistics functions to lower cost inputs in the production, transport and storage.
2. 1950–1970 – the period of formation or conceptualizing logistics, formation of the concept of total costs, the concept of business – logistics as an integral tool of management and supply and demand coordination for specific products, delivered to a certain place and at a given time;
3. The end of the 70-ies - Stage of development ("packaged packaging revolution"), changed the storage process.
4. 1980–1990 – the stage of development of the integrated logistics concept, which consists in creating a complete supply chain, "the purchase of raw materials – production – distribution – sales" with the lowest overall costs;
5. After 1990 – the current stage, a period of profound research of logistics theory and its widespread introduction into business practices [2].

The evolution of the logistics concept closely linked to the paradigm shift in logistics. Historically the four main paradigms: analytical, technological (information), marketing, integrated, each of which has developed and continues to develop its own tools for more efficient logistics management activities of enterprises [3].

Analysis of the formation, problems and prospects of development of logistics in Russia and Belarus led to the following conclusions.

The origin of logistics in Russia goes to the historical past. In the early stages of science formation it was used in the military sphere, later went to the economic sphere. So in the history there is a well known fact, according to which military theorist Jomini wrote a book on logistics. Subsequently, it was studied by Alexander II. During the Soviet era in the beginning of World War II ambitious logistics project was implemented to dismantle and transport the vast number of enterprises into the country. Unfortunately, the logistics development in the country until the 90s was slow. Logistics activities such as marketing and transport logistics in Russia had been long underestimated, and the sphere of production had always been one step ahead of the goods circulation.

The result was a slow delivery of the goods to the destination and the poor quality of customer service. The need for the application of logistics methods appeared during the transition period.

But there were other factors hindering its development in addition to the underestimation of the most important logistics, including: economic and social instability; poor infrastructure industry (unequipped warehouses, poor roads).

There was no understanding of the importance and the need for the widespread implementation of logistics practices. Perhaps that is why for the majority of Russian entrepreneurs, managers and technical officers its ideas are fundamentally new, even today. Of course, these days, a lot of people have realized that without logistics there won't be any profitable business. So businessmen are increasingly interested in the principles of logistics, universities began to train specialists in the field, and companies increasingly need to form a logistics personnel. It creates even special companies that provide logistics services, the volume of which is growing steadily. Although the recent global economic crisis has halted the development of logistics in Russia, serious logistics companies stay afloat.

You can select the difficulty, exacerbating the aforementioned problems of logistics in Russia and have an impact on its successful and dynamic development: the unstable general economic situation; social tensions of certain sections of society; backwardness of the economy from the world; backlog of infrastructure and transport (the poor state of roads); low level of technology, as well as production and technical bases; underestimation of the treatment structure; insufficient level of development of the industry for the production of packaging industry, etc.

The mentioned difficulties are only particular cases, act as the main obstacle to the absence of such business projects in which it would be clearly spelled out the distribution functions of each company's division. In addition, in the future economic development of Russia, and the competition's level will increase the market activity and customers needs will be higher. Recognizing the enormous contribution of logistics in enhancing the profitability of the business, business owners increasingly have to turn to specialists in the field of logistics. This suggests that there are good prospects for logistics in Russia.

The above prerequisites are folded foundation for the logistics development of the rod in the management of all production's aspects and the economy as a whole.

In Belarus, there was a similar situation. Due to objective reasons of historical, political and economic nature there has been some technological gap in the field of logistics.

The geographical position of Belarus predetermines its role as a transit country. Being at the crossroads of major transportation routes connecting Western Europe with two powerful regional markets – Russia and the countries of South East Asia, and the countries of the Black Sea coast – to the Baltic countries, Belarus is not only can, but must become a key element in the implementation plans building global Trans-European North – South and East – West.

For Belarus, the logistics should become a priority sector, as it is the main transport corridor between Europe, Russia and the countries of the Asian region. In all countries with similar geolocation logistics provides 20-30 GDP, in Belarus, the volume of exports was 11.7% in 2007 in the total volume of domestic exports. In the European Union this figure, at least 2 times higher, while in Austria, Denmark, Ireland, Spain, the UK services account for about a third of total exports, while in Luxembourg – almost 70%.

One reason for the delayed development of logistics is wrong accounting system in Belarus. Currently, transport services are something to trade, then to transport it to the industry. Even greater uncertainty exists in logistics services. In reporting they are more often on the industrial production. Smear this business creates impression of its insignificance, which distorts the economic picture.

Rapid economic growth in our country has demanded from the participants of this market early commissioning of logistics technology and warehouse complexes. However, while there are a number of unresolved issues, one of which is a shortage of qualified professionals.

Today, the level of logistics in our country leaves much to be desired.

Logistics Development in the Republic of Belarus is significantly lagging behind its development in other countries. In Belarus, in spite of its unique geographical position, there no modern logistics centers that meet international standards, there are no logistics operators ZRL and higher level, and there is an acute shortage of professional staff. Thus, the basic guidelines for the effective development of logistics as a science and applied the concept of management in the logistics systems of the Republic of Belarus and the Russian Federation in the context of global integration processes include the following recommendations: to optimize logistics costs throughout the supply chain: the enterprise in the development of logistical aspects its production and sales must optimize their logistics costs throughout the supply chain, rather than on one of its units. For example, it is pointless to develop warehouse logistics (warehouse building of the European level and scale), if the transport logistics is in decline (old-style equipment, inadequate modernization, etc.).

Such a policy will not lead to sustainable development of the entire logistics in general, but only lead to the inhibition of the mutual operation of warehouses and transport. The vector to maintain the current level and

quality of logistics customer service: the majority of businesses in any way trying to introduce logistics in its activities forget about such a direction as work with clients. In most cases, these businesses operate under the old Soviet system, where there is no such thing as "improving the quality of logistics customer service." Therefore it is necessary to resort to the specialists of "modern" quality in areas of marketing and logistics management. To improve the efficiency of logistics operations and performance of staff. If enterprises want to achieve the implemented efficiency of logistics it is necessary to focus on the logistics of each operation. The same concerns the personnel. We need personnel who are specially trained and have the experience in this field. It often happens that the management of logistics enterprises in the Republic of Belarus comes from people who do not know anything of it, and not having a proper education. Such personnel often just work the same way as previously worked, without changing anything substantial. This approach will introduce a pointless expenditure in the formation and development of logistics. The motivation of competent staff to improve operational / financial performance throughout the supply chain: an important aspect of the development of logistics is the staff, which carries out its work.

It is logical to encourage workers who are useful and effective in their work, especially if they bring something new. The number of such workers must exceed the number of employees working under the old system and the laws, which have been described above. Their motivation is to be always active. Participation in the development of the logistics of foreign experts and learning from them: An important indicator of the staff responsible for logistics, it is an experience. It will be logical if the enterprise to enhance the experience of its employees, will recruit foreign experts who will be able to change something, and staff will make some amendments to the work of the company's logistics system. It may be added that the need to attract foreign investment and capital in the construction of logistics centers after their evolving to evaluate all their characteristics and principles of operation to continue, relying on their experience, develop logistics, based on their experience.

On the whole, the effective application of logistics management concept will lead to solving the most pressing problems of the modern logistics systems development of countries and enterprises in the context of global integration processes.

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WAGES AS A FACTOR IN INCREASING PRODUCTIVITY AT SMALL CONSTRUCTION ENTERPRISES

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The article reveals the necessity of interrelation of remuneration with the results of production. Also this paper describes the principles of effective system of remuneration. The author informs the structure of the remuneration system, which will be effective for increasing productivity in companies with a small number of employees in the construction industry.

Introduction. Construction complex of the Republic of Belarus takes one of leading positions in the structure of the national economy. It provides stability and social orientation of the economy also contributes to the development of the productive capacity of the country, the implementation of major social and economic projects. Today it is one of the most rapidly developing sectors in the Republic of Belarus.

Private and mixed construction organizations in market economies are a driver of economic development affect the growth of the economy. So their competitiveness is extremely important and relevant for Republic of Belarus for several reasons.

First, it is an important source of formation of a profitable part of local and national budgets. In 2016 in Vitebsk region there are 636 construction companies, 547 of which are in private ownership. GDP in the region in 2016 was 7 069 667 million, 84% of which introduced private and mixed organizations. [1]

Secondly, it is a source of creation of new jobs that contribute to the growth of real incomes of the population, middle class formation, reduction of the dependency in the society, reduction of outflow of the highly skilled (labor migration) in the countries of near and far abroad. The number of employees of small and medium private enterprises by the end of 2016 reached 10.3 thousand, the nominal average monthly wage of a worker amounted to 6 667 200 BYR. [1]

One of the most important indicators characterizing the efficiency of work of enterprise and its competitiveness is productivity, which is characterized by a number of factors.

All its diversity can be classified into three groups:

1. Increasing the technical level of construction production.
2. Improving the organization of labor, production and management.
3. Socio-economic factors. [2]

The first core group should include all factors related to technological progress: using new technology, improving design decisions, the use of advanced materials and structures. The second group includes factors of an organizational nature: the application of progressive forms of labor organization and production management, the use of new technological solutions. The third group includes factors that depend on the composition of personnel, their qualifications, motivation and stimulation of labor, social and labor relations.

The first two groups of factors play an important role in increasing productivity and are tied to such cost figures in the cost of construction as materials, depreciation, operation of machines and other. At the same time the third group of factors is mainly determined by the structure of wages in the cost of construction. However, according to statistical data for the Republic of Belarus and the Vitebsk region the salary of workers of construction organizations is 20–26% proportion of the construction costs, which in itself already sets wages as some article costs, which should pay special attention in the formation of costs and the determination of the performance of construction organizations.

All of the above determines the relevance of research in the area of wages and finding ways to increase its role of regulating the efficiency of production and reproduction of human potential, which ultimately should lead to increased productivity and sustainable economic development.

Thus, wages can and should be one of the most important factors of increase of competitiveness of the enterprise.

The main part. Currently in a market economy wages is an effective tool that motivates the worker to increase performance. The relationship between results of production and wages is a prerequisite for efficient functioning of the enterprise [3].

According to the article 57 of TK RB salary is remuneration for work which the employer must pay the employee for work performed depending on its complexity, quantity, quality, working conditions and qualifications subject to the time actually worked and for the periods included in working hours [4].

To increase business performance and revenue from the sale of works it is necessary to stimulate workers.

The decisive causal factor in the impact of human activity is motivation.

From the point of view of management motivation is considered as the process of formation of workers motives to activities to achieve personal goals or goals of the entity.

The basis of wages is the price of labor as a factor of production, which is reduced to its marginal productivity. According to the theory of marginal productivity, the worker must produce a product that offsets his salary; therefore the salary is put in direct dependence on efficiency of the worker.

For employee salary is the main and fundamental article of his personal income, means of ensuring the well-being of himself and of his family members. The stimulating role of salary is to improve work outcomes for increase in remuneration.

For the employer, the employee's salary represents the cost of production, and seeks to minimize them, especially per unit of output.

Salary performs motivational and reproductive function, as the salary is a form of wages for labor and an important incentive for employees.

The arrangement for the salary reflects the process of turning the cost of labor in wages. Through the organization of wages is achieved by a compromise between the interests of the employee and the employer, which should contribute to the development of relations of social partnership between the two forces of the market economy.

The remuneration system should be flexible to encourage the increased productivity of labor, to have sufficient motivational effect. The wage growth should not outpace the rate of productivity growth, efficiency.

The flexibility of the wage system lies in the fact that a certain part of earnings is dependent on the overall performance of the enterprise.

In modern conditions to encourage efficiency and productivity it is necessary to change not only the remuneration system but also the approach to its formation, we need different attitudes, thinking and grading scale. Changing approaches to remuneration of recognition of thelabor is that paid no costs, and the results of work product of labor as a commodity. Funds from the sale of goods become the Supreme criterion for assessing the quantity and quality of labor producers and their main source of personal income.

In foreign countries have accumulated rich experience in the application of various wage systems that share a common focus on improving efficiency and productivity.

For example, in Germany a widely used system of bonuses for productivity growth, saving raw materials, etc. the Principle of operation is based on comparison of norms of the active (pre-specified) level of labor productivity, norms of expenses of raw materials with the practical results of the labor of workers. [5]

The remuneration system in France is a regulation of wages based on individual productivity of employees and economic efficiency of the enterprise.

This system is based on the following principles:

1)the payment for an individual production;

2)the fixed part of the salary is provided by the qualified employee, and variable results of the team's work and their own success.

3) the payment level engineering and technical personnel and specialists depends on the state of the labor market, the results achieved and the optimal use of allocated funds. [5]

In the United States system of "evaluation of merit is widespread. The meaning of assessment of merit is as follows: workers with the same qualifications and occupying a position, thanks to its natural ability, seniority, goals, motives and aspirations can achieve different results in their work. These differences should be reflected in wages. By the way, this problem is solved with the help of wage differentiation within the category or position [6].

Japanese companies, for example, use a reward for years of service, along with other factors, material incentives. Back in the 70s, based on the American system of tariff rates was formulated synthetic form of tariff wage. Using two rates: personal (based on seniority and age of employees) and labor (depending on qualifications and performance). Currently, the value of wages by 40% is determined by the length of service in the company [6].

Every entrepreneur, from the variety of existing forms of remuneration chooses the option that best suits the specific conditions of production (technological process, level of specialization, the nature of products and availability of production resources).

Effective remuneration system needs to meet the following principles:

1. Real wages should rise with the growth of production efficiency and labor.

2. The growth rate of labor productivity should outstrip the growth rate of the average wage.

3. Wages must be differentiated depending on the contribution of the worker in the results of operations of the company [7].

Given the outlined principles offer a method of determining wages, which will take into account the specifics of the work and the distribution by staff categories.

In the framework of this methodology at the beginning of the plan year is determined by the total payroll of employees, which is 15-18 % of the contractual scope of work.

After that, the distribution of the wage Fund according to personnel categories using the following principle: for technical workers a correction factor equal to 1.5; for machine operators and drivers was 1.15; for concreters – 1,1; for welders – 1,05; for support staff – 0,6.

In accordance with the received data to a separate payroll for each employee category is divided into two components:

1. Tariff part, which will provide the minimum state-guaranteed salaries.

2. The premium part, which is divided between personnel of the same category using the labor force participation rate, depending on the activity or ratio value.

All the other contractual quantities which lie in the current period, allow the Director to create additional payroll for each category of workers and to distribute it according to the principle described above.

This principle will not inflate the amount of cost of work performed at the expense of the wage Fund to the level of unprofitability of the enterprise and will not allow the excess growth of wage on rate of growth of labor productivity.

Conclusion. As a result, this technique allows prevent the excess growth of the wage above the rate of productivity growth and increase productivity at the company by encouraging employees to achieve high performance and decent wages.

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Economics

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CONCEPT OF LIFELONG LEARNING – THE MAIN VECTOR OF MODERN EDUCATIONAL SYSTEM DEVELOPMENT

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Now front lines in the industrial relation of the country are steadily departing from the orientation at the industrial development and heading for the creation of the economy based on knowledge.

It assumes the change of labor activity nature and is expressed in change of priorities. This approach approves of a priority role of knowledge and training in the structure of society and recognizes knowledge as the main value of a person and society. The economy based on knowledge requires availability of the education systems developed and covering more and more population and training promoting growth of some part of highly qualified specialists in a labor force composition and creating favorable conditions for life-long education of citizens. The emphasis is placed on the development of creative capabilities and flexibility in people, and also a capability to constantly adapt to the changing requirements of social development and the economy based on knowledge.

At the moment the world is at an early stage of awareness of the value of life-long training for reforming the system of professional education and training. On the one hand, there are social and economic forces which induce the states to invest into education and infrastructure of professional training for the purpose of compliance to the increasing level of the international competition, and citizens – to mastering new knowledge and the abilities necessary for them for accomplishment of the functional obligations and maintenance of the level of income. On the other hand, the development of the society founded on knowledge opens new opportunities for the development of the personality and allows citizens to take active part in the process of transformations and creation of new prospects of economic and labor life.

As each country has its own social, economic and institutional system, human resources development and training have their own features too. So, the dual system in Austria, Germany and Switzerland is historically based on close interaction of employers and entities with education and training. In Finland, France, Sweden education and training are based on educational institutions. Despite the distinctions between the countries, whether they represent social and economic models, have their culture, the role of the state, the public or private financing or other distinctions, it is possible to isolate a number of the general principles which are the cornerstone of the training and human resources development. These principles, partially or completely, are realized in the national legal system or practice of various countries. They are recognized by the ILO, the European Union, the Group of Eight and OECD. Below the basic principles on which the modern policy is based, the legislation and practice in the field of human resources development and training are considered. They include: formation of the investments stimulating environment of all concerned parties into human resources development and training; creation of institutes for the human resources development and training answering the features of the specific country; ensuring equality of access to training, irrespective of the social status, income, sex, age, ethnic origin, etc.; establishing partner communications between various concerned parties for the benefit of development of education and training; application of the techniques focused on the student and the use of ICT; investments into human resources development and training: social, economic and institutional environment [1].

The overall objective of investments into education and training consists in bringing their share in GDP to 6%. However education itself and training aren't capable to answer challenges which the countries during the era of globalization and transition to the society founded on knowledge face. For the solution of this task it is required that education and training were conformable to general policy in the field of economy, market development of work and social development. Harmonization in demand economy with the offer is the cornerstone of such policy. Various combinations of economic and social measures, the same as the measures aimed at labor market development can serve as incentives for investments into education and training. These measures can be applied at the macro level – for the purpose of increase in human capital investments and material resources. The combination of macroeconomic and political stability, favorable investment climate, effective economic policy and purposeful education and training proved the historical success. The lack of human capital investments and material resources has led to the reduction of labor productivity and quantity of the created workplaces, economic stagnation and the low income. Thanks to active social policy and active labor market policy, including questions of education and training, there has been a real decline in unemployment and inclusion in life of society of problem national groups. So, in Ireland pointed investments into human resources are successfully combined with investments into supply available and the industry. This approach caused a strong growth of economy and the income. The important instrument of investment attraction of the entities and individuals in education and training are financial incentives. In the Netherlands, for example, citizens can subtract from annually taxable income of the amount (in the amount up to 15000 euros), spent for increase in the capability of employment at this or future workplace. Employers have the right to reduce the taxable income by a certain percent. Besides, all participants of the apprenticeship program receive a tax benefit in the amount of 2500 euros when passing a rate of NG.

It is necessary to emphasize that only investments alone aren't enough for the development of education and training. Priority value acquires the innovative ideas and knowledge now. This strategy assumes the availability of three elements of human resources development, infrastructure and the content oriented at demand. At the same time the leading principle is equality of access to information for citizens. In many countries active labor market policy provides the citizens with so-called "second chance" to get a job after a long period of unemployment or help to return to labor activity after they were the unemployed. In the context of life-long training the increasing distribution is found by such directions of training for the labor market as advanced training, retraining and achievement of higher educational level. As a result of training citizens get access to new work and easier cope with the changes happening in the society founded on knowledge and in information society. Training helps people to be integrated into economic life and solves a problem of social exclusion. Active labor market policy has long traditions in such countries as Sweden, Germany and Denmark, and is carried out now in all EU countries, and also in countries with economies in transition for fight against unemployment in the conditions of economic reforms.

It is necessary for the development of the concept of life-long training: to review training programs, pedagogical methods and the organization of training and shifting focus of training towards students; to create the corresponding trajectories of training which would allow pupils to perform movement and promotion through various grade levels; to create collateral resource security; to provide active participation of the Ministry of Education, the authorities at the regional level and higher education institutions in implementation of the concept of training during all lives [2].

Education during all life implies the need to study continuously, constantly and consistently. At the same time a student will have a certain set of competences which will include the competences necessary for sustainable development and in a social capital.

The important social and economic reasons press active development of education during all life, namely: acceleration of rates of globalization; prompt scientific technical the progress leading to development of society of knowledge; the change of nature of work causing the necessity of fixed enhancement, updating of competences; increase in mobility and flexibility of the labor market; the growing polarization between the intellectual workers and persons who don't have a sufficient level of knowledge; immigration flows; need for bigger social responsibility of the person and others.

Development of the concept of life-long training is impossible without motivation of people to training and active actions of the governments, the organizations which are engaged in qualification systems and the organizations performing preparation which will provide the solution of the following tasks: recognition of the skills providing employment; creation of structure of qualifications; expansion of the choice of the qualifications offered to students; refining of a trajectory of training; ensuring transfer of the credits; increase in flexibility of the training programs leading to obtaining qualifications; creation of new ways of increase in qualifications; reduction in cost of qualifications; recognition of informal and formal training; monitoring qualification systems; optimization of a role of the interested circles in qualification systems; enhancement of methods of requirements analysis for the purpose of upgrade of qualifications; improvement of use of qualifications in case of employment; ensuring availability of qualifications; investment into pedagogical innovations; expression of qualifications in terms of results of training; improvement of coordination between qualification systems; quality assurance optimization; improvement of information and methodical support on qualification systems.

There is a rating of 20 mechanisms of implementation of the concept of education during all life, the main of which, according to the European experts, are: improvement of use of qualifications in case of employment; return to study for advanced training; identification of the skills providing an employment; investment into pedagogical innovations; expansion of the choice of the qualifications offered to pupils; monitoring of qualification systems; improvement of information and methodical support of work in qualification systems; reduction in cost of getting qualifications; enhancement of methods of requirements analysis for the purpose of qualifications upgrade; increase in flexibility of the training programs leading to qualification; ensuring availability of qualifications; expression of qualification in terms of results of training; clearing of a trajectory of training.

Now in social thought and policy the line item according to which efficiency of economy development, its competitiveness, level of innovation are determined not only and not just by material and financial resources, how much does the level of development of a human capital which is created, first of all, by the existing education system in general and professional education in particular dominate? Modern society is characterized by high rates of changes of various components of subsystems and elements which cause the need for search of a new vector for the development of the essential and additional professional education. The paradigm of life-long training – lifelong learning has become a new approach. In this regard the task for consideration of its main stages of evolution and identification of the theoretical bases has been represented.

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UDC 332.1

THE EVALUATION OF THE ASYMMETRIC DEVELOPMENT OF THE REGIONS IN THE CONTEXT OF ENHANCING THE GROWTH POINTS IN THE REGIONAL ECONOMIC SYSTEM IN THE REPUBLIC OF BELARUS

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The article reveals the type of the regional development, prevailing in Belarus in 2010–2014 years. It identifies the most problematic areas and regions in terms of development of asymmetry. The basic form of the creation of points of the economic growth and the mechanisms of their activation are studied.

Introduction. In modern conditions the states of the region show the unevenness of economic development indicators, which leads to an increase in the imbalance and disruption of economic equilibrium. The emergence of depression on this basis and prosperous regions is a major problem in the development of the economy, not only our country, but all countries, regardless of their administrative and territorial structure and the level of socio-economic development. The uneven development of the regions due to both objective and subjective reasons. Taken together, these reasons in particular should indicate the imperfection of regional policy, the limited use of modern models of regional development, incomplete use of the potential and competitive regional development mechanisms.

Task information. Identifying the problems, the assessment and alignment over the socio-economic asymmetries at the regional and subregional levels are becoming increasingly important in modern economics. It must be mentioned, that while the focus is on the analysis of the asymmetry of the levels of economic and social development of the regions, and not always this analysis includes an assessment of the potential asymmetry of socio-economic development. Meanwhile, the differences in potential are objective factors which largely determine the regional and sub-regional asymmetry of economic development, which in turn determines the asymmetry of social development [1]. Thus, the estimate of the asymmetry in the distribution of regions in the manifestation of the factors of economic development and the potential socio-economic development of regions and territories is of great practical importance.

Result, their discussion and perspectives. The type of the regional development from the point of view of the development of asymmetry can be asymmetrical, smoothing and neutral, and is set based on the evaluation of dynamics of coefficient of variation. The type of regional system is determined for each of the analyzed only economic performance and dynamics in [2]. Table 1 shows the coefficient of variation of indices that assess its change in Belarus in 2014 compared with 2010, and represented the identification of the type of regional development for each of the analyzed economic indicators.

Table 1 – Types of regional development on the basis of asymmetry in Belarus

Name analytical index	The coefficient of variation, %		The index of the coefficient of variation	Type regional development
	2010	2014		
1	2	3	4	5
1. The result of economic activities in the region				
A	1	2	3	4
1.1. GRP percapita	23,95	27,98	1,17	Asymmetric
1.2. GDP per person employed in the economy	14,25	18,23	1,28	Asymmetric
2. Performance indicators of economic activity				
2.1. Productivity for GVA (per employee)	14,46	16,61	1,15	Asymmetric
2.2. Capitalproductivity (GRP)	17,57	22,95	1,31	Asymmetric
2.3. Returnonsales	28,42	25,04	0,88	Smoothing (with a sufficiently high level of heterogeneity)
3. Development of small business				
A	1	2	3	4
3.1. The number of micro and small companies per 1000 population	45,98	50,64	1,10	Asymmetric
3.2. Labour productivity per worker employed in micro and small companies region	28,5	22,93	0,81	Smoothing (with a sufficiently high level of heterogeneity)

End of the table 1

1	2	3	4	5
4. Research and Innovation				
4.1. The number of employees engaged in research and development (by 1000 the region's employment in the economy)	87,33	87,36	1,00	Neutral type (high level of heterogeneity)
4.2. The share of shipped innovative products in the total volume of industrial production	43,61	56,14	1,29	Asymmetric
4.3. The share of exports in the total volume of innovative products and industrial organizations	45,58	22,2	0,49	Smoothing
4.4. The share of innovation-active organizations implementing costs on technological innovation, the total number of surveyed industry organizations	11,92	33,41	2,80	Asymmetric

Source: compiled by the author on the basis of previously made calculations the coefficient of variation and skew-factor.

From Table 1 it follows that for the analyzed period, seven of the eleven economic indicators were characterized by increasing the coefficient of variation, which allowed to determine the type of regional development for these economic indicators like asymmetrical.

Reduction of the Regions of the Republic of Belarus irregularities in 2014 compared to 2010 took place on three indicators: return on sales; the productivity of labor employed in micro and small enterprises and the share of exports in the total volume of innovative products and industry organizations. Reducing regional differentiation clearly can be seen as a positive trend, provided the favorable dynamics of economic indicators themselves. If the decrease of differentiation takes place against the backdrop of deteriorating the dynamics of economic indicators, the economic result of convergence regions is low.

When evaluating the heterogeneity of regional development on one or another economic indicator, based on the coefficient of variation is a problem establishing variation coefficient valuesintervals to determine the quality of its performance. In our study, given that the majority of statisticians as an upper limit above which points to the heterogeneity of population, is the value of the V, more than 33%, adopted the following scale: for V <15% variation is recognized low; at 15% ≤ V≤ 33% have an average level of heterogeneity; at V> 33% variation (heterogeneity) high.

Table 2 shows the results of the qualitative assessment of heterogeneity regions of the Republic of Belarus on economic indicators analyzed.

Table 2 – The level of heterogeneity and the behavior of the variations of economic indicators in the regions of the Republic of Belarus for 2010–2014 years

The name of indicators	Heterogeneity level and nature of changes in the variation for the years 2010–2014
A	1
1. The result of economic activities in the region	
1.1. GRP percapita	The average level of in homogeneities, increasing heterogeneity in 2014
1.2. GDP per person employed in the economy	The low level of in homogeneities, increasing variations in 2014
2. Performance indicators of economic activity	
2.1. Productivity for GVA (per person employed in the economy)	The low level of in homogeneities, increasing variations in 2014
2.2. Capital productivity (GRP)	The average level of in homogeneities, a significant increase in the in homogeneities 2014 (index variation coefficient of 1.31)
2.3. Return on sales	The average level of in homogeneities, a marked decrease in variation in 2014 (the coefficient of variation of the index of 0.88)
3. Development of small business	
3.1. The number of micro and small companies per 1000 population	The high level of heterogeneity. Increased in homogeneities in 2014

End of the Table 2

A	1
3.2. Labour productivity per worker employed in micro and small companies	The average level of in homogeneities, a marked reduction of variation (coefficient of variation of the index of 0.81)
4. Research and Innovation	
4.1. The number of employees engaged in research and development (1,000 employed in the economy)	Consistently high levels in homogeneities
4.2. The share of shipped innovative products in the total volume of industrial production	The high level of in homogeneities, a marked increase in variation coefficient of variation of the index of 1.29
4.3. The share of exports in the total volume of innovative products and industrial organizations	The high level of in homogeneities the regions in 2010.
	The average level of heterogeneity. Reducing in homogeneities by more than 2-fold in 2014
4.4. The share of innovation-active organizations implementing technological innovation costs, the total number of surveyed industry organizations	The low level in homogeneities in 2010
	The high level of heterogeneity of the region in 2014. The growth of in homogeneities is almost 3 times.

Source: compiled by the author according to the data in Table 1.

Analysis of the data in Table 2 suggests the following conclusions:

First, seven of the eleven economic indicators, which assessed the heterogeneity of the regions of Belarus, celebrated its gain in 2014 compared to 2010. This indicates that the growth of regional differentiation processes in terms of economic development;

Second, in 2014 a variation of the four economic indicators analyzed in its level was defined as high. In addition, as shown in Table 2, it figures that are included in unit 3 "Development of small business" in block 4, "Research and Innovation". This indicates the need for increased attention to this direction of development of regions, especially because they are a form of development and enhancing economic growth points;

Third, the low level of variation observed for the two indicators of regional development: GRP thereof employed in the region and on the performance of GVA. Although the variation of these parameters remained within the range of the average, each of them in 2014 celebrated its strengthening, which also indicates the strengthening of the processes of differentiation of economic development of regions of Belarus.

The statistical data collections of "Regions of the Republic of Belarus: the socio-economic indicators" and "Statistical Yearbook of the Republic of Belarus" we received the data to identify regions and the leaders of the regions with the worst values are considered the economic indicators.

Our study showed that in seven of the eleven economic indicators, that is the majority of them had the lead and retained in the 2010–2014 Minsk. In the block of indicators characterizing the development of research and innovation in one position as a leader in the 2010-2014 occupied the Vitebsk region. It should be noted the positive dynamics in the positioning of the Vitebsk region of Belarus among other regions. In 2010, this area in three areas had the worst values, but in 2014, she lost the position of Brest, Gomel and Mogilev regions. The most problematic region of the Republic of Belarus on the level and dynamics of the considered economic indicators is the Brest region, which had in 2014, the worst position on the five indicators, of which three figures refer to the unit "Research and Innovation", which indicates a limited use in the region of this form activation points of economic growth as the development of innovative activities.

For the development of regional growth points, you need to know in what areas, and in what form you can create and activate potential growth points. A study on the problems of regional development in accordance with the concept of growth poles, these questions are reflected. There are the following forms of creation and activation of growth poles: free (special) economic zones; Clusters; clusters; parks; Zone Economic and Technological Development; small industrial education; development zone of high-tech production.

To offer advice on the development of various forms of creating growth poles are three forms chosen in areas where there are the greatest regional differences, such as small business development, innovation, the creation of free economic zones.

For small business development it is recommended to create of a three-level organizational structure (the first level is the Ministry of Economy, which defines the purpose of long-term policy for SMEs and its expected impact, both for the sector and for the economy as a whole. At this level, as determined by the budget. In the second level is an organization that acts on behalf of the Ministry, but has great operational powers. On the third level are the organizations that are responsible for developing and implementing measures to support small and medium-sized businesses).

The legislative framework in the field of the free economic zone provides the basis to support the following areas of development. 1. Creation of conditions for development of commercial infrastructure in the process of attracting FEZ.2.Facilitating the process of attracting the territory of FEZ banks, insurance companies, financial companies to provide access to financial residents, including foreign, capital. 3. Development and

implementation of FEZ development programs, taking into account global trends. 4. Introduction of property on the territory of free economic zone on the ground, etc.

Based on the legal framework for investment projects of the Republic of Belarus are the following ways to overcome the Republic of Belarus of innovative development. 1. Establishment of small innovative enterprises and support their state. 2. The introduction of public private partnerships in innovation. 3. "Innovation without research." 4. Entrepreneurial activities carried out within the large enterprise. 5. The use of CALS-technologies. 6. Creation of strategic alliances for joint and introduction of R & D results. 7. The use of venture capital. 8. Establishment of a mechanism that regulates the production of obsolete products, which will allow timely response to changes in the external and internal environment (scientific and technological revolution, obsolescence of products and so forth.). 9. Innovative activity in the field of IT-technologies 10.Intellectual Property Events. 11. Improvement in the area of intellectual property law.

Conclusion According to the results of the analytical study of the problem of the asymmetry, the evaluation of the Republic of Belarus regions the following conclusions can be stated.

1. In the Republic of Belarus in 2010–2014 the asymmetrical type of the regional development was dominating.

2. The asymmetric sphere of small business and innovation regions is the most problematic in terms of the development.

3. The most problematic region of the Republic of Belarus on the level and the dynamics of the economic indicators discussed is Brest region. The leader is Minsk.

4. The recommendations for the development of various forms of creating growth poles are essential.

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CREDITING OF PHYSICAL PERSONS IN BELARUS: ACTIVITIES AND RECOMMENDATIONS FOR IMPROVEMENT

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In the article the model of lending to physical persons is considered, methods of lending are analyzed. The need to improve the assessment of the creditworthiness of the customer is described. The development of the system of Bank insurance is proposed.

As the experience of the development of domestic and foreign banks shows, the problem of the credit system improving, including determining the level of creditworthiness of the applicant, currently, does not lose its relevance, and therefore requires additional theoretical and methodological rethinking. This is not only an increase in the specific weight of credit portfolio in the total volume of active operations of banks, and increasing interest in credit worthiness of the applicant from the controlling organizations.

Analysis of laws and regulations, domestic banks used in the daily practice shows that studying the credit process, particularly in assessing the creditworthiness of individuals has received little attention. The actual financial condition of an applicant will not be considered as one of the criteria of credit risk management. The legislation does not require banks to assess correctly the creditworthiness of the applicant. According to the rules offered there are simple calculations of several factors. It seems that this point of view, under no circumstances cannot be considered correctly [1–3].

Currently, in the context of universalization of banking it is necessary to pay more attention to the development of new tools – modeling of the nonlinear dependencies in the evaluation of credit risk, including neural networks that mimic the human brain. Unfortunately, from the point of view of the development of external sources of information on the activities of the borrowers, the domestic practice of banking lags far behind the practice of economically developed Western countries.

Despite coming into force of the decision of Board of Belarusian National Bank from 27.05.2009 № 67 "On the formation of credit histories and providing credit reports", factors of risk in consumer lending still lack reliable information about the applicant and the imperfection of methods of assessing their creditworthiness, poor communications in the area of retail services.

The borrowers – individuals face difficulties associated with the calculation of the real cost of servicing the loan, with incomplete information about the terms for different banks: many of them are poorly informed about their rights and responsibilities for the implementation of the commitments under the credit agreement.

Obviously, when consumer crediting approaches the assessment of credit risk, methods of management must be different from the ones lending to organizations and corporations. Meanwhile, many banks, getting consumer credit, tried to use the same techniques of risk management that was developed by them in lending organizations. This has led to serious distortions in risk assessment of individuals and unnecessarily complicated the decision-making procedure of issuing credit and monitoring of debt [4–5].

Currently, a significant portion of bad loans is due to incorrect rating information. Therefore, the assessment of the creditworthiness of the borrowers is an integral part of the Bank's credit risk management.

In the international practice the research was conducted to identify the impact of factors causing losses of banks when lending to customers and affecting the exposure to credit risk. These studies showed that the most influential of these is the financial position of the borrower (takes 31% of the total influence of all factors).

The Republic of Belarus is characterized by such methods of assessing the creditworthiness as a logical method (the method of expert evaluation) and scoring method (point system).

The logical method is based on an expert evaluation and involves a balanced analysis of the personal qualities and financial condition of the borrower. Under the expert assessments of the creditworthiness of the customer, banks rely on the economic approach, i.e. banks analyze information from the point of view of banking requirements. This analysis assumes a balanced assessment of the personal qualities and financial condition of the borrower.

This method also has its drawbacks: the duration of decision-making on granting of credit; a significant document; the presence of subjectivity when making decisions.

The alternative to expert assessment is the scoring method for the assessment of the creditworthiness of the customer. This method is considered to be the most effective. It is a statistical model that evaluates the likelihood that the borrower will pay their obligations in time. Scoring highlights those characteristics that are most closely related to the reliability or, conversely, with the unreliability of the client.

All information is verified and entered into the scoring system in the form of answers to questions. The questions are divided into blocks, which are individual for each Bank.

The disadvantage of this method is that the Bank is relying on bad credit history of the client, makes a decision not in his favor, without considering the cause of such a credit history (because credit history is not always dependent on the causes that are the direct actions of the borrower).

Thus, we can say that the composition factors in the model are not universal for all banks, as each model has its advantages and disadvantages. Therefore, the choice of a particular method will depend on each Bank. However, the most effective assessment of the creditworthiness of the borrower and credit risk reduction best options is the use of the considered techniques together, which will allow more detailed study of the creditworthiness of the customer.

The development of a system of Bank insurance is also proposed. Analysis of the current state of the domestic financial services sector is the evidence of the urgent need for the development of joint programs of banks and insurance companies (Bank assurance) in the field of life insurance that are attractive and beneficial both for banks and for insurers.

The prospect of joint insurance programs demonstrates many European countries where Bank assurance is the main channel of implementation of programs for life insurance. In countries with centuries of insurance history, such as the UK or Germany, the share of payments for life insurance policies implemented through the Bank assurance, is 13 and 19 percent, respectively.

Expansion of services through the implementation of joint with insurance companies' products will allow banks to:

– attract new customers and satisfy the needs of regular customers;

– get additional profit at the expense of the Commission, as the seller of insurance products;

– expand the range of services in customer service and obtain additional competitive advantages to promote their own programs.

– create a positive image of the Bank.

Due to the above-presented proposals, it will be possible to improve methods of assessing the creditworthiness of individuals, which will allow more detailed study of the creditworthiness of the customer.

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Economics

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BANKRUPTCY PROCEDURES AND CONDITIONS OF USE

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In this article procedures of bankruptcy in relation to the debtor are examined. The existing procedures in Republic of Belarus are analyzed. The new procedure is offered: "the preliminary analysis" which needs to be considered further in more detail. On the basis of the conducted research the author proposes to develop this procedure in according to the legislation of Republic of Belarus.

In the analyses of the concepts "inability to pay", "insolvency" and "bankruptcy" the author concluded that a commercial organization is a bankrupt on condition of recognition by the court and acknowledged the dissimilarities of the concepts.

Conditions and order for recognition of the company bankrupt are based on the specific legal procedures. At the same time procedures are considered from a position of the debtor and from a creditor's position.

Let's consider the general procedures of bankruptcy with the debtor's positions which are offered by the author after studying normative legal acts and opinions of economists (fig. 1.1).

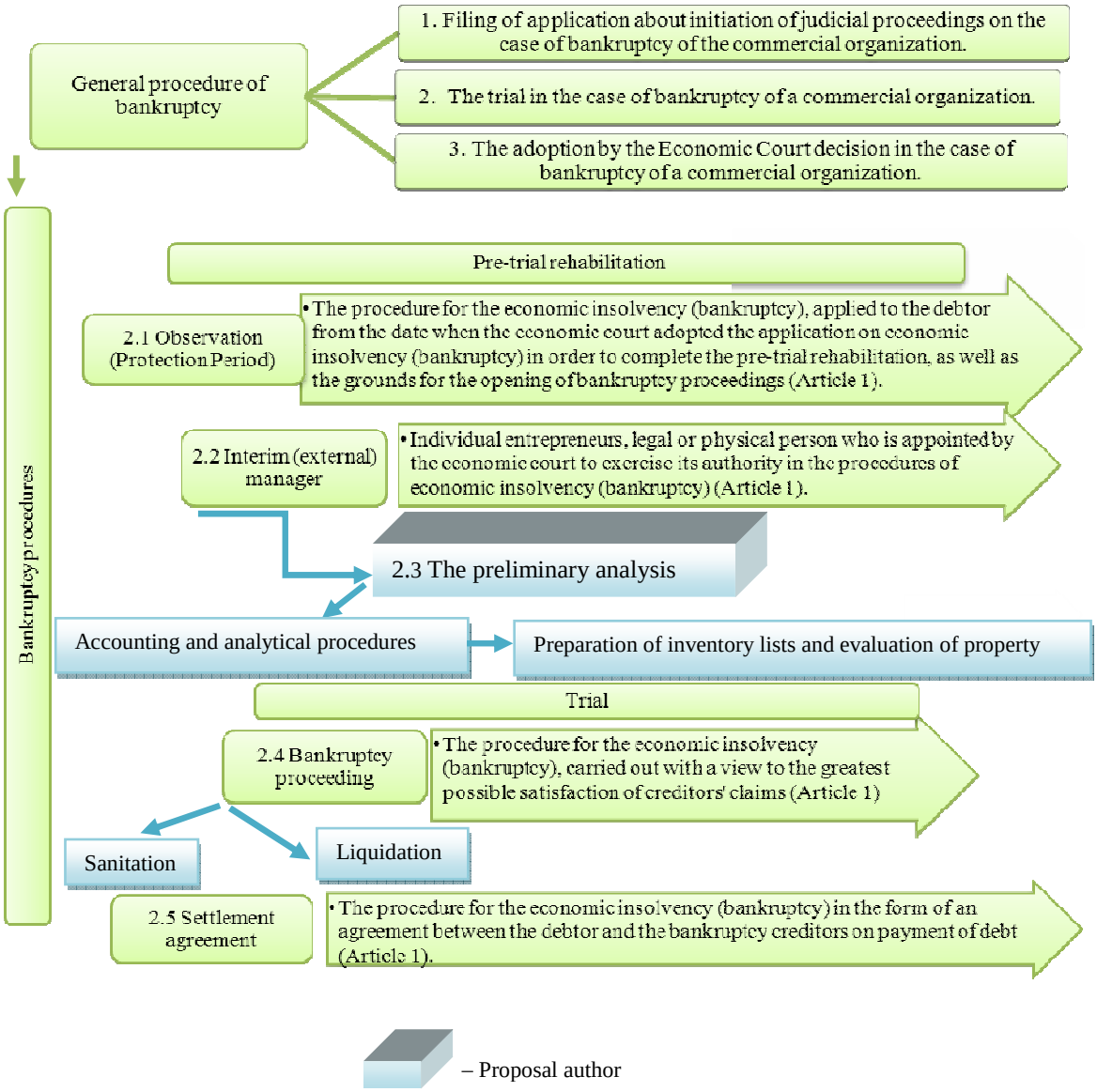

Fig 1. The proposed algorithm of bankruptcy proceedings against the debtor

Briefly describe the general procedure for the definition of bankruptcy:

1. Filling of the application for initiation of judicial proceedings on the case of bankruptcy of the organization.

The application of the debtor is submitted writing form and signed by the head of the debtor or the debtor – individual entrepreneur, and in the case established by a part of the second article 243 of the present Law – the chairman of the liquidating commission (liquidator).

2. The trial in the case of bankruptcy of the organization.

The purpose of the trial:

– The establishment of the real reasons for the insolvency of the organization;

– The ability to form and eliminate insolvency;

– The presence of prerequisites for successful overcoming of the financial crisis in the future.

3. Adoption of the Economic Court decision in the case of bankruptcy of the organization.

This solution may take the following forms:

– deviation of application in identifying the financial viability of the organization of the debtor if the insolvency of the organization of a technical nature ("technical bankruptcy"), i.e., available assets allow the debtor to fully satisfy all financial obligations and to carry out further economic activities;

– the suspension of the proceedings in connection with the reorganization proceedings. These procedures are aimed at preventing the liquidation of the organization and its way out of the financial crisis (trust management of property of the debtor company and its sanitation);

– recognition of the organization of the debtor bankrupt and its liquidation, i.e., made special liquidation procedures (opens bankruptcy proceedings).

In the absence of signs of bankruptcy, the economic court refuses to accept the relevant application of the bankruptcy debtor.

However, the presence of such signs (inability of the debtor at the moment to repay financial obligations and pay taxes to the budget) does not mean that the debtor as a bankrupt will be subject to compulsory liquidation.

In addition to the procedure of bankruptcy proceedings, applied in the liquidation of the debtor – legal entity, for it can be used and other procedures: observation; asset management; settlement agreement.

On bankruptcy proceedings instituted by the economic court, on the basis of an application for a bankruptcy.

When considering the bankruptcy case the debtor – legal entity shall apply bankruptcy procedures specified in Figure 1 (2.1 – 2.5), which will be presented in the following analysis.

2.1 Observation (Protection Period) Article 39 Law of Republic of Belarus «On economic insolvency (bankruptcy)» № 415-Z from 13.07.2012g.

When hearing the bankruptcy case by the economic court introduces procedure of Observation (Protection Period) in relation the organization of the debtor.

The meaning of this procedure – at the time of the economic court to produce applications for debtor bankruptcy is not yet clear whether it is in fact insolvent (ie, in a state if it satisfy the claims of creditors on monetary obligations and (or) execute a duty to make compulsory payments in full). Introduction observation (protection period) and limiting the powers of its head to determine the state of solvency of the debtor and the preservation of its property.

2.2 Interim (external) manager

According to with the «On economic insolvency (bankruptcy)» № 415-Z interim (external) manager has its own rights and obligations, which are written in Article 41 and Article 42 of this Law.

Interim (external) manager conducts accounting and analytical procedures, one of which is an inventory of assets and liabilities in accordance with the Regulations on the inventory of assets and liabilities, approved by Decree of the Ministry of Finance of the Republic of Belarus of 30.11.2007g. № 180.

At this stage, an interim (external) manager can be concluded that: can a commercial organization to restore its solvency within a three-year protection period, or a persistent inability to repay its financial obligations and other reasons that lead to the institution of proceedings of a commercial organization.2.3 Предварительный анализ прогнозирования банкротства коммерческих организаций

As part of a interim (external) manager the author offers to conduct a preliminary analysis of the predictive capability of bankruptcy of commercial organizations.

Evaluation of the bankruptcy of commercial organizations in the Republic of Belarus is based on a whole range of different indicators. In this work the author proposes to use a series of the following indicators: cash ratio, current ratio and the ratio of financial liabilities security assets. These indicators characterizing liquidity organizations are listed in table 1.

Table 1 – Indicators of liquidity of the organization

Indicator	Calculation procedure	Characteristic
Cash Ratio	(short-term investments + Cash + Cash Equivalents) / Current Liabilities	It describes what part of the short-term liabilities can be repaid at the expense of the available balance of cash and short-term investments
Current Ratio	Current Assets / Current Liabilities	It characterizes the degree of coverage of short-term debt by circulating assets of the organization
Ratio of financial liabilities security assets	Short-term liabilities + Fixed liabilities / Balance currency	This ratio shows that if an organization is able to repay its debt after the sale of existing assets; how the firm is independent of the creditors.

Source: own development on the basis of the instructions on the procedure for calculating the solvency ratios, and analysis of financial condition and solvency of business entities.

The author doesn't take into account the ratio of its own working capital, as in western countries practice this ratio is not calculated, as the right of ownership and a sphere the production of differentiated and interrelated, and the availability of liability from the organization in no way affect the financial position of the organization. However, it should pay attention to the ratio of financial liabilities security assets, as this indicator shows whether the organization is able to pay its debts and the normative value of the index does not depend on the industry trade organization.

2.4 Bankruptcy proceeding

The adoption of the economic court decision to declare the debtor bankrupt entails the opening of bankruptcy proceedings.

Since the opening of the economic court bankruptcy proceedings occurs the first meeting of creditors, which may apply to the debtor in order to meet their requirements only in the manner prescribed by this Law.

Bankruptcy proceedings entered a period of not less than one year. The term of bankruptcy proceedings may be extended by the economic court for six months (Art. 140).

Bankruptcy proceedings – one of the bankruptcy procedures applicable to the debtor declared bankrupt, in order to proportionate satisfaction of creditors' claims.

For the implementation of the bankruptcy proceedings, the economic court appoints an antichrists manager from among the candidates to be proposed by the meeting of creditors.

2.5 Settlement agreement

At any stage of the process the economic court of a bankruptcy case the debtor and creditors have the right to the settlement agreement.

The decision to conclude the settlement agreement by the bankruptcy creditors and authorized bodies is accepted by the creditors meeting. The decision of the creditors 'meeting on the conclusion of a settlement agreement by a majority vote of the total votes of the bankruptcy creditors and the authorized bodies in accordance with the register of creditors' claims and deemed to be accepted, provided that voted for him all creditors on liabilities secured by pledge of property of the debtor (Article 152).

Obligatory condition of the settlement agreement is that it can be concluded after the repayment of the claims of the creditors first and second stage.

Law of the Republic of Belarus «On economic insolvency (bankruptcy)» № 415-Z from 13.07.2012g. provides a number of pre-trial procedures, rehabilitation and trial. In the above normative document has no practical guidelines for conducting bankruptcy procedures. As a result, the author developed an algorithm of bankruptcy proceedings against the debtor and creditors. The developed algorithm is system-oriented in nature, aimed at a consistent gradual bankruptcy proceedings, namely, the author has been offered at the stage of monitoring (guard period), temporary (external) to conduct a preliminary analysis.

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UC 330.837+330.1

COMPONENTS OF SOCIAL CAPITAL INSTITUTIONS OF THE EURASIAN ECONOMIC UNION

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The article considers the formation of institutional environment of the Eurasian Economic Union through the components of social capital institutions which are affecting the quality of the integration of the Union countries. The author defines the components of social capital institutions and shows how they are operating.

The institutions of social capital of the Eurasian Economic Union (EAEU) are in process of formation in integration conditions. In this regard, the development and implementation of select groups of institutions in society which should create conditions for improvement of social capital institutions of the integration space are quite important activities of these Union countries. We can characterize these Member States that have arisen from the post-Soviet space, as the historical community of economic interests, social norms, system of moral values, and general rules and norms of behavior of the social capital institutions on the territory with population of more than 180 million people [1, p. 44–59].

The economic effect of the integration of the EAEU Member States depends on the quality of the functions of social capital institutions, and, as a result, provides economic growth for each country, and, therefore, reduces the level of uncertainty in interaction of economic agents. The Underdevelopment of social capital institutions complicates the process of increasing the level of integration of the Union countries [2, p. 30–31]. It follows that it is necessary to pay attention to the quality of the institutional environment which is formed by these social capital institutions of the EAEU. The qualitative characteristics of the institutional environment, as we know, should demonstrate how well formal and informal institutions of social capital contribute to obtain these special benefits for society or community of actors [3, p. 48]. In our opinion, these social capital institutions are *intangible socio-economic formations which stimulate actors to achieve positive economic effect, such as benefit or profit in monetary terms, or their equivalents, and they are based on the formation of stable norms of formal and informal relationships between actors* [4, p. 55–60].

Institutional environment of the EAEU includes a variety of institutions: political, economic, social, religious, etc. [5, p. 82–87]. They contain norms that can influence the decisions of actors and setting up point of balance between formal and informal norms for institutional environment of each state. It will form an active social policy and social balance [6, p. 374–375]. From an economic point of view, social capital institutions differ from other institutions of the institutional environment their economic orientation to profit or benefit. As a result, it forms the institutional environment of social capital of the EAEU. Thus, according to our definition, the institutional environment of social capital of the EAEU – *is an integration area of activity of social capital institutions which govern the behavior of society or community of actors, focused on achieving benefit or profit in monetary terms, or their equivalents* [4, p. 55–60].

These social capital institutions of the EAEU are formed on the basis of agreements that were reached earlier: the Customs Union (2010–2012), then the Common Economic Space (from 2012 till 2014) [1, p. 53]. On January 1, 2015 the Treaty establishing the Eurasian Economic Union came into force, which is the main tool of formation of the social capital institutions of the Union countries, where each actor is a member of a few institutions through existence into numerous contacts and links with other actors [7; 8, p. 10–11]. On the basis of these contacts and links a number of tools of social capital institutions within framework of institutional environment of the EAEU: fundamental, modeling, formalizing, instructing and forming is implemented (Table 1).

Table 1 – The tools of social capital institutions of the EAEU

The tools of social capital institutions	
Fundamental	Treaty, agreement, statute, memorandum, convention, declaration, recommendation, report, statement, etc.
Modeling	Plan, program, project, concept, research, law-project, regulation, discussion, consultation, coordination, methodology, methods, recommendation, forecast, codification, expertise, limiting, licensing, etc.
Formalizing	Constitution, act, regulation, decision, decree, resolution, law-book, ordinance, addition, amendment, law, quota, protocol, license, directive, order, disposition, etc.
Instructing	Instruction, regulation, direction, guide, etc.
Forming	Employment contract, civil law contract [2, p. 29], constitutive documents, etc.

Source: [1, p. 26–41].

Thus, the institutional environment of the EAEU is formed by these tools of social capital institutions, for example, the meetings of the Supreme Eurasian Economic Council where decisions, directives, protocols and orders are created (Table 2).

Table 2 – The meetings of the Supreme Eurasian Economic Council at the level of Heads of the State during the period 2011–2015

Number and location of the meetings		**Number of formal documents**	
3	Belarus	119	Decisions
2	Kazakhstan	2	Orders
7	Russian Federation	3/3	Protocols / directives

Source: [1, p. 46].

Similarly, at the meetings of the Eurasian Economic Commission (EEC), the Eurasian Intergovernmental Council (EIC) and other, decisions which formed the institutional environment were adopted. For example, on the basis of decisions, agreements and other acts adopted by the organizations of institutional system of the EAEU, in 2015 the general labor market of the Union states was opened. It provides for the following institutional norms for actors:

– recognition of documents on education and qualifications;

– provision of full scope of social insurance for employees and their family members that are implemented under the same conditions and in the same manner as for the citizens of the state of employment;

– employees and their family members have the right to receive free emergency medical care and rescue emergency care in their territories in accordance with the same procedure and under the same conditions as to the nationals.

Currently the Commission in cooperation with the competent authorities of the Member States is actively working on the Pension Contract of Workers of the EAEU [2, p. 28–30]. Thus, in our opinion, the tools of social capital institutions of the EAEU are forms of the documents which contributing to the integration process and building of social capital institutions of the EAEU.

The formation of institutional environment of the Union countries at the same time is implemented at the formal meetings where the social capital institutions of the EAEU: forum, conference, meeting, congress, session, discussion, consultation, negotiation and seminar are created. For example, under the EEC numerous subdivisions are working: according to the statistic from 2012 till 2015 – it held 5 meetings of the Advisory Council, and more than 200 meetings of the Advisory Committees [1, p. 231, 263, 271]. The decisions of the institutional system of the EAEU are realized in the form of various organizations of social capital institutions (Table 3).

Table 3 – The organizations of social capital institutions

The organizations of social capital institutions	Center, business community, services sector, guild, manufacture, court of law, alliance, organization (financial, fiscal), fund, agency, association, assembly, Customs, institute, university, media, commission, board, council, parliament, department, chamber (trade), committee, subcommittee, group, confederation, union, party, office, network (Internet, trade agreements, statistical portal), etc.

Source: [1].

Under EEC 20 advisory committees, 33 sub-committees, 55 working groups and 21 expert groups are operating [1, p. 231]. In the framework of the EAEU under the Eurasian Development Bank (EDB) Center for Integration Studies functions. It conducts research, produces reports and recommendations to governments on the issues of the integration of regional economy. The Journal of Eurasian Economic Integration is a quarterly journal of regional integration studies that was published in the period from 2008 till 2016 by the EDB [9, p. 5–6]. According to our definition, the organizations of social capital institutions of the EAEU Member States – are intangible integrated socio-economic formations of actors which focus on obtaining a positive economic effect, benefit and profit in monetary terms, or their equivalents.

Thus, tools, formal meetings and different types of organizations are the components of social capital institutions of the Eurasian Economic Union. They form institutional environment that consists of unification of international institutional norms of common rules of economic activity. In conclusion, we note that high quality of the social capital institutions of the Republic of Belarus within the framework of integration of the Union States contributes to the quality of the institutional environment of the Eurasian Economic Union.

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FINANCIAL PLANNING AS A TOOL FOR ECONOMIC DEVELOPMENT OF DOMESTIC ENTERPRISES

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One of the most effective ways to support small and medium-sized businesses to update the production capacity and solving their problems is leasing. The access of the large companies to a wide range of tools to attract funding - from loans and bonds to the IPO - raises a number of leasing as one of the many tools available to large companies, while for the small and medium business financing options are very limited.

The simplest solution to the problem of financing small and medium-sized businesses, at first glance, is to attract a bank loan, but, at present, the borrowing of funds from banks in small companies is limited for a number of reasons: distrust of banks to small businesses due to their lack of transparency, the instability of the resulting revenue, lack of collateral security, thus leading to higher interest rates. In this position, the use of leasing acquires additional benefits:

– the possibility of accelerated depreciation;

– lack of debt in liabilities balance, which leads to an improvement of its structure and related financial indicators;

– the inclusion of lease payments in the cost and, accordingly, reduction of the tax base for income tax;

– leasing helps to avoid a one-time withdrawal from the Working Capital to purchase equipment;

– leased asset acts as collateral and other guarantees, as a rule, is not required;

– by leasing you can solve the fixed assets shortage problem of high-tech small enterprises without resorting to bank loans.

The trend of the recent years is that every year the share of small and medium-sized enterprises in the portfolio of leasing companies' increases. This is due to the growing competition between the leasing companies, decreased interest in leases for large companies, desire to diversify its leasing portfolio and participation in government programs to support small and medium-sized businesses. Working with small and medium business imposes its own characteristics. For example, the assessment of risks related to the creditworthiness of potential leases produced using scoring systems, increasing the speed of the decision-making process and the organization of leasing transactions. However, the main condition for the beginning of the lease financing is still its effectiveness for the leasing company.

The possibility and expediency of a given amount of funding in leasing are determined, first of all, with the parameters of the leasing transaction and the ability to assume a certain level of lessor risk. Selection of parameters in the leasing transaction participants depends on the economic interests of each part. To have a deal, the interests of both the lessor and the lessee must be taken into account and harmonized.

Analyzing the available domestic and foreign literature methodology for assessing the effectiveness of leasing projects, it may be noted that there is no clearly applicable methodology for assessing their effectiveness. In particular, at the moment there is no efficiency analysis techniques focused on keeping the impact of leasing projects in the company's value. Using a value-based approach to management decision on the effectiveness of the transaction to the leasing company will take into account a basic methodological principles:

– the principle of controlling – is based on the need to maintain a balance between profitability, development and growth;

– the quality management principles, including the interaction with consumers.

Using the traditional calculation of financial indicators based on accounting data for past periods are not currently consistent with the trends of business development, and calls for predicting the conditions of its maintenance and increases the flexibility of doing business by the timely adjustment of strategy and tactics, taking into account changes in customer preferences. The leasing business is no exception and it is forced to adapt to new business trends, for which financial engineering leasing transactions on the basis of value-based management can be used. First of all, this approach allows us to answer the question, where a compromise is reached with the lessee: brings each additional spent monetary unit the long-term added value of the company or not.

When working with small and medium-sized businesses, as already noted, decisions must be made quickly. For example, risk management solution to the problem of rapid decision-making has been the creation of scoring systems. At the same time from a financial point of view, with the orientation of the company to maximize the value, there is a gap in this regard. Therefore, an urgent task is to develop a model of a financial leasing transaction design options for small and medium-sized businesses with a focus on maximizing the value of the company.

John Finnerty in his article «An Overview of Corporate Securities Innovation» described the ten elements that encourage the development of financial engineering, presented in Figure 1.

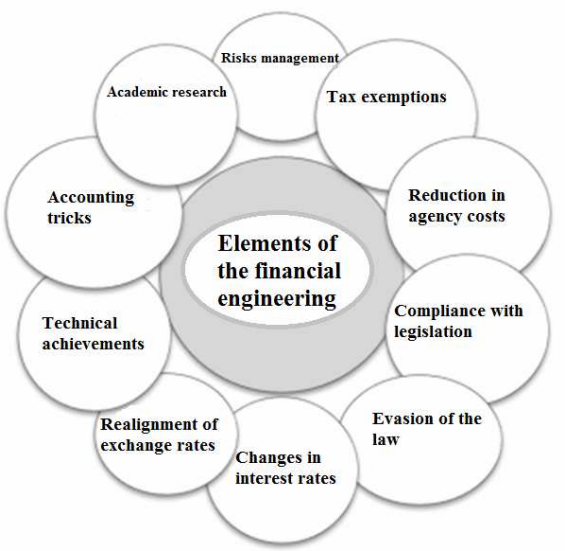

Fig. 1. Elements of the financial engineering

Source: based on the data [1].

Financial design concept performs a part of financial management that allows you to select the most appropriate way to achieve the goals. Using the tools and techniques of all areas of financial management in the framework of financial engineering, the company can implement and optimize the purpose to raise capital, the capital structure to design, organize, control, manage risk, to carry out operations on refinancing of debt, etc.

Dr. Manael Thabet also notes that the financial engineering – a method that is used to improve the financial performance of the company by getting a higher return on assets and a lower cost of capital, together all this affects the value of the company, and hence the welfare of shareholders [2, p.10]. Financial engineering in the first place brings innovation in the financial area in various industries. The development of new tools, processes and technologies contributes to the functioning of the main goals of the company – maximize the welfare of its owners. Making a profit – this is the main characteristic of support and business development. Consequently, companies are constantly creating new and improving existing products, services, processes and organizational structures that will further reduce the company's costs, improve customer satisfaction, and as a consequence, increase profitability.

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Economics

UDC 330.5

INTERRELATION OF LABOUR PRODUCTIVITY AND PRODUCTION RELATIONS IN POLITICAL ECONOMY

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Nowadays there is no available definition of political economy, as well as thinkers who could characterize this category in detail and comprehensively enough. In this regard there is a question of interrelation of this science with other sciences and political and economic factors which can be ranked as the characteristics of political economy as to the scientific community, the device of the state and economy interaction.

It was concluded by the author: political economy is the science of what productive rare resources people in the community (over time, with money or without them) elect for the production of various commodities and distribute them for consumption in the present and future society.

The objects of political economy are the production relations arising from the interaction with the productive forces (Figure 1)

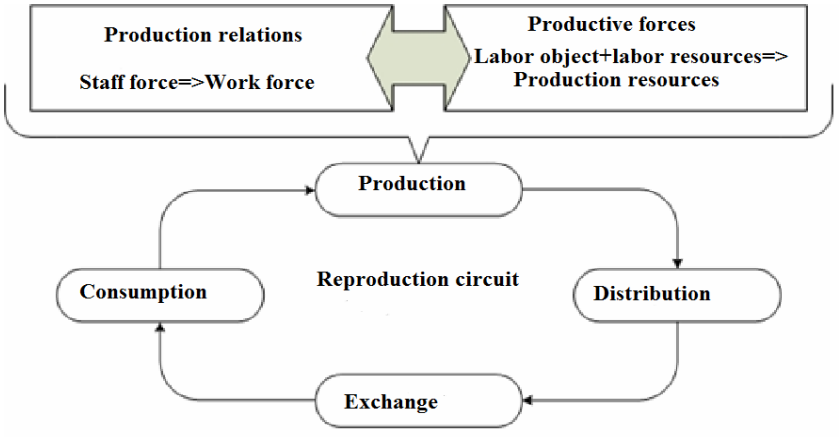

Fig. 1. The subject areas of political economy

Source: based on the data [1].

To start the production process labor force, capable to influence on the subject of work with a working tool is required. In this case, the labor force, depending on the type of work, needs to be qualified, to meet the specific requirements of modern industry to perform simple and complex tasks. The production process is the impact of the productive forces. In other words, the production is an expression of the staff relationship to different skills of labor force used for the production of material goods. In addition to such a relationship, the people also affect each other, engaging in certain connections and relations that are called production relations.

Their character is dependent on the owner, who owns the means of production. Therefore, analyzing the state of the production relations, we can talk about how means of production and the result of work (material goods) are distributed in the society. In addition to the distribution of the production means, production relations also have a direct impact on the productivity of enterprises workers.

Productivity is an essential part of improving production efficiency.

The level of labor productivity – this is the ratio of the produced goods volume or work performed and the time spent. The set of indicators depends on the performance level:

– the pace of industrial production development;
– an increase in wages and incomes
– the reduction of production costs.

In modern conditions, in our opinion, an effective management of labor and wages must ensure the reproduction of the labor force, the formation of motives and incentives to work, improving its quality and performance.

As we know from the course of economic theory, the cost of employees compensation makes up a large part of the cost of products, works and services of organizations (enterprises). Therefore, the task of every

employee in this situation is to increase the number of products by improving their own productivity. And the main employer / employee task is to ensure the demand for their products by creating an effective marketing program for promotion of the goods, works or services.

Observing the above-stated conditions caused by increase in labor productivity, increase in demand for the performed works, goods and services it is possible to achieve impressive results in the course of improvement of the economic condition of the enterprise (organization).

Thus, the author stresses the importance and the role of labor productivity at the enterprises, which can have a direct impact on economic growth not only on the enterprise (organization), but also, as a consequence, on the state of the national economy.

We share Lemeshevsky I. point of view on the importance of raising the economic level growth. In our time, this figure can rightfully reflect problems through their own indicators of social progress and better standards of living, state security and the preservation of national sovereignty, globalization of world economic relations and development of economic integration [2, P. 651].

In this case, after analyzing the scientific approach to the problem of the national economy economic growth, the author came to the conclusion that the challenges of sustainable development and long-term economic, social and environmental focus of economic growth are crucial in the political economy.

Based on the Lemeshevsky view, the author believes that with the prevalence of intelligent and innovative factors of economic growth the government currently provides access to the "knowledge economy."

In this case, it is true that there is a question of ensuring the innovative development of the national economy in order to stimulate the intensive economic growth.

Table 1 – Main types of economic growth

Extensive	**Intensive**
Expanding economic fields	Reconstruction and modernization of production
Constant technological mode of production	Increased productivity

Source: own elaboration based on data [2].

It is clear that intensive type of growth requires a fairly high level of technological development, technology, as well as the appropriate level of qualification of employees. It is the formation of "knowledge economy", which is a fundamental criterion for the development of economic relations in such a science as political economy.

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Economics

UDC 651.02

MANAGEMENT ACCOUNTING SYSTEM'S FUNCTIONAL ELEMENT RESEARCH

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In this paper management accounting system and it's functional elements are analyzed. Results of this paper revealed that management accounting system consists of three main elements: cost accounting, budgeting and accounting of responsibilities. All of the mentioned elements are connected by management accounting policy.

Introduction. In today's global market, when competition is growing exponentially, companies' management decisions are becoming more complex and the amount of data that needs to be processed is endlessly increasing, it is very important for the company to know what steps have to be taken to reduce the risk of unqualified management solutions. That is because each company has to take economically justified decisions in order to reach its goals. To make these decisions companies use information provided by management accounting system.

Many different questions related to management accounting were already analyzed by many Lithuanian and foreign authors: Gerdin (2005) evaluated the influence of organizational structure and relations between departments when creating management accounting system, Gliaubicas (2008) conducted a research on management accounting techniques in Lithuanian companies, Kalcinskaite (2009) examined elements of management accounting used in small and medium size companies, Strumickas, Valanciene (2010) analyzed the development of modern management accounting, Odar, Kavic, Jerman (2015) analyzed influence of management accounting system for decision making.

However, there are not many researches related to management accounting system itself and functional elements that are part of this system. That is why it is very important to identify and analyze this system and its functional elements.

The object of this paper is to analyze functional elements comprising management accounting system.

To achieve this, Lithuanian and foreign literature was analyzed, compared, described and then the obtained information was processed, systemized and summarized.

In today's world accounting is understood as an economic information recognition, measurement and presentation process which allows a company to make measured decisions in its economic activity. Based on this system, the financial and non-financial information for the management of the company can be analyzed, measured, processed and forwarded.

Tamuleviciene, Subaciene (2013) state that for a long time it was enough to use only one accounting system, but due to fast development of the market and rapidly changing business world, accounting system had to be divided into two systems: financial accounting and management accounting.

Every author interprets the management accounting differently, but most of them agree that the main purpose of this system is to help manage the company. In Lithuanian accounting law (2001), such definition of management accounting is provided: "Management (internal) accounting is the accumulation, systematization, evaluation and presentation of information that is used for entity management." By summarizing the ideas of various authors Gliaubicas (2008) describes management accounting as a system in which information is collected from various sources of information – both financial and non-financial – then it is processed in accordance with appropriate methods into a final result which satisfies the needs of the users. He also points out that well-maintained and processed management accounting information allows the users to make reasonable decisions and manage a company.

Different author highlight different management accounting functions (Table 1) which can be described as functional elements. It is these functional elements that collect and process information, which is needed for decision-making.

However, it is important to note that each company selects individual management accounting model and therefore it is appropriate to combine functional elements into three main groups: cost accounting, budgeting and responsibility accounting. It should be highlighted that decision-making function should not be assigned as a functional element, because all management accounting elements are oriented towards providing information for decision making and it should be considered as another system that combines information from all elements to help company achieve its goals.

Every company aims to produce and sell more goods at the lowest cost possible. Knowing and being able to control their cost allows companies to move faster towards their goals and therefore one of the functional elements of the management accounting system is cost accounting. According to Tamuleviciene, Subaciene

(2013) definition of cost within management accounting in particular is very important, as companies are interested in reduction and planning of their costs, because regardless of their income, all companies will always want to reduce their costs.

Table 1 – Classification of management accounting system elements by Lithuanian authors

Author	Functional elements
Tamuleviciene, Subaciene (2013)	Cost accounting; Planning; Control; Measurement of performance; Calculation of cost.
Meskeliene (2011)	Cost accounting; Budgeting, Calculation of cost.
Strumickas, Valanciene (2010)	Cost accounting; Planning; Control; Budgeting; Decision making; Measurement of performance; Strategic analysis.
Kalcinskaite (2009)	Cost accounting, Control. Budgeting, Calculation of cost.
Mackevicius (2003)	Planning; Classification of cost; Control; Cost Calculation; Evaluation of Departments activity.

Companies during their business activities face various expenses. As Lakis, Mackevicius, Gaizauskas (2010) state, to have a better understanding and control of its costs, it is very important for the company to classify it properly. However, due to diversity of company's structures, differences of their activities and objectives pursued, different classification of costs may be relevant to every company. Proper classification of the company's cost allows to provide company managers with detailed information which helps them make better and more effective decisions, assess company's costs incurred during the company's activity better, understand which costs have the greatest impact on the company's operations, as well as reduce the costs. Depending on what kind of information about company's costs the managers need and what goals they seek, they can classify costs by impact on the amount of production, by the type of costs, by composition of costs, etc. As it is shown in table 1, Mackevicius (2003) even distinguishes the classification of costs as a functional element of management accounting system. However, such distinguishment is not fully justified, because the classification of costs is one of the initial stages of cost accounting and therefore it must be identified as a part of a cost accounting element.

Cost accounting information is closely related to the calculation of the production cost. Despite that some authors (Tamuleviciene, Subaciene, 2013; Meskeliene, 2011; Kalcinskas, 2009) offer to consider calculation of cost as a separate management accounting element, such separation would be difficult because it is very hard to find a clear boundary between cost accounting and calculation of cost. That is why it is appropriate to regard the calculation of cost as one of the elements of cost accounting.

Production cost can be calculated in different ways. For every company it is very important to choose the most suitable product cost calculation method. Cost calculation depends on various organizational aspects. Lakis, Mackevicius, Gaizauskas (2010) state that it is important to pay attention to the nature of the company's product, the number of species of the product and what is the scope of each type of product when choosing the cost calculation method. According to the authors, it is necessary to breakdown the costs of the period which is being calculated into the costs type, the source of the costs and the object which costs are calculated, when using each of cost calculation method.

As many authors noticed (Lucey 2002; Kalcinskas, Jagminas 2005; Needles, Powers, Crosson 2007; Meskeliene 2011), there are two most common cost calculation methods: job-ordered costing and process costing. According to Tamuleviciene, Subaciene (2013), the most important cost calculation component is the production costs. These costs can be seen in three stock accounts: raw material account, work in progress account and finished product account. All production costs incurred during the production process (direct and indirect product costs) are stored in work in progress account.

However, in order to carry out management accounting information analysis, it is not enough to know only the costs of products that were produced and sold. Appropriate reports must be filled in so the information would by analyzed more effectively and later used. With reliable information on product costs it is possible to make important decisions related to production planning, pricing, and company's activity and find solutions to many other questions.

The second element of the management accounting system is budgeting and control. It can be said that in management accounting system, budgeting is the most important instrument of planning and control. When summarizing information from literature (Klimaitiene, Kanapickiene 2009; Kalcinskas 2009; Lakis, Mackevicius, Gaizauskas 2010; Tamuleviciene, Subaciene 2013; Odar, Kavic, Jerman 2015), it can be said that the budget is a monetary quantitative expression of an action plan of a certain period which provides certain performance indicators for achieving company's goal. Also, it should be mentioned that this action plan is written on the basis of both long-term and short-term objectives so this is the reason why budget reflects company's strategic and operational plans. What is more, according to many authors (Drury 2000; Mackevicius

2003; Klaimaitiene, Kanapickiene 2009; Kalcinskaite 2009; Strumickas, Valanciene 2010), budgets allows not only to achieve company's goals, but also to control and organize company's financial resources.

As Kalcinskaite (2009) states, budgets allows companies to plan their activity efficiently and to ensure the maximum benefit because the budgets allow to use resources efficiently, optimize costs, increase effectiveness of different operations. Lakis, Makcvecius, Gaizauskas (2010) say that the main purpose of budgets is to coordinate and to keep whole activity process balanced in order to ensure profitable operations by using all possible resources.

Budgeting system is not able to function as a planning system without an effective and efficient control system. According to authors of management accounting literature (Drury 2000; Klimaitiene, Kanapickiene 2009; Kalcinskas 2009; Jagminas 2005; Odar, Kavic, Jerman 2015), it can be said that control of budgets includes different norms, standards and criteria determination for evaluation of achieved results, deviation calculation and decision-making for eliminating deviations. Budget control allows managers to monitor the company's current condition and the company's activity results. Regular comparison of actual results with plans allows evaluating not only the company's performance, but also the effectiveness of the decisions made. What is more, it allows to monitor company's activity and take action before any serious risks could happen and to react quickly before anything could cause damage to company's results.

Another very important management accounting system's functional element is responsibility accounting. In management accounting system, responsibility accounting collects information about the segments of an organization (responsibility centers) and analyzes received data to provide reports about segments. Mackevicius, Tamuleviciene, Subaciene (2016) provide such definition of responsibility accounting: "Responsibility accounting is management accounting providing information about the company's responsibility centers, their performance and efficiency of resources provided.". After analyzing this definition, we can highlight these responsibility accounting features: it is one of management accounting elements; it uses information about responsibility centers; it analyses efficiency of resources provided to the segments; it provides information to the management which is later used for decision making.

Crucial part of responsibility accounting process is the formation of the responsibility centers. The purpose of establishing responsibility centers is to put responsibility on them for their activities and allocate power to take appropriate decisions for operations (Mackevicius, Tamuleviciene, Subaciene 2013). "There are various ways to distribute responsibility centers, but in practice the most appropriate is to form them according to responsibility areas, such as costs, revenue, profit and investment centers." (Mackevicius, Tamuleviciene, Subaciene 2016).

Once a company introduces proper responsibility accounting system, it is possible to ensure the company's flexibility and prompt reaction to problems, as well as increase company's operational efficiency. By concentrating on a specific area, each of the segment can provide the most valuable information for the managing a specific area of the company. I will be easier for the managers provided with this information to make important decisions.

Each functional element of management accounting provides specific information about the company's current situation and its position regarding its goals. Having such information, the company's management is able find solutions to any situation and enhance the company's economic position in the market, as well as work towards future goals.

Cost accounting, formation of budgets and the control of their implementation, responsibility accounting are the three main functional elements of a management accounting system. However, when introducing and developing management accounting system, it is very important to properly prepare fundamental base of the system that is management accounting policy (fig. 1).

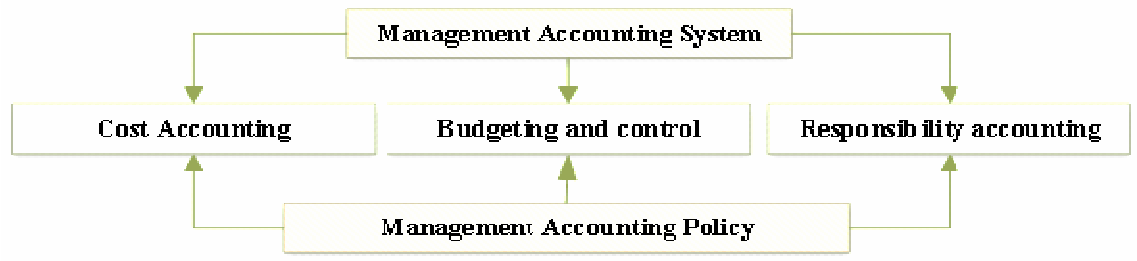

Fig. 1. Management accounting system's functional elements
and their connection with the management accounting policy

As it is shown in figure 1, management accounting policy affects every functional element. Depending on what kind of management accounting policy the company has, structure and functioning of functional elements

may vary. Without properly prepared management accounting policy the system and functional elements are not able to function properly and provide important and most valuable information for decision-making.

Conclusions. The analysis of the management accounting system structure showed that various authors point out different functional elements of this system. However, taking into account the fact that it is hard to point out a clear boundary between them it is not appropriate to consider them as separate functional elements of a management accounting system. Thus, it was highlighted that management accounting system structure consist of three main functional elements: cost accounting, budgeting and budget control, and responsibility accounting. Each of the three elements provides the information that is used in decision-making process related to long-term and short-term plans. It is these functional elements that provide valuable information which allows to increase company's profitability and to ensure operational effectiveness.

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UDC 332.146.2

IMPROVING METHODS FOR THE ASSESSMENT OF THE INNOVATIVE POTENTIAL OF THE ORGANIZATION ON THE EXAMPLE OF OJSC «BEREZOVSKY CHEESE-MAKING PLANT»

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The essence of the innovative capacity has been determined. The proposed method of the integrated assessment of the innovation is based on two modules: scientific-technical and industrial-financial, which includes a number of indicators that characterize the innovative condition of the organization. Also, the innovative capacity has been analyzed on the example of OJSC "Berezovsky Cheese-making Plant" in accordance with this method.

To implement the efficient management of the innovation activity it is necessary to diagnose a level of the innovative capacity of the organization and to estimate its dynamics for further development.

The purpose of assessing the innovative capacity is the ability to select and implement the innovation strategy of the organization, which allows strengthening its position on the market. The assessment of the level of the innovative capacity of the organization will:

1. Adequately assess the possibility and readiness of the organization to innovate.
2. Analyze and predict the development trends of the organization to identify its strengths and weaknesses.
3. Prepare the recommendations on the formation of the innovative strategy of the organization and the mechanisms of its implementation.

The comparative analysis of the methods proposed in the economic literature indicates their diversity, both methodical basis of research systems, and on the innovation potential assessment method. Some scientists and specialists prefer tenths, mostly expert methods for assessment factors; others use to this purpose statistical and quantitative data.

Before moving to the assessment of the innovative capacity of the organization, it is necessary to determine the nature and the significance of the category of the innovative potential.

The innovative capacity of the organization is the degree of its readiness to fulfil the task to ensure the achievement of the objectives of innovation, in other words the degree of readiness for the implementation of the innovation project or a programme of the innovative transformation and introducing the innovations.

Having examined the existing methods, we group together the indicators expressing the innovative potential, in two modules: scientific and technological, which provides the progress and development of the organization and production and financial reflecting the financial resources and the effectiveness of innovation. The list of indicators ensures the necessary and sufficient information on the innovative capacity of the state of the organization (Table 1).

Table 1 – Indicators assessment of the innovative capacity organization

Component indicator	Symbol
Scientific and technical module (NT):	
1.1 Number of patents and other intangible assets (licenses, know-how, trademarks, technical designs and models), including applications filed for patents, pcs.	NT1
1.2 Number of products or technologies that protected by patents received in the last three years, pcs.	NT2
1.3 The number of employees with an academic degree (doctors, PhDs), pers.	NT3
1.4 Number of employees engaged in research and development.	NT4
1.5 The budget of the R&D organization, mln.	NT5
1.6 The volume of external funds raised for R & D, million rubles.	NT6
1.7 The volume of orders in the R&D received from other organizations (universities, research institutes), pcs. and a million rubles.	NT7
1.8 Funding for research and development at the expense of own funds used by the company for R&D as a percentage of revenue, excluding the budget	NT8
Industrial and financial module (PF):	
2.1 Number of implemented innovations	PF1
2.2 The volume of shipped innovative products (works, services), million rubles.	PF2
2.3 The total amount of costs (capital and operational) innovation, million rubles.	PF3
2.4 Number of acquired patents, technologies and other intellectual property objects in the last 3 years, the pieces in mln.	PF4
2.5 The volume of exports of innovative products (works, services)	PF5
2.6 The amount of of expenses for equipment, tools and tooling operation life is under 5 years old as a percentage in the total amount of capital expenditures	PF6

Further, for clarity and more precise understanding of the level of the innovative potential of the organization a graph based on the considered indicators is constructed. The graph shows the level of the innovation potential of each component which also helps to identify problem areas in the development of the organization and allows the development of the corrective action on the specific indicators in order to increase the overall level of the innovation capacity of the organization.

According to the developed method, we will define the innovation potential of the organization on the example of JSC "Berezovsky cheese-making plant" and identify its strengths and weaknesses, and then be able to give a number of recommendations to improve its innovative capacity.

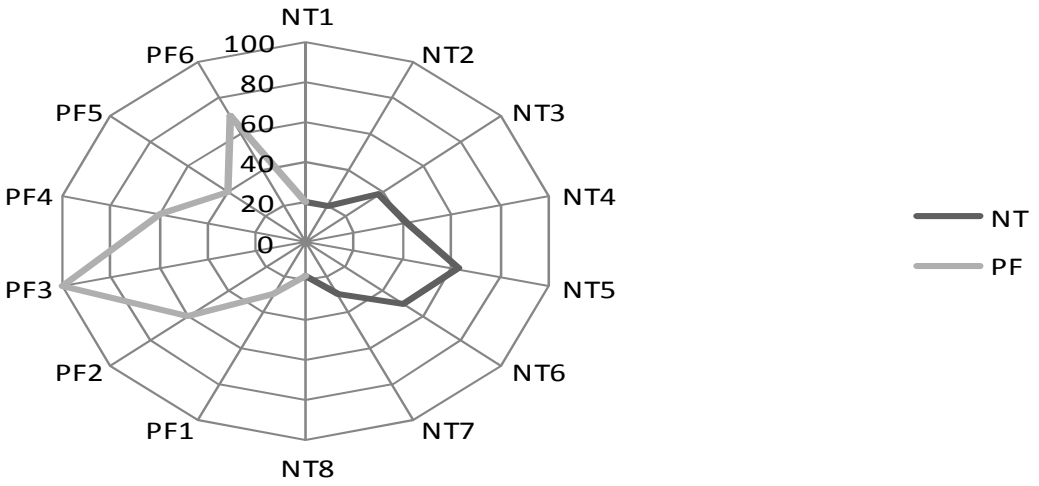

Fig. 1. The analysis of the innovative potential
JSC "Berezovsky cheese-making Plant" for the 2013–2015 year

As shown in Figure 1, which is dominated by the production and financial indicators of the module, thus the priorities in JSC "Berezovsky cheese-making Plant" is to improve business processes, aimed at saving resources, modification of the product line, the introduction of new and innovative techniques and technologies. The internal infrastructure innovation consists of a small number of researchers. The company begins to produce innovations, however, it's early to speak about an active innovation, since there is no involvement of a wide range of specialists and the contribution of a larger share of own funds in the innovation.

Next, you must determine the integral estimate of the innovation potential because it allows us to reduce the set of indicators to a single heterogeneous generalizing indicator that in its turn allows you to compare the innovative potentials of different organizations. In order to assess the innovation potential of the organization we are encouraged to use the integral index, which is defined by the formula (1):

$$IP = NT + PF\ , \tag{1}$$

where *IP* is the innovative potential of the organization.

$$NT = \sqrt{\sum_{i=1}^{8} NT_i^2}\ , \tag{2}$$

where *NT* is a scientific and technological module.

$$PF = \sqrt{\sum_{i=1}^{6} PF_i^2}\ , \tag{3}$$

where *PF* is a production and financial module.

According to the interpretation of the estimation of the innovation potential of the region's organizations we are encouraged to develop a matrix that expresses the 4 quadrants solutions. Each quadrant is interpreted by the value of scientific and technological, production and financial modules. We offer the following description of the quadrants in Figure 2.

Quadrant 4 "Researchers" Region organizations which have a Research and development (R&D) infrastructure, but have a weak industrial base	**Quadrant 3 "Winner"** Region Organizations with the best values of innovation potential indicators
Quadrant 1 is "Lost" Organization region with an extremely low production and financial and innovation potential	**Quadrant 2 "Manufacturers"** Region Organization receptive to innovation, but they do not have the infrastructure of R&D

Fig. 2. Grouping and placement organizations
in the quadrants of innovation potential the matrix organizations

Source: own development.

The organizations that are placed in the quadrant of the "Winner" have aimed their resources at the innovation. The priority areas of the innovation are the development of process innovations, the introduction of new or improved method of production, the establishment on this basis of new products, as well as the search for and the development of new activities. The internal infrastructure of the innovation activities is represented by a large number of employees engaged in research and development. The implementation of the innovative activity is one of the main priority activities.

By counting an integral assessment of the innovation potential and defining its location in the considered matrix, we can say that the JSC "Berezovsky cheese-making plant" is in the quadrant "manufacturers". Therefore the organization positively accepts the innovation and has the capabilities to implement them, but is not ready to develop and put into practice their own innovation and scientific development on a large scale. This organization needs to improve the qualification of its employees and to attract a larger number of staff with advanced degrees for creating the research sector, it should also increase the production of the innovative products and strive to find its niche on the international market, due to which the organization will have the additional funds for the acquisition and development of new technologies.

Thus, the author has developed a system of the organization of the innovation potential estimation, which has some features:

The calculation of the proposed to take place within the human, financial, scientific, technical, industrial, technological, organizational and managerial capabilities. Such system approach to the evaluation of innovation potential allows estimating the impact of factors on the innovative capacity of the organization, not only from different sides, but also to identify the most important key reasons that decisively influence the state of the system.

The proposed method covers a relatively small number of the indicators, which facilitates the calculations, but at the same time, provides a complete coverage of the elements of the innovative potential organization.

The share of expert scores is reduced to a minimum in the overall composition of the indicators and does not provide for the use of essential factors of significance that eliminates the subjectivity of the result.

The result of this approach not only provides an integrated assessment of the innovative potential, but also allows you to identify the specific elements that require the management actions to improve the innovative potential.

We believe that the proposed method will improve the organization of the innovative potential assessment procedure to identify the opportunities to increase its level as well as to develop and to analyze alternative options for the further strategic development of the organization. The advantage of using this method is determined by the fact that it interprets the innovative potential not only as a sum of its component indicators, but also as an integrated complex, located in an objective relationship.

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INTEGRATION DEFINITION FOR FUNCTION MODELLING OF BUSINESS PROCESSES (IDEF0) IN LOGISTICS

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The article is devoted to the idea of IDEF0 (Icam Definition for Function modelling). It is a function modelling methodology for describing manufacturing functions, which offers a function modelling language for the analysis, development, re-engineering, and integration of information systems, logistics processes, and software engineering analysis.

In any industrially developed or undeveloped society goods must be physically moved between the place they are produced and the place they are consumed. The exchange process has become the cornerstone of economic activity. Exchange takes place when a number of organizations have a surplus of goods while someone else needs: there is a basis of exchange [1]. The alignment of companies that sell product or services to market can be called the supply chain. Logistics is a broad, far-reaching function tool for the management of flow of goods, information and other resources [2].

Modern supply chains are often a series of enterprises with different complicated relations between them. Designing the logistics process in these structures might be an unusually difficult task. During the logistics processes, many problems might arise, which should be addressed already in the planning phase. Many actions are not defined clear, there are no clear areas of responsibility, it is difficult to predict all details. These factors lead us to losses. But using the process description languages makes supply chain management easier, e.g. IDEF0 (pronounced I-def zero) [3].

IDEF0, or Integration definition for function modelling, is a functional modelling method for complex manufacturing environment which when graphically represented show the structural relationships between the manufacturing processes [4]. The name IDEF originate from the Air Force program for Integrated Computer-Aided Manufacturing (ICAM) in 1970s, which developed the first ICAM Definition, or IDEF, methods [5]. IDEF techniques include the following: IDEF0, IDEF1, IDEF2. In 1980s the IDEF1 information modeling was enhanced up to IDEF1X (IDEF1 Extended).

IDEF0 is used to produce a "function model", which is a structured representation of the functions, activities or processes within the models system or subject area. IDEF1 is used to produce an "information model", which represents the structure and semantics of information within the modeled system or subject area. IDEF2 is used to produce an "information model", which represents the structure and semantics of information within the modeled system or subject area [3].

The models in IDEF0 are easy to build and understand. IDEF0 (Integration Definition language 0) is based on SADT (Structured Analysis and Design Technique), developed by Douglas T. Ross and SofTech, Inc. In its original form, IDEF0 includes both a definition of a graphical modeling language (syntax and semantics) and a description of a comprehensive methodology for developing models [3].

The two primary modeling components in IDEF0 are functions (represented on a diagram by boxes) and the data and objects that inter-relate those functions (represented by arrows). When we used in a systematic way, IDEF0 provides a system engineering approach to [5]:

1. Performing systems analysis and design at all levels, for systems composed of people, machines, materials, computers and information of all varieties – the entire enterprise, a system, or a subject area.
2. Producing reference documentation concurrent with development to serve as a basis for integrating new systems or improving existing system.
3. Communicating among analysts, designers, users, and managers.
4. Allowing coalition team consensus to be achieved by shared understanding.
5. Managing large and complex projects using qualitative measures of progress.

Providing a reference architecture for enterprise analysis, information engineering and resource management.

IDEF0 models are composed of three types of information: graphic diagrams, text, and glossary. These diagram types are cross-referenced to each other. The graphic diagram is the major component of an IDEF0 model, containing boxes, arrows, bow/arrow, interconnections and associated relationship. Box and arrows compound ICOM Code, acronym of Input, Control, Output and Mechanism [5].

Semantics determines meaning of syntax elements and aids correctness of interpretation. First of all the box name should be a verb or verb phrase that describes the function of the box. After naming the box arrows can be joined to sides of the box. The arrows identify data or objects needed or produced by the function. Each

arrow should be labeled with a noun or noun phrase. The peculiarity of arrows consists in their disposition. Example of standard arrow disposition is shown in the figure № 1.

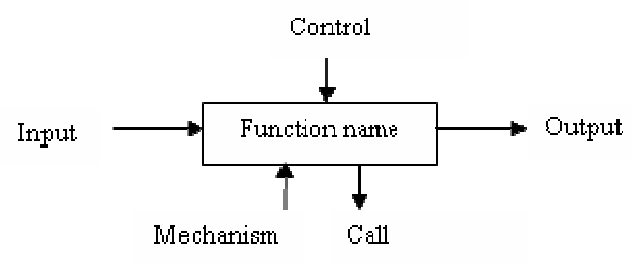

Fig. 1. Standard arrow disposition

Arrows that entire the left side of the box, named «inputs», are transformed or consumed by the function to produce «outputs»–arrows that leave the box on the right side. Outputs mark the data or objects produced by the function. Those arrows that entire the box on the top («controls») define necessary conditions for the function in order to produce correct «outputs». Arrows that connected to the bottom side of the box represent mechanism. The sense of the mechanism which described with upward pointing arrows is supporting execution of the function. And arrows pointed downward – call arrows – mean the sharing of detail between models or between portions of the same models.

In the process of modeling with IDEF0 consideration must be given to the aspect saying that each model consists of graphic diagrams, text and glossary.

Graphic diagrams contain boxes, arrows and their connection. All diagram types are cross-referenced to each other. The function represented on the top-level diagram is decomposed into more detailed diagrams until a subject is described on a necessary level helping to achieve the project goal.

Using a glossary in model is used to define some abbreviations or special phrases that were marked on diagrams to interpret their meaning.

The main rules of producing diagrams are:

1. Context diagrams shall have node numbers A-n , where n is greater than or equal zero;
2. The model shall contain a A-0 context diagram, which contain only one box;
3. The box number of the single box on the A-0 context diagram shall be 0;
4. A non-context diagram shall have at least three boxes and no more than six boxes. This amount of boxes can be explained with better understanding a diagram and convenient use in a project.
5. Each box that has been detailed shall have the detail reference expression of its child diagram written beneath the lower right corner of the box [3].

Creating an IDEF0-model is iterative process which consists of some conventional stages:

1. Creating a model by group of experts who relate to different scope of the company. According to terms of IDEF0 the group is called «authors».
2. The construction of initial model is a dynamic process in which the authors ask competent persons about the structure of various processes.
3. On the basis of regulations, documents and survey results a draft (model «Project») model is created.
4. Distribution of the draft for review, approvals and comments. At this step there is a discussion of a draft model with a wide range of competent persons of the enterprise (in terms IDEF0- readers). In addition, each diagram of the draft model has been criticized and commented in written form and then transmitted to the author. The author agrees or rejects critique with the statement of logic decision and again returns revised draft for further consideration. This cycle continues as long as the authors and readers will not come to a consensus.
5. The approval of the model. The head of the work group approve agreed model, if the authors of the model and readers (competent persons) have no disagreement about its adequacy.
6. The final model gives an idea of the enterprise (system) from a predetermined point of view and for the given purpose [6].

The clarity of IDEF0 graphic language makes the model quite readable even for those who has not participate in the project of its creation , so it is effective for presentations.

At present time there are many case-tools that support functional modeling IDEF0 standard. Best known case-tools are following systems: Design / IDEF (MetaSoftware, US, distributor – Metatechnology, Moscow), BPWin / ERWin (Logic Works, the US, distributor – Interface, Moscow). Orientsoft Company (Minsk) offers its own development on the basis of IDEF0 standard – system IDEF0 / EMTool [7].

Standard IDEF0 is widely used in the CIS in the Central Bank of Russia, the State Tax Inspectorate, the National Bank of the Republic of Belarus, in the aircraft and aerospace industry, in the development of information systems, and others [8].

An IDEF0-model is widely used in logistics.IDEF0 helps study logistic system taking into consideration next peculiarities: material, information, financial flows, also logistics operations and functions and the order of execution of logistics operations and functions. IDEF0 model can be considered as a universal model, applicable to describe the logistics systems in the view of the different functional areas of logistics - supply, distribution, and sale, transport and others. Possibility of decomposition processes in diagrams allows to present logistics functions through logistics operations [9].

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Economics

UDC 339.18

BUSINESS DEVELOPMENT STRATEGIES IN ACCESSING NEW MARKETS

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The summary describes strategies of entering new markets. Entering new foreign markets may be achieved in a variety of ways. Each of these ways places its unique demands on the company in terms of organizational and financial resources. Most of the times, entering international markets is not a matter of choice but of necessity to remain competitive in new or established markets. Our summary is going to analyze the possibilities that a company has when entering a foreign market, decision that is very important and which involves market assessment and analysis.

Introduction. New startups and companies typically have to consider entering new markets when their core markets start declining, or they have outgrown their core market and need new markets to continue to grow.

In both cases, there are significant risks and challenges to overcome. Our research has shown that there are certain best practices for mitigating the risks inherent in entering any new market, so as to achieve desired business results some effective ways are possible.

The main part. Part of a company's marketing plan may be to tap into new markets. A new market may involve selling a product or service in a new region or country, or it may involve targeting a new segment of customers. The implementation of business development strategies in accessing new markets involves a great deal of research and planning on the part of the business owner, company executives and employees.

Accessing new markets allows a company to broaden its reach and increases its potential to sell products and services to more customers. This increase in sales can also boost the bottom line of the business. In order to help to ensure a successful transition, company executives need to develop the strategies to use in order to penetrate the new market. Business development strategies can include marketing promotions, advertising, public relations and any other activities the company uses to promote its products or services and reach its new intended customer.

When developing business marketing strategies, it is imperative to consider the new segment the company is trying to reach. Most companies conduct their own marketing research or employ a market research company to conduct such research. Market research is made of two parts: target market research and competitive research. Target market research involves finding out everything that is known about the new market. Information on potential customers includes who the customer is, how they think and feel, what their needs and desires are, and how the company's product or service can satisfy their needs and wants. When researching the competition, the company needs to find out what type of customers the competition is attracting. The research aim also includes comparing the company's product or service to the products or services being offered by the competition in order to determine how the products or services differ. By finding information about the new target market and the competitors already operating in this market, the company trying to enter the market can create marketing strategies that take advantage of opportunities in the new market and promote itself in a way that appeals to the new target while differentiating the company's product or service from those of the competition.

When a company does its research and customizes its strategies to develop a new market, it helps to ensure that the new market penetration is successful. The better a company knows the market it is targeting, the better position it has to create marketing strategies that reach the new target customers. Planning ahead of time helps the company approach the new market in a proactive manner through the creation of adaptive advertising and marketing based on different responses the company may receive from new customers.

If a company tries to develop business in a new market without first conducting research and creating a strategic plan, it almost ensures failure. Most companies enter a new market because an opportunity has been identified. It means there is a need in the market that is not currently being fulfilled. If a company tries to push a product or service in a new market where there isn't a need or want for the product or service, then sales are going to suffer. If a company tries to sell a product or service to a new market without understanding the needs and wants of the customers in that market, then the marketing strategies may not hit the important points of the market. When the marketing doesn't appeal to the target market, then the marketing efforts fail and sales also suffer.

The development of strategies to enter a new market can take a significant amount of time. Some companies have been planning to enter a new market for years. Focus groups, surveys, panels, test groups and other types of market research can take months to implement. After the research is done, the company also has to take the time to evaluate and interpret the data. After this, companies often have to make modifications to the product or service, the marketing plan or the strategies it intends to use to better fit the market it tries to enter.

There are a number of ways to enter a foreign market. They consist of [1–2]:

Exporting. Exporting is the easiest, most cost effective and most commonly used method of entering a new international market. Some businesses do not actively plan to become exporters, they may simply start accepting orders from overseas customers. However, many businesses are planned by exporters who wish to

expand their international presence. Exporting has many advantages where it requires less investment and allows the business to 'try out' exporting on a small scale as a handy way of developing and testing the international plans and strategies without great commitment. Exporting also allows to concentrate the production in a single location, allowing for better economies of scale and quality control measures.

Franchising / Licensing. Franchising is a form of licensing. As a franchisor or licensor, the business effectively gives the licensee of franchisee permission to:

– Produce a patented product or patented production process.
– Use the manufacturing know-how.
– Receive technical and marketing advice and know-how.
– Rights to use a trademark, brand etc.

Franchising and licensing have many advantages as both are simple and quick to implement and offer the advantage of minimal business costs as well as access to some markets which may otherwise have been closed due to government policies etc. The most obvious drawback of franchising and licensing is that revenues are likely to be significantly lower than other market entry methods, as well as a possible lack of control over production and marketing.

Joint Ventures. A joint venture is an arrangement between two or more (often competing) companies to join forces for the purposes of investment with each having a share in both the financial running and management of the business.

Joint ventures are usually an alternative to building a wholly owned manufacturing operation and offer benefits such as:

– Capital outlay is shared.
– Reduced risk i.e. less government intervention if an alliance is formed with an indigenous business.
– Closer control over production, marketing and other business operations.
– Better local market intelligence provided by indigenous joint venture partner.

The major disadvantage of joint ventures is that conflicts of interest may occur between the different parties i.e. on issues such as profit shares, amounts invested, management of the business and marketing strategy. As with any type of partnership, there are ways to minimise the risk of conflict by careful selection of partners and the formulation of jointly beneficial contracts.

Wholly Owned. Setting up a wholly owned operation in a new international market offers less of the 'quick' advantages of other market entry modes as it involves setting up a presence from scratch.

It takes some time and effort to build a new market presence, especially in mature markets and where the business may have little knowledge of the local market. However, it does offer more in the way of control and management of the business.

When selecting the right market entry mode for your business, there are many factors that need to be taken into consideration including [3]:

What are you marketing objectives? Examine the volumes you wish to sell, timescales and coverage of key market segments. For example, if volumes are expected to be low initially, then setting up your own manufacturing facility would not be appropriate.

What resources do you have available in the business? Does your business possess sufficient resources to support the level of planned international business activity?

Suitability of a market entry strategy. Businesses may have to use different market entry methods for different countries i.e. some countries will only allow a restricted level of imports but may welcome the business in building manufacturing facilities to provide jobs and limit the outflow of foreign exchange. Additionally, some market entry methods are questionable on a practical basis i.e. a possible lack of suitable distributors or agents to sell and service the product.

Conclusion. Selection of market entry mode is of strategic importance and therefore it is vital to make an informed assessment before embarking upon any international business dealings.

Entering new foreign markets may be achieved in a variety of ways. Each of these ways places its unique demands on the company in terms of organizational and financial resources.

Foreign market entry strategies are numerous and imply a varying degree of risk and of commitment from the international firm. In general, the implementation of an international development strategy is a process achieved in several steps.

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Economics

UDC 658

RESHORING: THE NATURE AND CAUSES OF APPEARANCE

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The paper studies reshoring, the reasons of its appearance. Besides the possible influence of the reshoring on international trade and international logistics is noted.

Increased competition, the race for innovation and cheap methods of production, search for new markets in the second half of the last century have led to the globalization of the market and formation on this basis of a wide network of international and global supply chains.

To solve the problem of reducing the cost of production, European and American manufacturers have placed their power in developing countries with cheap labor. This phenomenon is called "offshoring" – the transfer of intra-activity in another country. In recent years there has been a tendency for the repatriation of production, which in economic literature has been defined as "reshoring" – the return of previously derived overseas production [1, p. 151]. From the point of view of many foreign economists, reshoring is able to change the existing system of international supply chains, which greatly affects both international trade and international logistics.

Reshoring, as such, is fundamentally concerned with where manufacturing activities are to be performed, independent of who is performing the manufacturing activities in question – a location decision only as opposed to a decision regarding location and ownership.

Defined as a location decision only, American explorers are hence able to identify the following four possible manifestations or types of reshoring [2, p. 28]:

(a) in-house reshoring, in which a firm fulfills demand in its local market by relocating manufacturing activities being performed in wholly owned offshore facilities back to wholly owned US-based facilities;

(b) reshoring for outsourcing, in which a firm fulfills demand in its local market by relocating manufacturing activities being performed in wholly owned offshore facilities back to US-based suppliers;

(c) reshoring for insourcing, in which a firm fulfills demand in its local market by relocating manufacturing activities being performed by offshore suppliers back to wholly owned US-based facilities;

(d) outsourced reshoring, in which a firm fulfills demand in its local market by relocating manufacturing activities being performed by offshore suppliers back to US-based suppliers.

While all of the reshoring options in Figure 1 are different, they are united by the fact that they are all location decisions.

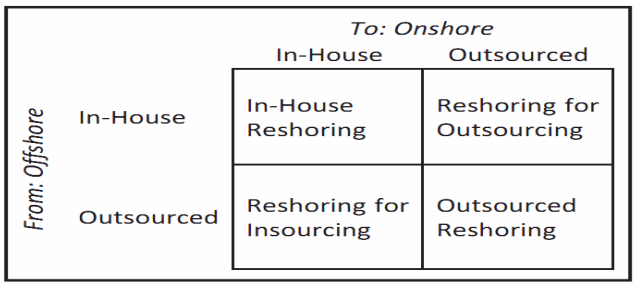

Fig. 1. Reshoring Options

Source: [2, p.28, fig. 1].

After having analyzed Western and Russian sources we have identified the following causes of reshoring:

1. Changes in the managerial valuation of the true total cost of offshoring relative to producing locally, based on experience with offshore production. Traditionally, the major American and European companies have transferred production with high labor costs and relatively low logistics costs in countries with low wages. Recently, however, this difference in payment for labor was reduced significantly. Thus, according to the portal The Reshoring Initiative, the wages of Chinese workers are growing annually by 15–18%, while the US – only 3%, and labor productivity in the US is much higher than that in China [3, p. 45]. The growth of prices for shipping and lower prices for energy resources in the United States (through the development of shale deposits)

should also be noted, which significantly affects the cost of production in the offshore and within the country (especially in the US) and logistics costs in the supply chain.

2. Environmental regulations become more synchronized and standardized across global supply chains. Offshoring for domestic demand requires shipping products across ocean, often from plants using power generated by dirty coal. At the same time, several countries have initiated carbon labeling programs such as Carbon Reduction Label in the UK, the Carbon Counted label in Canada and the carbon footprint labeling scheme in Japan. This will encourage firms to be engaged in less offshoring and more reshoring.

3. Increased value of the consumer brand "Made in USA" and "Made in the EU". In a press release of BCG (The Boston Consulting Group), issued in November 15, 2012, the results of the surveys which show that, firstly, more than 80% of US consumers and 60% of Chinese are willing to pay for the goods made in the US and not in China have been presented. Similar results were shown by studies of German and French consumer markets. Secondly, almost two-thirds of consumers in the US are willing to pay from 10 to 60% of the value of ten "key product categories", which have been tested in the United States (including baby food, clothing and electronics), and some consumers from 10 to 80% [3, p. 43].

4. The increase in the unemployment rate in the US and Europe. Due to the data of Office of Economic Development and Industry Relations (Iowa State University) at its peak in the late 1970s, the US manufacturing sector had nearly 20 million on jobs, 20 percent of all nonfarm employment. After that pivotal year, manufacturing employment began a steady erosion through the 1980s and 1990s before plummeting at the start of the 21st century. By 2010, US manufacturing had ebbed to less than 12 million jobs and less than 9 percent of the total workforce. So, Boston Consulting Group predicts an increase in the number of jobs in the 2–3 million until 2020 by reshoring. Walmart Buy America Initiative makes more modest forecasts – 1 million jobs to 2023 [4, p. 11]. Similar negative trends are observed in European countries. During the period from 2008 to 2013 3 million workplaces were eliminated in the European Union, while industrial production fell by 10%. Leaders of European countries see the future success in the development of the domestic industry as a major source of jobs, investment, innovation and skills.

5. The increasing desire of European and American companies are to avoid hidden costs and possible risks (current risk, expropriation risk, quality risk and others) in global and international supply chains [2, p. 29, Table 1], to improve their reliability and flexibility. The willingness of companies to accelerate the process of bringing the product to the consumer needs to be mentioned. At the same time product shipping by sea significantly slows the circuit.

6. Fears of US and the European Union in relation to the growing influence of the eastern countries (in particular China) on the global economy and international politics.

Thus, we can talk about reshoring as a phenomenon that in the near future can have a widespread application. Thus, according to foreign sources, to date, many US companies – Apple, Digital Innovations, Electrolux, Google, Lenovo, NCR, etc. – have already returned from their production offshore. In addition, one of the three largest car manufacturers in the US market – Ford – announced at the beginning of 2017 that it plans to produce cars for the Americans in the US, but not in Mexico. All this confirms the current favorable trend for intensification of reshoring. At the same time the ambiguity of this phenomenon and the unpredictability of possible outcomes are worth noting, both in developed and developing countries. It should be noted that reshoring will influence international trade and international logistics, due to changes in the existing network of global supply chains.

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UDC 338.24–111

INTELLECTUAL POTENTIAL AS A FACTOR OF SUSTAINABLE DEVELOPMENT OF THE ENTERPRISE

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The article defines the category of "intellectual capacity" in relationship with the "intellectual capital" category. The intellectual potential of the structure, its features and principles are considered. The importance of the intellectual potential for sustainable development of the enterprise is determined.

In conditions of transition to the information economy specific knowledge is essential for a successful, competitive companies that is held by employees of the enterprise, effective control mechanisms, collection and processing of data, the relationship with customers, investors, suppliers and other contractors. In this regard, issues of effective formation and management of those resources become more important. The theory of the intellectual potential as a key factor of the enterprise development is widespread, but the mechanisms and impact of intellectual resources on the efficiency of the enterprise is not uniquely identified.

To be effective in the management of intellectual potential of enterprises, it is necessary to define the basic theoretical aspects of intellectual potential. The existence of different approaches to the theoretical definitions leads to problems in the diagnosis and management of intellectual potential, and proves the need for such research.

Among the foreign authors who devote considerable attention to the problems of formation, development and effective use of intellectual potential we can highlight: D. Bell, E. Brooking, G. Belinger, G. Katrug, Jh. Galbraith, B. Genkin, A. Dreval, L. Edvinson, M. Malone, G. Probst, P. Sullivan, P. Strassman, T. Stewart etc.

Intellectual potential of economic systems is opportunities offered by the intellectual resources in a particular period and in the future, and can be used to solve specific problems or to achieve determined goal. The intellectual potential is a system with its inherent elements: intellectual capital; knowledge management system, links and properties (innovation, competitiveness); security system (informational, functional, organizational) [1, p. 66].

The concept of intellectual potential is similar to the concept of intellectual capital, but, if the elements of intellectual capital involved in the activities of enterprise and generate income, then the elements of the intellectual potential do not fully participate in the activities of the enterprise and at a particular time does not generate revenue, but have the ability to bring it in the future.

Intellectual capital is the relationship of knowledge, experience and key competencies of staff, corporate relations with partners and clients, which ensure the creation of added value and unique competitive advantages of enterprises in the selected segment of the market [2, p. 111].

Deep penetration of intellectual capital (and potential) in the production changes its character, provide the growth of its effectiveness, issues related to the theoretical and practical principles of effective use and development of all the elements of intellectual capital are getting particular importance.

The structure of the intellectual capital of the enterprise, and also illustrating the structure of intellectual potential, shown in figure 1.

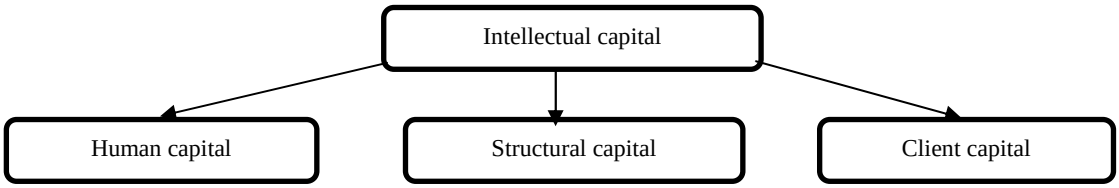

Fig. 1. The structure of the intellectual capital and potential of the enterprise

Source: author's own design based on [3, p. 2].

The structural or organizational capital includes the methods and structure of the relationship, to ensure effective interaction of employees within the enterprise, as well as with external partners in the course of its activities. Organizational capital includes management systems, databases, trademarks, copyrights, company culture etc.

Under the client or consumer, or attitudinal, capital is understood a system of stable links and relations with clients and consumers. It includes goodwill, contracts and agreements with customers and partners, brand etc.

However, this separation into components of intellectual capital is conditional, because in reality they are not separated, and function together providing a synergy effect.

The market demand what has value. Exactly in a market society inequality of people in their intellectual abilities is most noticeable. The gap between what actually is a human and his achievements, on the one hand, and what he thinks about his abilities and achievements, on the other hand, becomes apparent. Intellectual potential - it is, above all, a set of professional knowledge, skills and creative abilities of intellectual property, which are used in all types of economic activities and become a source of additional income (intellectual rents, royalties, lump-sum payments), providing strong market prospects and competitive advantages to the staff, enterprise, society.

Search of effective ways to manage the existing intellectual potential becomes a strategic objective of higher-level management executives to provide high competitive advantage in the market. There are the following features of the intellectual capital and capacity as an economic category [4, p. 6]:

– formation of intellectual capital has the character of accumulation in the form of knowledge, skills and experience;

– character and types of investment in intellectual capital are determined with historical, national, cultural features and traditions;

– investment in intellectual capital should provide the holder receiving higher income;

– investment in intellectual capital provide quite significant in terms of volume, long-time and integrated by the nature economic and social effects. The earlier investments in intellectual capital, in particular human component are made, the faster they begin to return. But it should be noticed that the higher-quality and long-term investments bring higher and more long-term effect. The investment period in intellectual capital is much longer than the physical. Investment period in physical capital is from one year to five years, and that form of investment in intelligence, education, investment period can be up to 12–20 years, continuing in the future the entire working life. Intellectual capital is different from the degree of liquidity of physical capital and is not as current capital;

– transformation of intellectual capital in the intellectual property in the form of a patent or other intellectual property rights may be bought or sold.

Thus, the economic system of intellectual capital as the potential inherent in the basic principles that define its character and main properties [4, p. 6].

1. The integrity of a system of intellectual capital. Its character is not a sum of the properties of its content elements, on the contrary, functioning of each element of the system it depends on its location and connections within the whole.
2. The relationship of elements within the system of intellectual capital as well as the interaction with the external economic environment, and this feedback.
3. Purposefulness and self-organization of the system. For the economic system of the intellectual capital these principles act as a natural trend.
4. Presence in the economic system of intellectual capital transfer and exchange of information.
5. Considered economic category has the properties of the goods: the ability to generate additional cash flow share under certain control conditions.
6. Cyclical and continuity of the acquisition process, accumulation, transformation, capitalization of intellectual capital.

Thus, when the elements of the intellectual potential are used in the enterprise activity, the intellectual potential becomes intellectual capital and begins to generate revenue from its using. Transfer of intellectual potential into intellectual capital precisely in direction and field which are essential for the enterprise now, providing its adaptation to the changing conditions of the environment and preservation of sustainable development vector. Consequently, there is a need to assess the existing potential.

To evaluate the intellectual capacity following indicators with their integral estimates should be used [1, p. 67]:

– unit personnel intellectual potential;

– intellectual material support – based on the number of personal computers, the quality and availability of modern means of communication, availability of computer support systems, enterprise management systems, etc.;

– intellectual scientific and technical potential – based on parameters such as the amount of scientific research, the number of patents and innovations, the number of awards for new developments and participation in exhibitions and conferences, publications in scientific journals and the like. This indicator should show a generalized quantitative expression of the intellectual development of the structural unit;

– intellectual information base – is characterized by the possibility of fixing the knowledge of the individual so that they can be transferred to other and stored in a knowledge base, information about consumers and suppliers, the history of relations with clients, etc.

For comparison of indicators in frames of integrated estimates of groups and calculating the final rating is used weighted sum where the weights are given by experts.

It is advisable to determine the intellectual potential not only of the enterprise and its divisions, but of each employee. This indicator will help to solve problems of personnel policy. Knowledge of the intellectual level of the enterprise and its subsidiaries helps to solve the following problem [1, p. 68]:

– confirmation of enterprise capabilities to achieve its strategic objectives (whether the enterprise has the necessary expertise and technology);

– restructuring of the enterprise (which features highlight in the new organizational structure, and which on the contrary, merge or liquidate, etc.);

– expansion of corporate memory boundaries by creating a knowledge base containing information about intellectual potential of every employee.

The process of changing the enterprise's intellectual potential and its units should be carried out annually. Continuous monitoring of the dynamics and timely corrective action to make better use of the intellectual potential of the enterprise to improve the performance of industrial and economic activities and improve enterprise stability. Therefore, the intellectual potential of becoming an important factor for sustainable development.

Thus, currently an enterprise can be competitive and sustainable if based on knowledge and human potential, the main principle of which is the dissemination and use of knowledge and the potential of its staff to ensure their growth and development.

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ANALYSIS OF THE STATUS AND PROSPECTS OF DEVELOPMENT OF FREIGHT BY MOTOR TRANSPORT IN THE REPUBLIC OF BELARUS

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The article presents the analysis of the condition of cargo transportation by motor transport in the Republic of Belarus. It analyzed the volume of cargo transportation by motor transport, and freight turnover of motor transport over the last six years and determined the perspective of development of freight motor transport in the Republic of Belarus.

Motor transport is the main mode of transport by transportation cargo in the city and neighborhood, serves more than 57 percent of freight traffic, providing the ability to deliver cargo "door to door".

In the Republic of Belarus there are more than 414 thousand trucks. In 2015 their number has increased compared to the 1990 level (225,6thousandtrucks) by 83,5 percent. During the same period from 1990 to 2015 the volume of freight by public motor transport decreased by 2,4 times from 428,1 million tons to 180,2 million tons (table 1). In January – November 2016 the volume of freight by motor transport amounted to 162.26 million tons, accounting for 96,7% in relation to January – November 2015.This happened because the organizations actively acquires trucks, although the freight are not their main activity, and performed for their own needs. This type of freight is not reflected in the statistics. The efficiency of such transport is low, and high cost.

Table 1 – Volume of freight by motor transport (million tons)

Region	2010	2011	2012	2013	2014	2015
The Republic of Belarus	166,9	191,0	189,3	192,5	191,7	180,2
Brest region	30,4	30,7	28,4	26,5	27,0	25,3
Vitebsk region	17,0	19,5	19,9	20,2	18,9	17,1
Gomel region	12,9	15,2	14,8	18,9	18,6	17,6
Grodno region	24,6	27,1	26,4	27,9	25,1	22,9
Minsk city	32,0	41,4	40,1	35,4	35,1	34,6
Minsk region	35,4	41,6	44,0	47,1	52,7	47,7
Mogilev region	14,7	15,4	15,7	16,5	14,2	14,9

Freight turnover of public motor transport in comparison to 1990 increased by 3.2 times from 7.7 billion ton-kilometers to 24.5 billion ton-kilometers (table 2).In January–November 2016 the freight turnover of motor transport executed by organizations and individual entrepreneurs totaled 22624,9 million ton-kilometers (101.2% as against January–November 2015). This growth in freight turnover due to the active development of international motor transport and the increase in the average transportation distance. During2010 – 2015 the total volume of international freight increased from 6,8 million tons to 12 million tons, or 1,8 times.

Table 2 – Freight turn over of motor transport (million ton-kilometers)

Region	2010	2011	2012	2013	2014	2015
The Republic of Belarus	16023	19436	22031	25603	26587	24523
Brest region	2795	3288	3796	4469	4646	4575
Vitebsk region	1194	1335	1596	1859	1979	1753
Gomel region	1351	1689	1855	2238	2375	2141
Grodno region	1786	2147	2603	3106	3353	3074
Minsk city	5568	6600	7249	7391	7490	7095
Minsk region	2238	2910	3341	4591	4737	4063
Mogilev region	1091	1467	1591	1950	2008	1822

It should be noted that in Belarus motor transport services are ranked first among exports of services.

The international automobile transportations are carried out on the basis of the national legislation and concluded bilateral and multilateral treaties and intergovernmental agreements. The Republic of Belarus has concluded 55 agreements in this field with 44 countries, work is continuing on the signing of agreements on international motor transport with other countries that are promising directions of implementation of transport of

goods and passengers. Special attention is paid to the liberalization of international motor transport. In 2015 there has been planned the way of the abolition of the licensing system with the Republic of Macedonia and Republic of Slovenia. In the framework of the Eurasian economic Union has already cancelled permits for bilateral and transit transport, and also assumes the lifting of the ban on cabotage.

In the Republic of Belarus preference for motor transport compared to Railways. This is due to the role of Belarus as a transit country in international trade between EU member and the CIS, and is caused by the speed requirements of transportation and requirements of modern producers to the transport of perishable and expensive goods.

The most important element of the logistics infrastructure of Belarus is the network of public roads. Their length is more than 86 thousand km. Major importance roads of national significance (a length of about 16 thousand km), which carried, more than 70% of all goods.

Currently, the State program for the development and maintenance of roads in the Republic of Belarus for 2015–2019. Its main objectives are the modernization of roads in all directions of international transport corridors; increasing the technical level of national roads connecting Minsk with regional centers; construction of bypasses of a number of cities; the development of a network of local roads; construction of roadside service objects.

During 2015–2019 is planned to reconstruct and build 1158 km of national roads and 2213 linear meters of bridges and overpasses. The parameters of the 1st category will be given 520 km of national roads which bring them to international standards. By 2020 it is planned to perform capital repairs of 1600 km of national highways, 8200 linear meters of bridges and overpasses, repairs of 7200 km and 6500 linear meters of bridges and overpasses. Will be upgraded 2758 km of roads with an increase in the bearing capacity to 11,5 tons per single axle. Within five years it is envisaged to increase the length of the Republican roads in good condition compared to 2014 for 4972 km. Speed limit will be raised for 520 km of roads. The length of toll roads in general will be 1968 km.

The competitiveness of Belarusian carriers on the international transportation market, the sustainable performance of transportations of passengers and cargo in the intra Republican message directly associated with the timely renewal of the vehicle fleet. At the same time to ensure the competitiveness of international road carriers especially, it is important to update it due to the purchase of automobiles of high ecological class.

In previous years, the park international vehicles actively updated, but recently the trend has changed. The introduction of utilization fee and state duty for permission for admission of vehicles to participation in traffic worsened the position of Belarusian carriers.

According to the State program of development of transport complex of the Republic of Belarus for 2016-2020 the development of outsourcing in the field of road transport will promote a more rational use of cars and increase of efficiency of transport organizations. These organizations have developed production and technical base and staff to carry out the works for the storage, maintenance and repair of vehicles and qualified personnel for operation management and logistics.

To increase the proportion of transport organizations of private form of ownership that carry out freight transportation in the regular message will be created conditions for the development of public-private partnerships by improving the performance of operators of passenger transportation in terms of giving them roles in the payment for the performed transport work.

The state program of development of transport complex of the Republic of Belarus for 2016 – 2020 is aimed at the development of motor transport in accordance with the needs of economy of the Republic and its population, creating conditions for the growth of exports of road transport services, improvement of normative legal acts in the field of transport activities. The target of the Program is the growth of freight turnover of motor transport to 107,1 % in relation to 2015.

In turn to enhance the transit appeal of Belarus is required to address the following issues:

– improvement of legislation on administrative responsibility;

– optimization of seasonal restrictions;

– international certificate of weighing;

– introduction of the list of perishable goods;

– the use of electronic versions of special permission to journey of heavy and (or) large vehicles on public roads etc.

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BUSINESS VALUATION METHODS: THEORETICAL ASPECTS AND COMPARATIVE ANALYSIS

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The paper analyses tree main traditional business valuation methods: the market approach, the income approach and the asset approach. All methods will be describe and comment by theoretical aspects. The author presents the main advantages and disadvantages of business valuation methods and performs comparative analysis.

Introduction. Businesses need to be valued for a number of reasons. There are five main reasons for valuing a business: 1) it helps seller or buyer to buy or sell a business; 2) understanding how business are valued, it will help to improve the business real or perceived value; 4) negotiate a better price – as a buyer or seller; 5) complete a purchase more quickly.

Off course value should not be confused with price, which is the quantity agreed between the seller and the buyer in the sale of a business. This difference in a specific business value may be due to a multitude of reasons. Since business value is at the centre of company finance, finding a value for a company is not easy. First, different companies should be valued differently (for example, public company vs. private company, company in distress, etc.). Second, company value depends on the aim of the valuation as well (one company can have several values, depending on the method).

The seller and the buyer perspective of business valuation looks different. From the buyer's viewpoint, the basic aim is to determine the maximum value it should be prepared to pay for what the company it wishes to buy is able to contribute. From the seller's viewpoint, the aim is to ascertain what should be the minimum value at which it should accept the operation.

The tasks of the research are as follows:

– to overview the traditional business valuation methods;
– to describe the main advantages and disadvantages of valuation methods;
– to compare business valuation methods.

1. Business valuation methods theoretical aspects. Different authors distinguish various aims of the valuation and classification of valuation methods. For example, Irina Berzkalne (2013) identified six business valuation methods: balance sheet, income statement, mixed (goodwill), cash flow discounting, value creation and options. Other authors – Laro, D., Pratt, P.S. (2005) point out four situations when it is necessary to value a business: income approach, market approach, asset – based approach and entity – level discounts. J. Žaptoriusir G. Garbanovas (2006) in article „Influence of financing policy to company's value "separate income approach methods and provides discounting free cash flow accounting methodology. Traditional business valuation methods are based on balance sheet, income statement or cash flow statement. Figure 1 shows tree different business valuation methods.

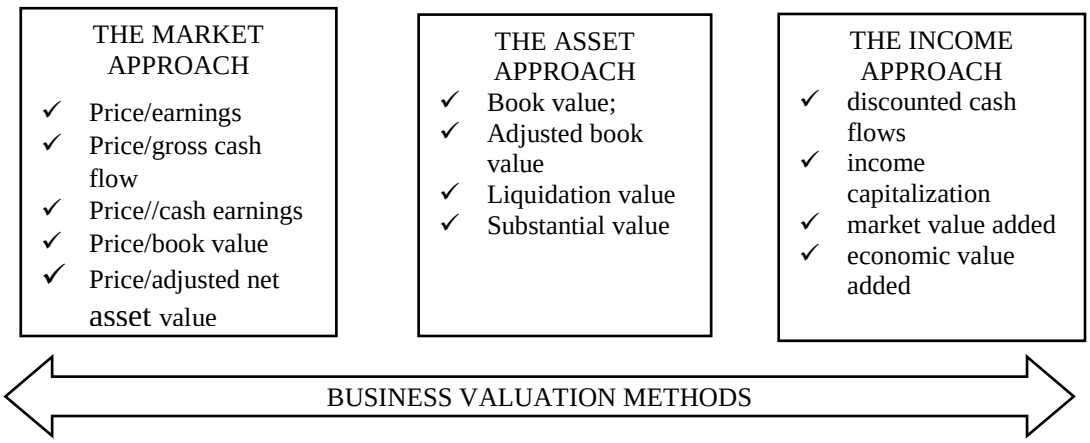

Fig. 1. Business main valuation methods

Source: P. Fernandez (2007), Laro, D., Pratt, P.S. (2005) and Republic of Lithuania Law on the bases of property and business valuation (2016).

The market approach to business valuation is a pragmatic way to value businesses, essentially by comparison to the prices at which other similar businesses or business interests changed hands in arm's-length transactions. It is widely used by buyers, sellers, investment bankers, brokers, and business appraisers. The market approach to business valuation has its roots in real estate appraisal, where it is known as the comparable sales method.

The fundamental idea is to identify the prices at which other similar properties changed hands in order to provide guidance in valuing the property that is the subject of the appraisal. Of course, business appraisal is much more complicated than real estate appraisal because there are many more variables to deal with. Also, each business is unique, so it is more challenging to locate companies with characteristics similar to those of the subject business, and more analysis must be performed to assess comparability and to make appropriate adjustments for differences between the guideline businesses and the subject being valued. Different variables are relatively more important in appraising businesses in some industries than in others, and the analyst must know which variables tend to drive the values in the different industries. These variables are found on (or developed from) the financial statements of the companies, mostly on the income statements and balance sheets. There are also qualitative variables to assess, such as quality of management.

By Laro, D., Pratt, P.S. (2005) the market approach methods could be described:

– The price-earnings ratio (P/E Ratio) is the ratio for valuing a company that measures its currentshareprice relative to its per-share earnings.

– The price-to-cash-flow ratio is the ratio of a stock's price to its cash flow per share. The price-to-cash-flow ratio is an indicator of a stock's valuation.

– The price/book value ratio, often expressed simply as "price-to-book", provides investors a way to compare the market value, or what they are paying for each share, to a conservative measure of the value of the company.

– The Price/adjusted net asset value a business valuation procedure used in acquisition accounting that changes the stated values of a company's assets and liabilities to reflect its current fair market values. This accounting technique adjusts asset and liability values either up or down, so they reflect the true values on either an ongoing concern, forced liquidation or orderly liquidation basis.

The asset approach methods seek to determine the business value by estimating the value of its assets. These are traditionally used methods that consider that business value lies basically in its balance sheet. They determine the value from a static viewpoint, which, therefore, does not take into account the business possible future evolution or money's temporary value. Neither do they take into account other factors that also affect the value such as: the industry's current situation, human resources or organizational problems, contracts, etc. that do not appear in the accounting statement. (P. Fernandez 2007). These methods could be used then if company has a stable, asset rich business. The biggest disadvantage of this method is that it does not take account of future earnings. This value suffers from the shortcoming of its own definition criterion: accounting criteria are subject to a certain degree of subjectivity and differ from market criteria, with the result that the book value almost never matches the market value.

By P. Fernandez (2007) and G. Kancerevyčius (2006) the asset approach methods divided:

– A book value method is the value at which the asset is carried on a balance sheet and calculated by taking the cost of an asset minus the accumulated depreciation. Book value is also the net asset value of a company, calculated as total assets minus intangible assets (patents, goodwill) and liabilities. For the initial outlay of an investment, book value may be net or gross of expenses such as trading costs, sales taxes and service charges.

– Adjusted book value method seeks to overcome the shortcomings that appear when purely accounting criteria are applied in the valuation. When the values of assets and liabilities match their market value, the adjusted net worth is obtained.

– Liquidation value is the business value when it is liquidated, that is, its assets are sold and its debts are paid off. This value is calculated by deducting the business's liquidation expenses (redundancy payments to employees, tax expenses and other typical liquidation expenses) from the adjusted net worth.

– The substantial value presents the investment that must be made to form a company having identical conditions as those of the company being valued. I could also be defined as the assets replacement value, assuming the company continues to operate, as opposed to their liquidation value. Normally, the substantial value does not include those assets that are not used for the company's operations (unused land, holdings in other companies) (P. Fernandez 2007)

The income approach methods seek to determine a business value by estimating the cash flows it will generate in the future and then discounting them at a discount rate matched to the flows risk. This method is generally used because it is the only one conceptually correct valuation method. In these methods, the company is viewed as a cash flow generator and a business value is obtained by calculating these flows present value using a suitable discount rate. Cash flow discounting methods are more used because business value is based on

the detailed, careful forecast, for each period, of each of the financial items related with the generation of the cash flows using historical data of company and market situation and data. By G. Kancerevyčius (2006) and V. Aleknavičienė (2009) the income approach methods described as:

– *Discounted cash flow method* is an income-based approach to valuation that is based upon the theory that the value of a business is equal to the present value of its projected future benefits (including the present value of its terminal value). The terminal value does not assume the actual termination or liquidation of the business, but rather represents the point in time when the projected cash flows level off or flatten (which is assumed to continue into perpetuity). The amounts for the projected cash flows and the terminal value are discounted to the valuation date using an appropriate discount rate, which encompasses the risks specific to investing in the specific company being valued. Inherent in this method is the incorporation or development of projections of the future operating results of the company being valued.

– Income capitalization method is used to determine the value of an income generating property by deriving a value indication by conversion of expected benefits like cash flows and reversion into value of property. This approach is applicable for those properties that generate income like the rental properties which includes non-owner occupied building, houses and duplex, apartment building, etc. The income from rent that an owner expects from a property is also a part of the value of that property. This approach is not suitable for purely residential properties that do not generate any income. The value of any income producing property like office building, cell tower rental and storage facility can be determined by the income capitalization approach.

– Market value added is a calculation that shows the difference between the market of a company and the capital contributed by investors, both bondholders and shareholders. In other words, it is the sum of all capital claims held against the company plus the market value of debt and equity.

– Economic value added is a measure of a company's financial performance based on the residual wealth calculated by deducting its cost of capital from its operating profit, adjusted for taxes on a cash basis. Method could also be referred to as economic profit, and it attempts to capture the true economic profit of a company.

Each business valuation methods are selected depending on the purpose of assessment and asset type. Different methods of value results could be compared with each other for more accurate business valuation.

2. Business valuation methods comparative analysis. Each business valuation methods have different criteria which are specially selected for different companies. Business valuation methods are decomposing by different objects and criteria in table 1.

Table 1 – Business valuation methods criteria

METHODS	CRITERIA							
	Decision-making	*Investment*	*Valuation object*			Company sphere	Time	
			Small company	Liquidation	Profit generating asset		Current data	Past, current, future data
I. THE MARKET APPROACH								
1) price/earnings	-	+	+	-	+	+	+	-
2) price/gross cash flow	-	+	+	-	+	+	+	-
3) price/cash earnings	-	+	+	-	+	+	+	-
4) price/book value	+	-	+	-	+	+	+	-
5) price/adjusted net asset value	-	+	+	-	+	+	+	-
II. THE ASSET APPROACH								
1) book value	+	+	-	+	-	+	+	-
2) adjusted book value	+	+	-	+	-	+	+	-
3) liquidation value	+	-	-	+	-	+	+	-
4) substantial value	+	+	-	+	-	+	+	-
III. THE INCOME APPROACH								
1) discounted cash flows	+	+	-	-	+	-	-	+
2) income capitalization	-	+	-	-	+	-	-	+
3) market value added	-	+	-	-	+	-	-	+
5) economic value added	+	-	-	-	+	-	-	+

Source: L. Dagiliene (2007), V. Aleknavičienė (2009), G. Kancerevyčius (2006).

According to the information provided in the table, separated by the evaluation criteria are as follows:

– Decision-making – this is the criteria, which is the ultimate goal of decision on the company's future performance or results.

– Investment – that's the assessment criteria, which depend on the sentiment and the final result indicates continuing company.

– Valuation object which is divided into a few objects as small company, liquidation and profit-generating assets.

– Company sphere – this sector of activity, which indicates where the industry activities of the company.

– Time – is the data analysis, which depends on the period: past, present and future.

Not all the specified criteria could be applied to all methods. For example, the market approach methods depend on: industrial, economic and commercial buildings, structures and installations; small businesses and liquidation. Also, there should be the same business sphere, activities with other companies, if want to compare business valuation prices and reduce the risk. Advantages: good data since it is based upon arm's length transactions; pricing is often done based on comparable; there is a large pool of data. Disadvantages: the concluded value may be imprecise since comparable are not actually or truly comparable.

The analysis of the asset approach methods, it could be seen that the main criteria for this group is the decision-making, the company decided to calculate the value based on the book values of the balance, rather than market prices. In most cases, this method applies to companies under liquidation. Also, this method is inappropriate to evaluate companies, which for the most part of the property consists intangible assets because it would not reflect the true value. Advantages: data required to perform the valuation are usually easily available; allows for adjustments (up and down) in estimating; suitable for companies with heavy tangible investments (e.g. equipment, land); helpful when the company future is in question or where the company has a brief or volatile earnings record. Disadvantages: could understate the value of intangible assets such as copyrights or goodwill; does not take into account future changes (up or down) in sales or income; balance sheet may not accurately reflect all assets.

In income approach methods values important object – the profit-generating assets. Used for commercial, residential or productive profits officer to assess the property in accordance with its capacity to generate revenues. Then, when assessing the need to align income and expenses, income method is often used to check the results. The income methods involve evaluating to what extent the market is able to generate revenues from the property. The method is based on future cash flow forecasts and their present value. This method is suitable for investment and decision-making criteria and important activity. Also, this method is time to assess the impact of cash flows. Advantages: the value of the business is based on projected future results, rather than assets; it could be used with either net earnings or net cash flow; it useful when future results are expected to be different (up or down) from recent history. Disadvantages: it could be understate the value of balance sheet assets; discounts the valuation based on the level of risk; a business perceived as riskier typically receives a lower valuation than a more stable business; projections are not guarantees; unforeseen future events could cause income or earnings projections to be completely invalid.

Conclusions. There are many different methods for valuing a business, with some better suited to a specific type of business than others. A key task of the valuation specialist is to select the most appropriate method for valuing a particular business. The method chosen should provide a reasonable estimate of value, be suitable for the intended purpose and be able to face legal challenges. The most important criteria for the methods are: business structure (dominant material or intangible assets), company size and age, the industry in which the company operates, and other factors. Choosing the business valuation method takes the availability of the necessary background information (minimal time and monetary costs) as a business valuation based on inadequate, outdated or unreliable information, the conditions obtaining false results. The assessment takes into account the business in a competitive environment, companies of similar financial indicators, the user needs analysis, and identifies the main aims and objects.

The main theory about market approach methods is that valuation measures of similar companies that have been sold in arms-length transactions should represent a good proxy for the specific company being valued. However, it is difficult to find information and compare similar business because other company's do not like to public their selling information and details.

The asset approach methods could be used for business liquidation because the result of the book value almost never matches with the market value. Therefore the value of business is not reliable.

The most perspective and appropriate methods of business valuations are the income approach methods. This method includes not only business data but also is based on market situation and data. Using discounting cash flows and other income approach methods value is based on the detailed, careful forecast, for each period, of each of the financial items related with the generation of the cash flows. This method calculates future earnings and there for it is useful for investors and shareholders.

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INSTITUTIONALISM IN LABOR ECONOMICS

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Labor economics is the science which analyzes labor market, labor resources and employment, long-term analysis of labor relations, explores the revenue of workers and labor costs, investigates the problems of labor productivity and efficiency, develops the methods of explanation the number of employees, as well as explains the concept of human capital. Also, labor economics studies the processes of reproduction of labor power and interaction of employees, means and objects of labor.

There are several economic approaches to the study of labor economics: neoclassical, Keynesian, the marginal, the Marxist, technocratic. In the middle of the twentieth century the narrowness of these approaches, one-sidedness, the lack of breadth in the labor science development in accordance with the needs of society were understood. In these circumstances, the need for science was the need to explain the situation, systematize views on this issue, make a new model of regulation of social and labor relations, re-describe labor as a social and economic process, consider labor activity (the concept and the characteristics of its basic forms: employment, craft, professional work, professional activity), the socio-economic structure of labor economics and the system of economic institutions, their socio-labor content, the relationship of economic, legal and social development, and so on [1].

Today social and labor relations are the subject of a number of works of economists. As A.V. Karpushkina notes, more and more often in the sphere of economic analysis, including labor economics, the institutions of social and labor relations are mentioned. It is caused by aspiration to find in institutional methodology source of new solutions in the direction of reforming the economy. Any kind of economic activities is institutionalized, i.e. made within a set of rules and restrictions. Therefore, you should agree with the economists' assertions that the social and labor relations can exist only within stable rules, regulations, procedures, lines of behavior and interaction between employees, employers and authorities [2].

Institutional approach to labor economics and the study of the labor market has been defined by J. Dunlop. The focus of the approach is given to the analysis of occupational and sectoral differences in the labor force and the corresponding wage levels; traced a departure from the macro-economic analysis, and an attempt to explain the nature of the market by characteristics of the dynamics of individual industries, professional and demographic groups is made [3].

The institutional approach characterizes the internal labor market as a social and institutional system, in which in a certain way is ordered joint labor activity and takes place savings on transaction costs. Institutionalism offers a theory, which studies human behavior, forms of achievement of a market consent and the employer and the employee seek for harmonization of relations on the basis of the regulation of its activity by means of intercompany mechanisms [4].

One of the main directions of institutional approach to labor economics is the introduction of the quantitative analysis in the research process of institutional change in the labor sphere, which involves a process description and prediction of institutional effectiveness. The object of study of institutional change can be the fact of the changes, its causes and consequences. Tasks of prediction of institutional changes are to determine which of the described institutional alternatives would be most effective in the specific economic conditions, what the quantitative parameters of similar efficiency are and what the properties of this or that institution replacing earlier existing one are. [1]

In the Republic of Belarus during the last decades there has been a transition from neoclassical to the institutional approach to labor economics. It is caused by specifics of the social and economic system created in Belarus, badly corresponding classical macroeconomic model, which assumes equal treatment of economic entities and their activities proceeding from the principle of economic expediency. Learning the specifics of the economic policy in Belarus forced to turn to the institutional methodology, which is in contrast to the classical approach, considers economic problems under wider point of view, without absolutizing the principle of economic feasibility and often focusing on other institutional settings.

In Belarus in recent years, the development of institutional direction has been fast enough. Among the publications there are a large number of articles in the collections of conference papers, monographs, textbooks, articles in economic journals. Translations of articles by foreign economists, which have influenced the development of institutional economics (D. North, J. Stiglitz) are published, as well as the articles of national institutionalists in «ECOWEST» magazine, published by the Research Center of the Institute of Privatization and Management. At the same time Belarusian scientists actively use the Internet features. Among the

Belarusian scientists, using the methodology of institutionalism in their research, V.F. Bayneva, Y.V. Valevicha, E.B. Dorin, P.S .Lemeshenko, A.I. Luchenok, E.J. Morozov, P.G. Nikitenko, S.S. Osmolovets, I.A. Rudenkova can be identified. Modern institutionalism has quite a wide range of areas, different methodologies of analysis and research program. With a sufficient degree of conditionality, the main directions of development of institutionalism in Belarus can be divided into a theoretical institutionalism, new institutional theory, practical neoinstitutionalism [5].

Considering tasks of modernization of the Belarusian economy to increase its competitiveness a number of measures for debureaucratization of public authorities, the simplification of taxation and rules of entrepreneurship, liberalization of the labor market and development of system of motivation of workers are undertaken now. To determine the directions and extent of liberalization of the labor market, it is necessary to evaluate as far as it is rigid and regulated now, and also to establish a proportion between its flexibility and rigidity.

Flexibility of the labor market depends on its institutional structure. Currently, experts are unanimous in their opinion that the qualitative differences in the results of the labor market functioning and its effectiveness is largely determined by its institutional framework. Therefore, studying of an institutional structure of the labor market, assessment of its institutional flexibility (rigidity) and reasons for the directions of liberalization for increase economic efficiency have become important theoretical and applied tasks.

From a theoretical point of view, it is interesting how the institutional intervention can enhance the effectiveness and changing market forces in the field of labor relations. Institutions transform labor relations in view of the current situation really trying to eliminate information asymmetry, to take into account the heterogeneity of workers and workplaces by means intervention in wage formation mechanism to minimize transaction costs.

From a practical point of view, not only the development of indicators by which it is possible to diagnose and monitor the institutional structure of the labor market is of interest. Allocation of those players on it (employee groups and employers) which win (and lose) in case of changing the degree of institutional intervention in the mechanism of the labor market functioning is also of interest. Knowledge of nature, the dynamics of the institutional structure of the labor market and the consequences of change is one of the fundamental elements of the stability of the national economy.

The institutionalization of the labor market – is the creation of sustainable complex of formal and informal rules, principles, norms, attitudes and organizations regulating labor relations. All its structural divisions, the organizations of subjects, standard and legal instructions, the value system acquired by a general population, standards of behavior, installations and a mentality treat institutes in the labor market [6].

Institutes of the labor market are understood, first, as the "rules of the game" set out in the laws, regulations, the principles, social norms, secondly, as institutions and organizations creating labor market infrastructure which criterion function is optimization of behavior of participants of the social and labor relations, thirdly, as the mechanisms regulating the functioning of the labor market and its development. The system approach to institutes of the labor market undertaken in work also includes the analysis of their structure and the carried-out functions. The structure of institutes of the labor market differentiates the formal and informal institutes regulating interaction of individuals and groups in the social and labor sphere.

The institutionalization of the labor market is a necessary attribute of human activity and economic factor in the development of the national economy. Actions in the labor market, carried out in an institutional form, create an orderly economic process, which can be regulated, controlled, structured, providing normal functioning of the labor market and its structural elements. Effective institutional arrangements harmonize interests of the employee, the employer, the state [7].

The institutional approach is the most actual among the existing approaches to market research. Its use makes it possible to understand and analyze the nature of the institutional changes, as well as the behavior of organizations and individuals in the labor market. In the conditions of ongoing processes of globalization in the world, studying the institutional and organizational structure of the labor market has special scientific importance for the further development of economic theory; it plays an important practical role in terms of institutional change management and reduces transaction costs [8].

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UDC 330

THE COMPARATIVE ANALYSIS OF THE STANDARD OF LIVING INDICATORS: LATVIA AND BELARUS

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The author has made a research by comparing the standard of living indicators of Latvia and Belarus. Because of the limited amount of research paper volume the author investigated the most important indicators – GDP, demographics, employment, as well as some indexes like Human development index, Quality of life index and Level of happiness.

Introduction. With the collapse of the Soviet Union over 25 years ago Latvia and Belarus gained the independence and the ability to govern state policy by them. Since Latvia and Belarus are neighbours, the transnational transit and various co-operation agreements are bounding these countries, therefore it is essential to examine what the differences in the standard of living in both countries today are.

The aim of the research is to analyse and compare the standard of living indicators of Latvian and Belarus.

The research methods are presented by the monographic and comparative analysis.

The tasks of the research are the following:

1. To study the concept of the standard of living and to identify the most important indicators characterising the standard of living;
2. To compare various indicators that characterise Latvian and Belarusian standard of living;
3. To express the conclusions and proposals.

The main part. A full-fledged life has always been a significant topic in philosophy, social thought and each person's personal life [1]. The quality of life is a multi-dimensional and broad concept, which characterise welfare of individuals, social groups and the general public. The quality of life consists of many components, the ones which are objectively affecting people's lives and ones that are an evaluation of the subjective level of satisfaction with life.

Both the economic and social development together constitutes the environment that is necessary for the well-being of people, and the increase of quality of life therefore also raising the standard of living [2].

The notion of the standard of living has been defined in different ways. Ministry of Economics of Latvia defined standard of living as follows: "Degree of satisfaction of material and cultural needs of the inhabitants" [3]. European Union (EU) glossary of terms (2004) which is accessible in the database of Latvian Academy of Sciences webpage, standard of living is defined as "the amount of goods and services that a person can purchase for gained income, i.e., the real value of income. It depends on the value of goods and services produced per person. The standard of living can be improved only by increasing production and productivity" [4]. Consequently, this definition claims that the standard of living is mostly affected by the Gross Domestic Product (GDP).

As mentioned in the European Union statistics database *EUROSTAT*, GDP is a quantitative indicator, which means that it is impossible to determine how wealth is distributed among people inside of the country. Consequently, to identify and compare the standard of living in the EU between the various member states, for statistical purposes the 8 + 1 dimensions of quality of life is used, which describes indicators such as [5]:

1. Material living conditions (income, consumption and material conditions).
2. Productive or main activity.
3. Health.
4. Education.
5. Leisure and social interactions.
6. Economic and physical safety.
7. Governance and basic rights.
8. Natural and living environment.
9. +Overall experience of life.

Thus, the author can conclude that the indicators of the standard of living can be divided into 3 categories, which are (1) economic indicators (GDP, employment and unemployment, household income, etc.), (2) social indicators (demography, education, health, etc.) and (3) subjective indicators (quality of life assessment).

The standard of living and also the quality of life can be evaluated using various indexes, such as Gender Equality Index, Human Poverty Index and Quality of life index and others. Within The United Nations (UN) Development program, every year the majority of world countries are placed on the Human development index

(HDI) ranking by calculating different indicators of the country and combining them. Its determination involves the use of criteria such as life expectancy at birth, which can be predicted by demographic characteristics, education level and income (gross national income per capita) [6].

None of the indexes is a perfect indicator, since absolutely all aspects of human development are not possible to cover, as well as many indexes are collected only among EU countries, however, these indexes provide a relatively clear picture of the development trends in various countries and regions. [7].

The author of the research, as the leading indicators to evaluate standard of living, choose to compare the demographic indicators, GDP, unemployment and other indicators, as well as the HDI and the Quality of life index.

As a first indicator to compare the two countries, the author used demography, that is, the number of inhabitants, the breakdown of inhabitants by place of residence and the life expectancy (Table 1). According to the latest information, Belarus population is 9,505 million, while the Latvian is only 1,969 million. In both countries, the population over the years has fallen since gaining the independence, but in the last two years, the Belarusian population growth rate is positive, which could not be said about Latvia.

Table 1 – Demographic comparison of Latvian and Belarus

Indicator	**Latvia**	**Belarus**
Population (2005), million	2,250	9,697
Population (2010), million	2,121	9,500
Population (2016), million	1,969	9,505
Population by place of residence (%): – urban – rural	68 (2016) 32 (2016)	77 (2014) 23 (2014)
Life expectancy at birth, years	74,3 (2014)	72,6 (2013)

Source: [8–9].

As shown in Table 1, a population of Latvia in 2016 compared to 2005 decreased by 12.49%, while in Belarus at the same period by 1.98%, which can be explained by the low birth rates in Latvian, as well as migration to other EU countries with better living conditions. In Latvian higher proportion of the population is living in the rural areas. Life expectancy is an important indicator (calculated with a special computer program), as it reflects the nation's health, while health depends on the living conditions and the figure in Latvia (74,3 years) is better than in Belarus (72,6 years).

According to the Latvian Central Statistical Bureau, the GDP is a volume of produced final products and services in total during the year in the certain territory. It is calculated using data on domestic production, expenditure and income [10]. Table 2 summarises the GDP figures. To compare GDP of Latvia and Belarus, the author chose to use International Monetary Fund data which is available in dollars, whereas the Belarusian Ruble exchange rate is quite volatile and the currency is repeatedly denominated [11].

Table 2 – GDP and GDP per capita in Latvian and Belarus (Real and Deflator)

Indicator	**Latvia**	**Belarus**
GDP, Real	$ 27,95 billion	$ 48,12 billion
GDP per capita, Real	$ 14 141	$ 5 092
GDP, Deflator	PPP $ 50,87 billion*	PPP $ 165,36 billion*
GDP per capita, Deflator	PPP $ 25 740*	PPP $ 17 496,5*

Note: * – an International dollar would buy in the cited country a comparable amount of goods and services a U.S. dollar would buy in the United States.

Source: [12].

In terms of real and deflator GDP, Belarus numbers are higher, but it is important to take into account the fact that in Latvia goods and services per capita are produced at higher numbers, which means that, according to this indicator, economic situation is better in Latvia than Belarus. Since the GDP is used to provide a broad overview of the national economy, therefore assessment of the specific country's standard of living only by GDP cannot be done.

By analysing the HDI index of Latvia and other Baltic countries, the author concluded that HDI in 2015 (last data collected) placed Latvia in the 46th place among 188 countries (index value 0,819) [13]. Lithuania ranks in the 37th place [14], while Estonia is at the 30th place [15], which means that all three Baltic countries

are in a high Human Development Index group (high HDI (0,800 and above) Medium HDI (0,500-0,799); low HDI (below 0,500)). According to HDI, Belarus among all countries is in the 50th place with an index value of 0,798 [16], which correspond to the Medium Development Index group. The author has compiled a variety of standard of living indicators and internationally recognised indexes in Table 3.

Table 3 – Comparison of Latvia and Belarus standard of living indicators and indexes 2015

Indicator/index	**Latvia**	**Belarus**
Human development index	0,819	0,798
Gini coefficient of income inequality	36	26,5
Employment to population ratio (% ages 15 and older)	53,8	52,7
Employment in services (% of total employment)	68,1	49,9
Total unemployment rate (% of labour force)	11,9	6,1
Youth unemployment rate (% of labour force ages 15-24)	23,2	12,5
Homicide rate (per 100,000 people)	4,7	5,1
Internet users (% of population)	75,8	59
Environmental sustainability: Carbon dioxide emissions per capita (tonnes)	3,8	6,7
Quality of life index (2015) (place in ranking among 34 European countries) [6]	23	28
Ranking of Happiness (2012-2014) [17] (place in ranking among 158 countries)	89	59

Source: [13, 16].

The biggest advantage of HDI is that the countries with low-income level are able to score higher than might be expected, because even essential GDP growth still can make a relatively small contribution to human development and improvement on Standard of living in the country. The Gini coefficient reveals income inequality. If Gini coefficient value is 0, then there is absolute equality of income (all citizens have the same income), but the more it is approaching a value of 100, the greater the income inequality. Thus, it can be concluded that the Latvian income inequality is higher than in Belarus. As shown in Table 3, the employment rates in Belarus is much more successful, and the unemployment rate is lower (6.1%), as well as the youth unemployment rate (12.5%), and, as the Latvian youth lack employment opportunities, they are going to other EU countries, which leads to have a negative impact on the national economy and on the demographics in the long term. Among European countries, the Quality of life index in Latvia is higher than in Belarus, but with life, in general, more satisfied and happier is the Belarusians. In terms of security and environmental sustainability Latvian indicators are better, so it can be assumed that the living environment is more favourable in Latvia than in Belarus. Another important indicator is the number of the people employed in the service sector, as trends indicate, in the developed countries the services sector employs more than 70% of the population compared to the manufacturing sector [18], which can be seen also in Latvian figures in Table 3, unlike in Belarus where more people are employed in manufacturing.

Conclusions. After analysing the major indexes that characterise standard of living in the country (GDP per capita, the Quality of life index and the Human Development Index), Latvia was in a higher positions than Belarus, but taking into account other indicators, the gap between the countries does not seem that major, besides, according to the Ranking of happiness, Belarusians are happier about their life.

But it should be emphasised that there are significant problems in both countries – in Belarus it is the currency instability, whereas Latvia faces the depopulation and unemployment.

By continuing to develop and improve this research further the author should increase comparable determining indicators of standard of living for comparison, as well as accurately assess the importance of each of the quality of life indicators to better compare the standard of living in both countries.

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UDC 629.735

THE ANALYSIS OF CAPABILITIES AND MARKET OF ERP SYSTEMS

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This article describes the functions of ERP systems that enable enterprises to automate their work. Also, here have been revealed the advantages and disadvantages of these systems. By analysing the market of ERP systems have been identified leading vendors ERP systems.

Introduction. Today, the ERP systems (Enterprise Resource Planning) are becoming more and more popular. Thanks to them, any enterprise can automate and optimize its work. The systems of ERP class are a full-featured suite of integrated applications that allow creating a single environment for automation of planning, accounting, control, analysis and management of business processes in the financial, inventory, production and logistics flows, accounting, personnel management, regulation of relations with contractors, reporting, etc. [1]. Thus, data exchange between departments is much faster and easier.

Task formulation. To research the possibility of ERP systems, to identify the advantages and disadvantages of ERP systems, to analyze the market of ERP systems.

The introduction of ERP-systems in any enterprise can cause many changes, so this process takes a lot of time (may take 2–3 years). Let's consider the possibilities of ERP systems.

Firstly, these systems make possible to plan in details the needs of the enterprise (for example materials, components, etc.), in what terms and in what volumes delivery should be made for completion of the plan on production.

Secondly, these systems help determine the number of goods, as well as identify surplus or deficit, that will help reduce the costs of storage.

Thirdly, ERP systems reflect any change in demand, so make it possible to adjust the production process.

Fourthly, the introduction of ERP systems optimizes business processes in the company by reducing material and time costs.

Fifthly, thanks to ERP client can control the delivery of products and the quality of customer service.

So, in ERP systems, there are the following main functional blocks [2]:

• Planning of sales and production. The result of the block's activity is the development of a plan by production of major products.

• Demand management. This unit is designed to forecast future demand for the products, determine the volume of orders that can be offered to the client at any given time, determining the demand of distributors, demand within the enterprise, and others.

• Enlargement planning of capacity. It is used for plan specification of the production and determine their feasibility.

• The main production plan (schedule of output goods). Goods are determined in the end production units (articles) with production time and quantity.

• Requirements planning materials. Are determined the types of material resources (precast units, prefabricated units of finished products, raw material, semi-finished products, etc.) and the specific terms of delivery for the implementation of the plan.

• Product specifications. The composition of the final product is determined, material resources necessary for its production, and others. In fact, the specification is the link between the basic production plan and plan of requirement materials.

• Planning of requirement capacities. At this stage of planning, capacities are determined more detailed than at previous levels.

• Routing / work centers. With the help of this block, product capacity and routes are concretized in such way, according to which products are produced.

• Checking and correcting the shop plans by capacity.

• Procurement management, inventory, sales.

• Financial management (general ledger, accounts with debtor and creditors, asset accounting, cash management, financial planning and other activities.).

• Cost management (accounting for all expenses of the enterprise, and calculating the cost price of the finished product or service).

• Project management.

Certainly, ERP systems make life easier for any company. Like any innovation, ERP systems have their advantages and disadvantages. Let's start with the advantages:

• Control. As mentioned earlier, ERP-systems allow control over all departments of the processes, thereby simplifying the work of many departments.

• Sync. Each production is a certain sequence of operations. Any process involves exchange of data. ERP-system synchronizes all data into a single database so that the information on a particular product is available at any stage of production.

• Standardizing reporting. ERP reporting tools unify all kinds of reports and statistical data, that are needed for management. These reports can be created for all processes, business units or functions in real time.

• Unification of information systems. Because of implementation ERP-system in all parts of the organization, there is no need to maintain disparate information management systems. All functions of the individual systems can be integrated into the ERP-system.

• Enhanced management functions. Majority of ERP systems make possible to use corporate knowledge management modules. This enables organizations to significantly expand the management functions through the creation of a corporative knowledge base.

• Integration with suppliers / customers. Many modern ERP systems allow suppliers / customers to perform the part of functions of the organization (the formation and order tracking, inventory control and replenishment, and so on).

• Adaptation to business needs. There are different modules in ERP-system that can be operated in conjunction with the basic functions, and separate from them. The composition of the tasks in each module is customized for the needs of the organization.

• Data Protection. For each user group in the ERP-system can be created its own security policies that provides a more reliable data protection. The operation of each user can be controlled. All the operations and actions performed by the user can be controlled by ERP system.

• Improved communication. ERP-system provide "transparency" of the results of each business division. This makes it possible to establish horizontal links between departments and improve their interaction.

• Scaling. For large companies with distributed structure and geographically remote locations, ERP systems can scale solutions. This allows remoted offices to have a single management system.

ERP-system, like any other system, cannot consist solely of positive characteristics. There are several drawbacks and limitations.

• Cost. Any of ERP system is expensive. Firstly, the acquisition of the license agreement, which must be purchased yearly. Secondly, these systems require a constant technical update that is performed by the service provider and it is definitely expensive process. Thirdly, the introduction of work to consist of several stages (planning, setup, testing, etc.).

• The duration of the introduction. Implementation of the process is not quick and consists of several stages and each stage requires a certain time costs

• Development difficulties. Typically, ERP-systems have complicated interfaces users. For the successful implementation and operation of ERP-system users need long-term training.

• Data transfer. When implementing, ERP system replaces the existing disparate information management systems. Data stored in these systems can not always be easily integrated into the ERP database system. Data transfer may be difficult or impossible.

• Dependence on the supplier. The acquisition and implementation of ERP-system is a costly process. By selecting a single supplier, the company is forced to use its services in order to maintain work ability system and its updates.

According to the forecast Allied Market Research (AMR) global ERP-systems market in 2020 will reach $ 41.69 billion, with the annual growth rate for 2014–2020 will be about 7.2% [3].

According to the "REPORT ON ERP SYSTEMS AND ENTERPRISE SOFTWARE" [4] on the ERP-systems market leading vendors are SAP, Oracle, Microsoft.

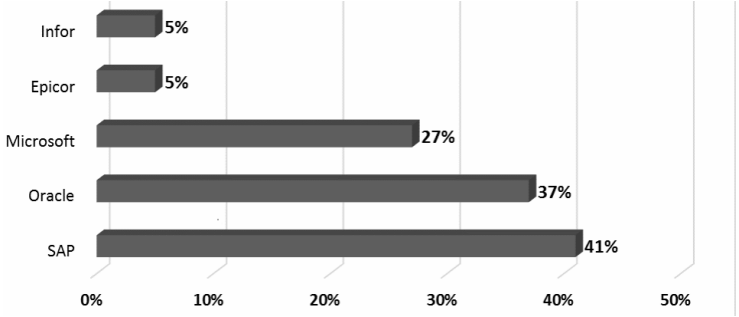

Fig 1. Frequently Short-listed vendors

As figure 1 shows, the leading vendor of ERP-systems is SAP. According to the Panorama's data [4], then the following companies are located:

- Sage (3,5%);
- NetSuite (2,9%);
- IFS (1,5%);
- IQMS (1,2%);
- Syspro (1,1%).

The first place in terms of return on investment in the ERP ranked SAP. By the speed of the implementation leading Oracle products, and by the cost of implementing the palm captured in NetSuite, which cost customers an average of 2.8% of revenue. The Panorama study also noted the advantages of Infor systems, such as opportunities to use mobile version of remote offices and employees, reliable and intuitive tool for business data analysis and optimal values of time and cost of implementation and ROI [5].

Conclusion. Enterprise Resource Planning System allows not only intelligently allocate resources, but also to automate the operation of the enterprise. The larger the company, the more difficult to track one process. Therefore, many large enterprises are implementing a set of integrated applications that enable to create an integrated information environment for automation of planning, accounting, control and analysis of all key business operations. Sometimes projects to implement ERP-systems can provide only 50% of the desired result. However, the opportunities that give any software related to the ERP-system, you can create a well-functioning system, with constant synchronization, standardization of reporting and data protection. But what kind of software company should choose depends on the management of the company and the situation in the market of ERP-systems. In 2016 the leading vendor is SAP. However, the introduction of Oracle products comes forward speed.

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TRANSPORT AND LOGISTIC SYSTEM OF BELARUS: ESSENCE, PROBLEMS AND PERSPECTIVES OF DEVELOPMENT

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The organizational and economic nature of the transport and logistic system is studied in the article. A general characteristic of the transport complex of the country is represented; the structure of cargo transportation by different modes of transport in the past five years is analyzed. Also the problems and prospects of the development of transport and logistics system of the Republic of Belarus are studied.

Important condition of economic growth of any country is formation effective transport and logistic system covering various spheres of action. Thanks to the geographical location Belarus appeared in the center of important transport streams. Nevertheless, the formation of transport - logistic system in our country is slow in coming. The need of increase in efficiency of functioning of transport-logistic system of Belarus defines the relevance of the conducted research. It is that the transport and logistic system represents very difficult and accurately working system collected from separate elements.

In view of this, we investigated essence of this definition and defined that scientists have various interpretations of the studied concept of transport and logistic system. For some scholars it is difficult, organizational complete economic system consisting of the elements and links interconnected in uniform process of management of the material and other accompanying streams, borders and problems of their functioning are united by specific goals of the organization of business. For others – it is the dynamic, open, stochastic, adaptive difficult or big system with feedback performing these or those logistic functions.

On the basis of the conducted research of the concept "transport and logistic system" we generalized views of authors in table 1.

Table 1 – Definition of the concept "transport and logistic system"

Author	Criteria of definition "transport and logistic system"					
	it is a rather steady set of structural links	performing these or those logistic functions	it is an adaptive system with feedback	the difficult, organizational complete economic system consisting of elements and links	interconnected on the main or accompanying streams	other
1	2	3	4	5	6	7
T.V. Alesinskaya [1, p. 1]		+	+			
A.I. Belzetsky [2, p. 1]	+				+	
G.G. Levkin [3, p. 20]		+	+			
L.A. Mishina [4, p. 1]						+
V.G. Bulavko [5, p. 10]	+				+	
R.B. Ivut, T. R. Kisel, V.S. Holopuv [6, p. 10]				+		
A.I. Belzetsky [7, p. 1]						+
A.G. Nekrasov [8, p. 1]						+
P.A. Drozdov [9, p. 18]		+	+			
The law of logistic activity in the Republic of Belarus [10, p. 3]						+
Total (%)	13 %	20 %	20 %	7 %	13%	27 %

Source: own development on the basis of the studied scientific literature.

Thus, it is revealed that there is no uniform concept of transport and logistic system in scientific literature and, respectively, there is a problem of insufficient scientific research of this subject. Taking into account the

aforesaid, the following definition is offered: the transport and logistic system is an economic system which has high adaptive properties when performing a complex of logistic functions and operations where there is an integration and reengineering of business processes for the purpose of decrease in risk, increase in reliability of level of functioning, improvement of quality of service by the transport organization to the cargo owner.

The most important indicator of integration of transport and logistic system of the Republic of Belarus in world economy is rational use of the existing transport networks, realization of advantages of their geographical arrangement and the communication ability providing the shortest way and the minimum time frames of passing of freights between the countries of European Union and the Pacific Rim. The transport role in the economy of the Republic of Belarus can be characterized through its share in gross value added which for the last five years does not exceed 10–11% [11]. Rather low contribution of transport of Belarus to gross value added (8,3% in 2014) is explained by insufficiently rational use of resources in transport and poor development of the transport service which is not connected with transportation which makes 18% (this indicator is equal to 25–30% in developed countries) [11].

Now transit transportation of goods through the territory of the republic is carried out by the motor transport carriers of more than 40 states. The largest volumes are accounted for by transport operations made with Russia, Turkey, Hungary, Germany, Lithuania, Poland, Kazakhstan, Ukraine [11].

In 2015 the organizations and individual entrepreneurs transported 447,4 million tons of freights that for 4, 3% is less, than in 2014. The motor transport transported 180,4 million tons of freights in 2015 that is 5,9% less, than in 2014. Rail transportation also decreased concerning the level of 2014 (decline by 7,1%). Reduction of volumes of railway cargo transportation is the greatest among all means of transport. Air freight is insignificant and actually remained at the level of 2014 [11].

Road freight transport transports 47,7% of all freights, mainly on short and average distances. So, road transport is accounted for by 10,8% of the total cargo turnover of all kinds of public transport . The greatest part of freights was transported by the motor transport: 180,4 million tons. In comparison with 2014 the volume of road transport decreased by 5,9% [12]. In 2015 – 1 107 934 transit trips were made by foreign trucks and 19 778 transit trips were made by foreign buses (81,5% and 72,7 percent to the forecast established by the State program for 2015). Over 2011–2015 about 7 million transit trips were made by foreign trucks and 112 thousand trips – by foreign buses (122,5 and 98,4 percent to the forecast established by the State program for this period) [13].

The research of current state of the international road carriers of Belarus showed that the park of the vehicles registered for implementation of international transport according to the MDP procedure was 11 700 units. In recent years high growth rate of number of the international carriers is observed. At the same time their park of vehicles is rather new. So, the share of trucks with operation term "up to 3 years" was more than 37%, "from 3rd to 7 years" – more than 35%. At the same time more than 50% of trucks meet the ecological requirements of Euro-4, Euro-5 and Euro-6. Most transport enterprises use auto trucks of the class Euro-4 and Euro-5. But gradual transition to Euro-6 which reduce the level of emissions in the environment is carried out, they are more economical on fuel consumption (from 2 to 6% in comparison with trucks of the Euro-5 standard), [14].

Railway transport corridors are the priority direction of realization of transit potential in the overland way. Two Pan-European transport corridors pass through the territory of the republic: II and IX, and also two corridors of the Organisation for Railways Cooperation: No. 1 and No. 9. Researches show that the share of international transport in the total amount of goods turnover by rail in Belarus makes 87%, in Russia – 90%, in Kazakhstan – to 72%, in Ukraine – about 70%. Generally cargo transportation in the Eurasian direction is carried out along transport corridors of Organisation for Railways Cooperation. At the same time by 2020 it is planned to complete the formation of transport routes of Uniform transport space [14].

In 2015 the volume of cargo transportation by rail decreased by 7,1% – to 131,4 million tons. Apparently, the reduction of transit transportations between the European countries and Russia in connection with mutual imposition of economic sanctions led to that [13].

Income from transportations of passengers by rail in 2015 made 22 million US dollars, and contributions to the budget – 3,7 million US dollars that respectively for 71,7 and 70,4 percent is lower than forecast level for 2015. From 2011 till 2015 the income and contributions to the budget from transit transportations of passengers by rail made respectively 243,2 and 38,8 million US dollars. The income from transit transportation of goods over 2015 made about 378,3 million US dollars, and contributions to the budget - 56,6 million US dollars. The income and contributions to the budget from transit transportation of goods by railway transport over 2011 - 2015 made respectively 2505,5 million and 412,7 million US dollars [13].

One of the main aspects of increase in transit efficiency of the Republic of Belarus is optimization of control of movement of goods through customs border and reduction of terms of their customs registration. The State Customs Committee of the Republic of Belarus together with Belarusian Railway realized the simplified order of customs registration of the freights transported by railway transport. Customs procedures are carried out

by means of modern information technologies. All this allows accelerating document flow considerably, reducing quantity of delays of freights on border, providing their free advance to destination.

Air transport of the Republic of Belarus represents a complex of the state enterprises and organizations transporting passengers and freights by air both in the republic and beyond its limits. The largest air carrier in Belarus is the National airline "Belavia" created in 1996. It is based at the National airport Minsk, making regular flights from Minsk, Gomel, Grodno in 42 directions to 24 countries of Europe and Asia. In 2012 about 1,3 million passengers flew by planes of airline that is nearly 24% more in comparison with 2011. For the same period aircrafts of Belavia transported about 1,7 thousand tons of freight and mail (7% more) [15].

Over 2015 through airspace of the Republic of Belarus more than 221 thousand transit flights that is 3,3 percent below than the level, reached in 2014 are made. The income and contributions to the budget from service of transit flights in 2015 made respectively 73 million and 41,7 million US dollars. Over 2011 – 2015 the income and contributions to the budget from service of transit flights respectively made 381,1 million and 185,4 million US dollars [13].

In 2015 goods turnover of the Belarusian airlines made 66,2 million tkm that is 14,6% more in comparison with the same period of previous year [16].

Thus, proceeding from the conducted research, it is revealed that transit potential is not fully implemented in the Republic of Belarus. A number of problems are an obstacle:

– the imperfect standard and legal base providing transit appeal of the country, lack of standardization of normative legal acts with the progressive standard norms;

– discrepancy of transit infrastructure fully in technical, technological and organizational parameters to the similar systems created in the European Union (discrepancy on the load-bearing ability of the republican highways on gross vehicle weight rating of road train with 5 and more axes and load of an axis in 11,5 tons);

– existence of bottlenecks and considerable temporary delays on joints of railway tracks of various width; backwardness of network of the transport and logistic centers;

– irrational placement of some logistic centers created within implementation of the Development program of logistic system and transit potential concerning routes of logistic streams;

– insufficient volumes of investment into logistic sector;

– processing of consumer goods by most of the logistic centers;

– insufficient use of the developed warehouse infrastructure of railway transport [13].

In our opinion, to improve the development of transport and logistic system of the Republic of Belarus it is necessary to conduct the following activities:

– involvement of national logistic operators to the organization of deliveries of export-import freights of the Republic of Belarus;

– development of the competitive environment for activity of logistic operators (the forwarding organizations), including due to liberalization of the market of transport services;

– improvement of customs regulation concerning the logistic centers having the status of Authorized Economic Operator;

– elimination of the factors constraining use of opportunities of preliminary electronic informing customs authorities without participation of the third parties;

– carrying out voluntary certification of logistic services in the Republic of Belarus;

– increase in the number of the logistic services rendered by the logistic centers (logistic operators) according to STB 2306-2013 "Logistic services. General requirements and procedure of certification";

– development of the accompanying services in the territory of the logistic centers;

– use of opportunities of foreign institutions of the Republic of Belarus in development of international cooperation in the field of transport and logistic activity;

– involvement of logistic operators in system of exchange and electronic trading in foreign economic activity;

– reduction of number of the transport documents necessary for performance of the international automobile transportation of goods;

– development of system of electronic passports of goods in commodity distribution networks;

– expansion of use of electronic document flow in logistic activity in the Republic of Belarus;

– expansion of use of the international standards and standards of identification and marking of consumer, group and logistic units of goods (production);

– creation of national intellectual system of monitoring of commodity transport streams on the basis of modern information and communication technologies, technologies of automatic identification and electronic commodity accompanying documents;

– introduction of automatic registration of customs declarations, automatic release of goods when they are placed under separate customs procedures;

– carrying out analysis of legal operating conditions of the logistic centers and preparation of offers on their improvement;

– study of a question of introduction of voluntary certification of forwarding activity [17].

In 2017 the Republic of Belarus will preside in the Central European Initiative (CEI) of which it has been a participant since 1996. It is also a favorable factor for the development of transport and logistic system of the Republic of Belarus. At the same time efforts on ensuring geographical balance of activity of CEI, and also expansion of partnership with other international and regional organizations will be continued. For the solution of these complex tasks Belarus has to seek for creation of full cooperation both between the countries of the region, and between various integration platforms at the same time. EU, EEU, initiative "Eastern Partnership", and also other sub-regional organizations as Visegrad Group, Council of the Baltic Sea States, Organization of the Black Sea economic cooperation are among them. Belarus has to promote cooperation on large initiatives which are important for sustainable economic development of all European regions [18].

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THE VEHICLE CLASSIFICATION OF THE CONSTRUCTION INDUSTRY

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This article describes the vehicle classification, designed for the enterprises that produce building materials. The practical applicability is reflected not only in the ordering of transport equipment company, but also in the regulation of the fundamental approaches to the calculation of enterprise machines.

We can often hear at the industrial enterprises about various branches of such problems as simple technique or lack of it. This may be due to various causes. The simplest and most common of them is the wrong definition of the required number of machines and equipment.

Currently in production plants it is necessary to calculate the amount of funds that are designed for loading and unloading and transportation of goods and people operations. Such a calculation can not be made quickly without a clear delineation of the main groups of transport and handling equipment. This is due to the fact that when determining the number of machines required in most cases, such as performance index, which is calculated analogously to certain types of machinery. In other words, you need to develop a detailed classification of all the company vehicles and for each group to choose a convenient calculation formula.

It was decided to establish the classification of hoisting and transport means for the enterprises for manufacture of building materials.

Belarusian construction materials industry is about 6% of the total industrial production of the country. Belarus takes a strong position in the regional market of building materials. This industry is characterized by significant depreciation of fixed assets (60%), as well as a high level of material and energy intensity of production [1].

Already at the first stage of development, we can run into quite a big problem is the lack of a legislative framework in the field of transport and handling equipment. Most of the machinery do not have a clear identity as a particular category, there is no unambiguous definition.

This article describes the classification, designed for enterprises that produce building materials based on the classification of S.A Shiryaev for loading and unloading mechanisms. During the work on the classification of significant changes were made to its structure. In the development of standards and the laws in the field of transport were taken into account.

1) There is a need to share vehicles and mechanisms into 2 main groups (fig. 1):

1. The lifting and conveying machinery (lifting and transport means);
2. Vehicles.

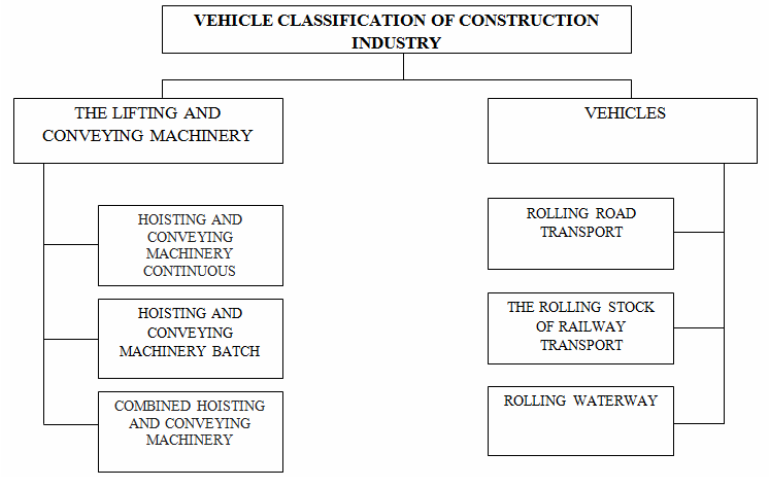

Fig. 1. Vehicle classification of construction industry

A common mistake is to identify vehicles and transporting machines. In this connection it is necessary to draw attention to the fact that the vehicles are mainly used for cargo delivery to the construction or production site, and often - over long distances, and transporting the machine perform the movement of goods within the construction or production site at short distances. [2]

It is also due to the significant differences between the two groups of funds in many respects.

2) An aid group that originally was present in the classification had to be disregarded. Their number is directly related to the presence of certain fixed assets.

3) The Group "Hoisting and conveying machinery" was divided according to the classification by Shiryaev S.A without any changes because among the many criteria, the criterion of "the principle of action" allows the most obvious and clearly demarcate hoisting equipment, which further affects the fundamental approach in calculating the amount (fig. 1).

Thus, when calculating the amount of equipment sub-group "Hoisting and conveying machinery batch" at the basis of the calculations is finding the time spent in a single machine cycle during the operation.

4) In connection with the specifics of each mode of transport, the group "Transportation" was divided into 3 subgroups (fig. 1):

1. Rolling road transport;
2. The rolling stock of railway transport;
3. Rolling waterway.

These subgroups are further subdivided in accordance with the existing classifications, standards and laws.

The existing classification standards and laws as the Republic of Belarus and the Russian Federation were reviewed. As a result of discussion and comparison of optimal positions specific tools and machinery were chosen.

For example, a subgroup of "Rolling road transport" used Belarus traffic rules.

5) The group of "Hoisting and conveying machinery batch" was classified as "Earthmovers" in accordance with the principle of separation of vehicles and transporting machines.

The need for the allocation of such a subgroup is justified by the special functions (earthworks), which can be carried out as belonging to its machines.

A certain lack of classification is that it does not take into account many different criteria (the direction of the movement of goods, the functional purpose, a kind of processed goods, etc.). The absence of a specific method of construction can also be considered a disadvantage.

The advantages of this classification are its expansion and completeness: it not only consists of systematic groups of materials handling equipment, the majority of the classifications, but also includes the vehicles that are no less involved in the process of movement of goods and people.

Practical applicability is reflected not only in the ordering of transport equipment company, but also in the regulation of the fundamental approaches to the calculation of enterprise machines.

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IMPROVING THE COMPETITIVENESS OF THE ENTERPRISE BAKING INDUSTRY

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This article considers the theoretical aspects of improving the competitiveness of enterprise of the baking industry. The significance of competitiveness in the development of the enterprise is determined. The results of the analysis of the competitiveness of enterprise of the baking industry and the strategic directions of its improvement are introduced.

The competitiveness of enterprises, today, is considered by many native and foreign scholars. The pioneer works of this theme of research include those of M. Porter, who was one of the first to formulate the theory of competitive advantages, selecting the most common causes and factors of their retention, and the works of WJ. Stevenson, who identified five main ways that help enterprises compete among them [1, p.62]. However, despite such a variety of works devoted to competitiveness and theoretical substantiation of its importance in the implementation of activities of enterprises, problems presented by the field relevant than ever, due to the fact that not every enterprise producing demanded by consumers products is competitive in the market of products.

To determine the economic essence of the concept «competitiveness of enterprise" it is necessary to consider its interpretation in terms of scientists and specialists in this field, due to the lack of consensus on this matter.

After analyzing the concept of "competitiveness of enterprise", it was found that each reviewed definition can be referred to the following approach: as a basis of competitive advantages, as a tool to enhance the functioning or based on the commodity component of competitiveness. There are also authors, considering competitiveness at other angles. To such authors is possible to carry S.L. Kalachev, who views it through relationships of the seller and the buyer [2, p. 395] and L.N. Chainikova, who defines competitiveness as the ability to fight for the market [3, p. 22].

Generalizing the opinions of experts, we will offer an integrated definition of "competitiveness of enterprise" as "the property of enterprise, characterized by the degree of its competitive advantages disclosed by the production and sale of goods and services which satisfy customer's needs more efficiently than competing products in order to improve the results of its economic activity."

In general, competitiveness reflects the performance of an enterprise and their effectiveness, which are the competitive advantages and shaped by the factors of external and internal environment (fig. 1).

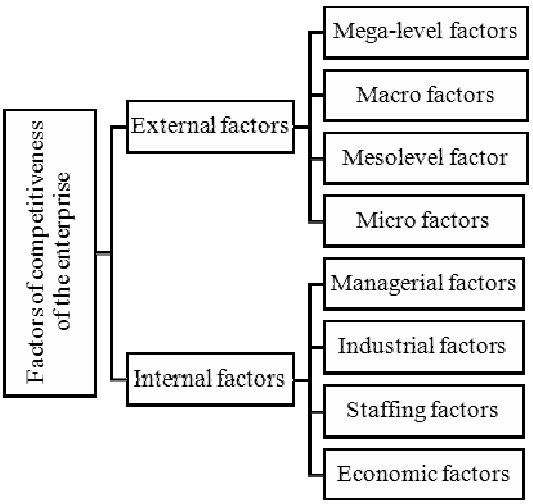

Fig. 1. Factors of competitiveness of the enterprise

Source: personal development based on [4].

Based on the identified factors the analysis of competitiveness of the enterprise through the following methods of estimation and prediction of its level was performed:

1. the method of determining competitiveness of the enterprise by estimating the level of competitiveness of its products or services;

2. the matrix method based on determining factors of competitiveness, and a particular economic area of the enterprise;

3. the method of determining integrated competitiveness of the enterprise on the basis of calculating the value of the integral index;

4. the operating method designed to determine competitiveness of each of the structural division of the enterprise;

5. the integrated method based on an evaluation of the effectiveness of all activities of the enterprise;

6. the dynamic method of evaluating competitiveness based on the key economic indicators of the enterprise [5].

On the basis of the results obtained after implementation of evaluation and predicting methods of competitiveness of the enterprise the ways of improvement its level are determined.

The main areas of improvement of competitiveness of the enterprise should include the following:

1) growth of sales volumes of manufactured products. This area is one of the main, because by increasing volumes of produced and realized production, enterprise will be able to increase profit margins by expanding the range of goods and services that will lead to the creation of new buying groups and, as a result, will increase a market share and enhance competitive position in the market;

2) improving the quality of products. Product quality has a greater influence on the attractiveness from the consumer, which is an important indicator of the competitiveness not only products, but also the enterprise as a whole;

3) decrease costs of production and realization of products with preservation of its quality. Decrease or increase of costs of the enterprise for production and realization of products effect on the level of its competitiveness to a large extent , since in the context of their increase the enterprise often decreases profits, which reduces the availability of turnover assets of the enterprise to strengthen its competitive advantages as compared to other economic entities in the market;

4) benchmarking. Knowing your competitors is a necessary element for the conduct of competition, as the identification of their strengths and weaknesses, as well as studying their experience, allow the company to shape its development strategy and develop strategic moves aimed at strengthening the competitive position in the market of goods and services.

It should be noted that each of the selected areas is focused either on made by the enterprise products, either on its functioning market. Having defined the main directions of its development, enterprise develops tactical and strategic steps, and then forms a line of its future conduct on the market – competitive strategy.

Table 1 shows the types of popular classification of competitive strategies of enterprises, proposed by most authors-researchers in this field.

Table 1 – Classification of competitive strategies of enterprises

Author	Strategy
M. Porter	– cost leadership (attracting customers at the expense of minimum prices for the products);
	– differentiation (attracting consumers by forming a product more appealing options than its competitors);
	– focus (orientation on a narrow segment of consumers).
L.G. Ramenskii	– violentnaya (typical for large enterprises with a stable reputation, gradually mastered a significant share of the market segments);
	– patientnaya (designed to gain and hold relatively narrow market niches within which specially designed and high quality products are realized);
	– kommutantnaya (designed to meet short-term needs of consumers);
	– ruderal (oriented on introduction of a new product innovations to the market).
I. Ansoff	– penetration (expedient in the event that enterprise operates with already well-known product in the existing market);
	– product development (it recommended when the enterprise working on a certain for it market and offers new products);
	– market development (requires large amounts of investment in new markets);
	– diversification (assumes expansion of spheres of business, by offering new products and services to new markets).

Source: personal development based on [6].

On the base of the presented material, as the object of the study an analysis of competitiveness of the enterprise of the baking industry was held, as a result of which there was a trend to a decrease this indicator and identified the following reasons impeding its growth:

– decrease in the efficiency of production;

– reduction of the market share occupied by the enterprise;
– narrow range of long-term storage products;
– inefficient use of material resources of the enterprise.

To ensure strategic stability and increase the level of competitiveness of the enterprise, it is necessary to solve the above problems through the implementation of activities such as:

– renewal of fixed production assets;
– implementation of software;
– development of scientific research and experimental design pre-production;
– reduce the cost of production and sales.

Let.s consider the process of their implementation in detail.

Upgrading of basic production assets. To solve this problem it is recommended to replace the existing furnace G4-CPF-H20 and proofer G4-XP-35 by proofing-furnace unit T4-RPA-15M. This replacement is offered on the basis of the fact that the performance of proofing-furnace unit is higher than that of the installed at the enterprise furnace by 25 kg/hour. It should also be noted that despite the significant difference in the occupied area (unit area of 51.7 m^2, while the total area of the furnace and proofer was only 33.3 m^2), the electricity consumption for the proposed unit T4-RPA-15M is much less than that of the currently installed equipment, which is a substantial saving for the enterprise.

Introduction of the software at the enterprise is a marketing tool to promote products on the market. To increase the market share of the company the introduction of a software management system "1C-Bitrix Site Manager" is proposed, as in today's business, such information systems solve problems of feedback consumers with the manufacturer, that will enable the company to conquer new markets and, therefore, to develop for the benefit of the consumer demand.

Development of R&D activities of pre-production. One of the identified problems hindering the improvement of the competitiveness, is the presence of narrow range of long-term storage products in the company. In this regard, for the effective elimination of the bottleneck, it is proposed to conduct in the enterprise scientific research on the development and introduction of new products with the participation of academic institutions, specialized in this field of scientific activity. This cooperation will contribute, not only to improve the competitiveness of the enterprise level through the introduction of these developments, but also to suffer significant social impact by training staff involved in this area of scientific activity.

Reduction of the cost of production and its realization. The problem of increasing material costs has a negative impact on the level of competitiveness of the enterprise. In this connection, it is proposed to reduce the consumption of fuel and energy resources due to expansion of spheres of business, by offering new products and services to new markets and to reduce the cost of purchased raw materials by import substitution.

Thus, competitiveness of the enterprise should be considered as an element of its management process aimed at the creation and development of competitive advantages with following extraction of additional profit. Identification of factors that characterize the competitiveness of enterprise is based on the methods by the implementation of which the enterprise can identify bottlenecks in ensuring an adequate level of competitiveness and develop the direction of its increase. Proposed measures to ensure strategic stability and increase the level of competitiveness should be implemented through specific strategies by which companies can predict their activities and increase its effectiveness.

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INTRODUCTION OF WAREHOUSE MANAGEMENT SYSTEM LEAD WMS TO THE ENTERPRISE

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The use of a special warehouse management system WMS, which solves the problem of warehouse management and automation of warehouse operations, is very important. A modern WMS warehouse management system increases warehouse efficiency and staff productivity at times.

In modern conditions on trade enterprises the issues, which are related to ensuring the process of trade necessary material resources and their effective use, improving warehouse management and product inventory, sales activity and traffic flow, are of particular relevance.

In order to achieve the competitiveness the organization should organize their activities so as to minimize the risks, losses and expenses that are associated with the processes of storage and distribution of products and maximize the revenues from sale. It is possible to implement in the first place by improving the efficiency of storage management.

The rational organization of storage facilities is of great importance to accelerate and reduce the cost of promotion material assets within the enterprise to improve the productivity of workers involved storage, better utilization of equipment and warehouse space for mobilization of surplus stocks.

A specific feature of storage facilities is the presence of large reserves of perfection that with the full implementation will have an effect on other areas of activity of commercial enterprise.

Warehouse management system (WMS-system) is used for optimizing the business processes of storage space, regardless of the size of the warehouse [1].

The warehouse management system is an information system providing automation of business process management warehouse work of the enterprise.

WMS-class systems are designed to automate the operational warehouse management. Their work is based on the automatic identification technology, the principle of address storage and remote control technology of personnel. In automatic mode, the systems directly form the setting for operations, managing the warehouse personnel and equipment, leaving managers the functions of process monitoring and resolution of problem situations. WMS eliminates the need to synthesize information on their own and keep paper records. Instead, this information is transmitted and processed by the system and converted into an optimized work orders for each warehouse worker. Personnel management at every stage of the work is carried out by means of issuing assignments to wireless terminals.

The information on each operation immediately fixed in the system using the keyboard or scanning. This means that the information about the number and arrangement of the goods in stock are transmitted in real time, and any deviations can be addressed immediately. WMS works closely with the company's corporate system, taking from it the information about orders, deliveries or other documents for the establishment of operations, as well as providing it with the necessary data for the warehouse. One of the main tasks of WMS implementation is the regulation and optimization of processes with material flow. Thanks to the address storage improves the accuracy of the data about the number and placement of goods in a warehouse to 99.9%, provided full control of merchandise. Efficiency of storage space is optimized due to its use in the various strategies stowage, sealing procedures, analysis of using cells with different heights (capacity is increased from 5 to 25%). According to the data, the application of WMS can significantly improve customer service – first of all due to the exclusion shipment of the order situation in the incomplete scope of delivery or misdescription, which reduces the cost of additional delivery and reception of returns. Its implementation can significantly improve the efficiency of personnel management. In particular, it allows reducing the time of implementation of all warehouse operations, increasing productivity an average of 20–30%, eliminating unexpected situations and identifying their perpetrators. The number of situations in which staff can not find items in stock is reduced to almost zero. Data exchange between the corporate and warehouse system in real-time provides sales department accurate information about stocks [2–3].

The control system displays on the screen of the terminal warehouse employee information about the operation that must be completed with the goods. The operator removes the item with the specified number, read by a scanner bar code of cell and product, confirming the correct execution of the task. When the operation is completed, the message of its completion is displayed. If an error occurs, the control system will inform about it. Thus, any movement of goods in the warehouse, receiving deliveries, order placement and other operations are

carried out with the use of radio and recorded in the database management system. Use of terminals, which equipped with a radio-frequency device data reception and transmission, enables automatic in real-time to fix the course for operators and to carry out load tasks for performance of work, and constantly be in touch with the information system. Since the correctness of all operations is continuously monitored by the WMS, it allows increase in the accuracy of data on the state of the warehouse almost to 100%.

Now the so-called voice-picking is enough new area of data collection. It is technology by which executor gets an order from the control system in the audio format. As in the case of the radio, the order is transmitted to the executor in real time. If you have a speech recognition unit between the performer and the system, feedback is possible (for example, to re-request command). The advantage of this control method is that the executor should not carry the data collection terminal and switch attention continually on his screen. However, there is a significant likelihood of erroneous actions due to the visual identification of the goods [4].

The use of modern WMS allows you to minimize the influence of the "human factor" in the decision-making process and the result of the work. Warehouse automation significantly reduces the risks associated with human error. WMS-system efficiently solves problems in scheduling and monitors their implementation and considers the labor costs. Warehouse Management System supports automatic distribution of tasks between employees of the warehouse, and also allows you to track the total and detailed information about the run-time operations. Requirements to executors' qualification are reduced, as the system knows the whereabouts of the goods in the warehouse and determine the order of execution of works. At the same time the level of staff's responsibility is increasing that allows the introduction of an effective system for its stimulation. The result solves another important task – the opportunity to exercise personal control over the employees and calculate wages on the basis of the accurate accounting of transactions made. Thanks to the tracking function, after the switching on which the screen manager duplicated radio operator screen, the manager can determine what a particular employee is busy at the moment. At the same time he is able to control the work of several operators. For each work the duration of its implementation is recorded, and all the parameters of goods with which operations were performed in this work (mass, volume, size, etc.). Upon completion of the registration data is written to the archive operations WMS-system [2].

Advantages of WMS implementation:

1. The ability to create automatic scheduling of tasks to staff in the warehouse;
2. The operational accounting of inventory in real-time;
3. The records of stocks in a given period of time;
4. The storage of goods for certain locations;
5. Accounting shipments;
6. The control of the equipment, technology and personnel;
7. The ability to integrate with barcode reader systems.

WMS systems, carrying out technological operations and machining very detailed information about the storage process, are at the middle level – the level of production. They work in real time, carrying out management in addressing current operational challenges.

Thus, the effectiveness of modern warehouse is determined not only by handling machinery or convenient shelves. The use of a special warehouse management system WMS, which solves the problem of warehouse management and automation of warehouse operations, is very important. The system places the good in stock, provides tasks and controls the selection of products, controls personnel, as well as automates the replenishment stock balance. A modern WMS warehouse management system increases warehouse efficiency and staff productivity at times. In the selection of hardware, software and the development of WMS one should pay particular attention to the prospect of further growth of the company. Well-organized factory automation usually frees additional resources and increases overall productivity. Therefore, the equipment must be purchased with a view to increasing the scope of work, with the possibility of modernization and expansion [1].

Consider a project to introduce automated material flow management system LEAD WMS.

Consider the sections of the business plan of the investment project for the implementation of the materials management system LEAD WMS LLC "TEHPROMIMPEKS".

Enterprise: LLC "TEHPROMIMPEKS".

The purpose of the design: evaluation of the effectiveness of implementation of material flow management system LEAD WMS.

The volume of investments: 4260 rubles at the first stage

Financing: from domestic sources.

Key indicators of the plan:

Planning period: 4 years.

At the end of the period, revenue from sales will amount to 7,400 rubles.

Discounted payback period is 12 months.

Net present value amounted 25000 rub.

The company is going to introduce a computer management system, as a rule, gives the following setup: the system should start operating as soon as possible, on time and within budget. The approximate schedule of implementation of project activities is presented in Table 1.

Table 1 – The planned schedule of implementation of the project activities (Gantt chart)

TYPE OF WORK	CONTRACTOR	WEEKS											
		1	2	3	4	5	6	7	8	9	10	11	12
The initial analysis of the project	Planning and economic department												
Signing a contract with STS "TOP SOFT"	Director, lawyer												
Buying Software	Director of Sales												
Hiring	Human Resources Director												
Training	Logist												
Carrying out commissioning	Hired team, working enterprises (under the guidance of an engineer)												
Start of the project	All staff												

Table 2 – Baseline

Index	Unit	Value
The cost of 1 kWh of electricity	rub	0,1188
Power consumption of equipment	kW	8,4
Hours per day of the program	hour	8
Duration of adjustment	month	1
Wages of one specialist	rub	310
Standard extra wages	%	40
Number of employees	persons	1

Table 3 – The capital cost

Expenditures	The value, rubles
The cost of the initial analysis and planning	39
Purchased software complex	3200
The cost of installation of software	160
Costs for commissioning	745,98
The cost of professional training courses	120
In total	4264,98

Table 4 – Current costs of operating software package

Expenditures	The value, rubles
Depreciation and amortization costs	320
Energy costs	16860
Repairs	128
Labour costs	5148
Charges on wages fund	1801,8
in total	24257,8

Table 5 – The schedule of the project LLC "TEHPROMIMPEKS"

Stages of the project	Total project	By year project			
		2016	2017	2018	2019
1	2	3	4	5	6
Pre-investment studies, thousand rubles	39	39	0,0	0,0	0,0
Purchasing the software package, thousand rubles	3200	3200	0,0	0,0	0,0
Installing the software package, thousand rubles	160	160	0,0	0,0	0,0

End of the table 5

1	2	3	4	5	6
Commissioning works	745,98	745,98	0,0	0,0	0,0
The cost of professional training	120	120	-	-	-
The development of production capacity			100%	100%	100%
Total investment costs, thousand rubles	11655,592	11655,592	-	-	-

Table 6 – Data for calculating the economic impact of the implementation of the program complex

Index	Valuation in thousands of rubles			
	2016	2017	2018	2019
Capital expenditures	4264,98	E = 0,16	E = 0,16	E = 0,16
		-4264,98	-	
Discount coefficient	1	0,8	0,64	0,512
Operating costs	-	-242578		
Discounted costs	-	-19406,24	-15524,99	-12419,994
Increase in profits	-	57751,244		
Present profit	-	46200,995	36960,796	29568,64
Net present value	-4265	22529,78	21435,80	17148,64

Thus, taking into account all the above calculated, it is possible to conclude about an economic efficiency of the project, which is paid back in 12 months.

Introduction of the materials control system LEAD WMS into LLC "TEHPROMIMPEKS" can reduce the number of workers, thereby increasing profit margins and efficiency of the enterprise. In the first stage, the volume of investment is proposed in the amount of 426 0 rubles. Financing is provided from domestic sources. Discounted payback period is 12 months. Net present value is 17100 rubles.

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PROVIDING OF NATIONAL STATE SAFETY: THEORETICAL ASPECTS

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The research of theoretical aspects of national safety providing in the Republic of Belarus in all major spheres of society activity is conducted in the present article. The emphasis in the article is placed on ensuring of national safety of the Republic of Belarus which becomes complicated now not only because of world finance crisis, but also because of a difficult political situation in the world. The directions of national safety providing of the Republic of Belarus under modern conditions are designated based on the conducted research.

Ensuring of national safety is one of the urgent directions of domestic and foreign policy of the state. Processes of globalization cause the dependence of stable development of the states on existence of effective system of national safety under current conditions. Each state, including the Republic of Belarus, attaches huge significance to ensuring of national safety.

Relevance of the problem of ensuring national security in practice of modern public life is caused by the changed geopolitical conditions, and emergence of a wide range of threats of global scale, such as growth of organized crime and vigorous activity of world terrorism, aggravation international relations and complication of the international relations, etc.

The purpose of article is the research of theoretical aspects of ensuring national security of Republic of Belarus under current conditions.

National safety is the system of factors creating favorable conditions for development of the state, providing development and preservation of its main values and traditions, harmonious relations of society and state, opportunity effectively to resolve any external problems and to eliminate threats, to carry out achievement of the public purposes.

The concept of national safety is related not only to the practice of public administration directed to protection of national military-political interests but also to development of society in general under current conditions. National safety of state designates system of various (social, economic, political, ecological, moral and psychological, etc.) forms of stable and steady activity.

Further, under national safety, we will understand such state at which harmonious and effective development of all social and public systems is provided, qualitative conditions for existence and development of the individual, society and the state are created.

National safety has to be understood not only as ensuring stability, indestructibility of the state, but also as property of the country which gives the chance effectively to develop in the conditions of risks, uncertainty and dangers.

The mechanism of national safety providing is complex of imperious, administrative and coordination conditions, and also the actions directed to establishment and attraction of necessary material, spiritual and human resources, integration of various spheres of society for prevention and leveling of external and internal threats to existence of the personality, society and the state.

The threat of native safety is a direct or indirect possibility of causing damage to constitutional rights, freedom, worthy quality and level of living of citizens, to sovereignty and territorial integrity, sustainable development and safety of the state [3].

Native safety, as to complex system, such signs as integrity, interrelation, interaction of the structural components and parts, their coordination, subordination are inherent. Respectively, it has to be considered in the wide context and it should consider existence of diverse factors and threats.

It is possible to allocate the following basic principles of native safety:

– legality;

– respect for balance of the vital interests of the personality, society and state;

– mutual responsibility of the personality, society and state according to ensuring of national safety;

– the reasonable, not violating the state sovereignty integration with the international safety systems;

– unity, interrelation and balance of all types of safety, change of their priority depending on the changing situation;

– combination of the centralized and decentralized management of forces and means.

The main value of the state is a person therefore the essence of ensuring of national safety of the country consists in ability to protect the state and its citizens from internal and external threats, to create a sufficient level of living, to observe legality and to provide defense of the country.

The strategic problems of safety are understood as security of interests of the personality, society and state from internal and external threats as main direction of public policy, are reflected in the Concept of native safety of the Republic of Belarus approved by the presidential decree of the Republic of Belarus No. 575 of November 9, 2010.The main lines of the organization of safety in various spheres of public life are structurally presented in the Concept: defense and military safety, political and economic activity, information sphere; the role of the state in the solution of these tasks is especially allocated [1].

The main content of national safety ensuring consists in maintenance of legal and institutional mechanisms, and the resource opportunities of the state and society, which are the cornerstone of national safety of the modern Belarusian state at the level, which is equitable to national interests of the Republic of Belarus.

Strategic national interests according to the Concept of national safety of the Republic of Belarus are:

– ensuring independence, territorial integrity, sovereignty, firmness of the constitutional system;

– sustainable economic development and high competitiveness of the Belarusian economy;

– achievement of high level and quality of life of citizens [1].

Spheres, in which national safety of the Republic of Belarus has to be ensured, are described in the Concept. It is economic, public, ecological, social, defensive and industrial, information security [1]. Various means of safety providing are necessary to reach safety in all these spheres.

The external threats caused by modern international processes exert impact on ensuring of national safety of the Republic of Belarus.

Therefore, in the modern world the economies of the different countries develop unevenly: the level of living in developed countries much more exceeds a level of living in the countries with the developing economies.

The competition for raw materials sources, energy resources amplifies under conditions of globalization; there are new environmental problems, deficiency of fresh water in many countries; new viruses cause epidemics, which cannot be covered. Besides, the demographic situation in the world is changing, the migration is growing.

The international conflicts in different countries cause increasing in production of weapon, including, nuclear, that poses a special threat of national safety. The unstable situation in economy is the base for such marginal forms of crime as human trafficking, production and drug trafficking [2].

Position of the Republic of Belarus in the modern world will be defined by cooperation with the countries based on equality and mutual safety in various spheres of economy, industry, art and science.

Now the growth of global and regional instability is observed in the world. Antagonism between the states covers values and models of social development, human, scientific and technological potentials more and more.

In this regard, interests of the state consist in firmness of the constitutional system, sovereignty and territorial integrity of the Republic of Belarus, in political, economic and social stability, in unconditional law enforcement, in development of equal and mutually beneficial international cooperation.

The Republic of Belarus has shown the ability to ensuring sovereignty, independence, the state and territorial integrity, protection of the rights of compatriots abroad.

The role of Belarus in the solution of the major international problems, settlement of political conflicts, ensuring strategic stability of international law increased in the interstate relations.

The modern concept of a homeland security focuses the Republic of Belarus on priority use of the whole complex of political, not military means and methods of protection against dangers and threats.

There is a need in this regard under current conditions for development and creation of such mechanism of national safety ensuring of the Republic of Belarus, which would allow to react quickly and effectively to changes of factors of the external environment, to predict and timely prevent local and global threats, to guarantee safety of the personality and society in general.

It is important to concentrate on human rights protection, the Constitution, social stability for national safety ensuring of the Republic of Belarus. It is necessary to direct the efforts to increase in level of the population income, to build social policy for worthy life of citizens for improvement of quality of life of Belarusian citizens.

It is important to develop national innovative system due to economic growth; to increase labor productivity; to develop new fields of important resources for our country; to improve the banking system. It is necessary to create innovative systems in different spheres of production and science for prevention of the threats of national safety connected with the economic sphere.

Developments and scientific research for achievement of competitive innovative system, independence of import technologies, the equipment and strategic goods, protection of intellectual property are necessary for development of education and science.

The high-quality changes in health care sector are necessary for increase in life expectancy and improvement of health of citizens, including hi-tech medical care, and quality control of drugs. Now it is

necessary to prevent such threats to health of the population as drug addiction, tuberculosis, epidemics and pandemics.

It is necessary to develop true values for development of cultural ties, the population has to have access to domestic and foreign pieces of art.

It should be noted, that nowadays the worthy relation to history of Belarus has been already formed among younger generation.

There is a consolidation of civil society around the general values forming the base of statehood such as freedom and independence of Belarus, humanity, national peace and harmony, respect of family traditions and patriotism.

Traditional Belarusian spiritual and moral values revive.

It is necessary for ecological safety to create such conditions of production, which are technologically perspective and safe for the environment without climatic conditions change.

Prevention of threats of information security includes the following tasks:

– protection of information systems;

– protection of telecommunication means;

– providing of technical support of information systems of national safety of Belarus.

Thus, these directions will allow increasing the level of national security providing of the Republic of Belarus under current conditions.

On the basis of the above mentioned, it is possible to draw a conclusion that providing of national safety is one of the major tasks and functions of the state now and it is aimed at the harmonious development of the personality and society.

Native safety is the comprehensive problem affecting geopolitical, military and power, economic, social, demographic, spiritual and cultural, informational and other aspects of functioning of the state and society.

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Economics

UDC 331:177

MORALITY OF LABOR AND LABOR BEHAVIOR

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The article is devoted to concepts of morality, ethics which are some of the most common and at the same time some of the most multi-valued and uncertain ideas. Ethical problems appearing in some of the most important sides of human life are considered here.

Labor morality. Morality of labor – one of the most important fields of morals action , covering all socially useful human activities (primarily material and productive labor, as well as scientific, cultural and educational activities, artistic creativity, the activity of state and public administration, services, etc. because they are also the sectors of social labor).

The concept of labor morality comprises two main parties – the attitude to work and norms of mutual relations between the parties to the joint venture. In addition to the general problems of work ethic, there are also specific problems of morality associated with the professional features of the various labor sectors (professional ethics). Public utility labor is the main indicator of its moral value and a source of moral relations in the labor process. With the development of industrial production and the socialization of labor there is a need for close cooperation of a large number of employees. The very nature of industrial labor creates the need for the establishment of labor relations of solidarity between workers. These solidarity requirements coincide with the interests of the workers themselves primarily in their joint actions against capital (strikes, revolutionary action), which already go beyond the labor process, and related to his interruption. However, since the labor socialization takes place within the framework of capitalist relations, labor solidarity is undermined exploitation and private property relations generated by the competition between the workers [1].

Labor behavior. Behavior is a set of actions that have moral significance made in a relatively long period of constant or changing environment. Behavior covers all the actions entirely and allows us to give them moral assessment, regardless of the intentions and motives degree of morality, that is, behavior gives more reason for man's moral evaluation than an act, motive, intent, because the behavior is a system, a relatively stable phenomenon. Morality as a system of moral norms is a form of social consciousness, acts as a regulator of human behavior [2].

Other regulators of behavior are the legal rules and decrees of the state (political regulators), production and administrative regulations, institutional statutes and regulations (organizational adjustments), customs, traditions, public opinion (public regulators), and others. Morality refers to the social regulators, ensures consistency joint activities of people (along with other regulators) without exception in all spheres of public life: in school, work, life, politics, science, family, public places. The actual behavior of the individual is the product of not only social morality, but also of his own mental activity, the result of the interaction of the individual with the environment, the manifestation of personal morality, emerging in the process of socialization and ontogenesis [3].

Criteria, indicators of moral evaluation of behavior, driven by different thinkers, are different.

1) According to Kant, moral behavior, if motivated by respect for the moral law (the categorical imperative) and is free from an extra-moral motives – self-love, the desire for personal happiness, social and prestigious moments.

2) Popular right now in the West, the theory of motivation D. MacGregor defines as the most desirable for the enterprise motive behavior of workers striving for success. Since the notion of success is subjective, it either has to be determined taking into account the moral component, or replaced by a moral imperative, for example, the pursuit of the common good (although the notion of good is ambiguous) [4].

Apparently, the criteria of morality have a concrete historical and national, religious and situational origin, and individual morality affects individual behavior. But as the structure of man's moral core allows predict its behavior in different situations, it necessary to obtain this representation for the organization of joint activities, although the identification of human moral principles is very difficult and often impossible.

In the business sphere such behavior modification is manifested as labor behavior. Experts in the field of work sociology believe that the labor behavior is manifested in regard to work. The attitude towards work is the unity of three elements: the motives and value orientations (shared social values of the person acting as a means of selection of life goals and criteria for achievement of these purposes), the real work behavior and employee evaluations of their behavior in the work situation (verbal behavior). In relation to labor influence factors of production (related to the content, organization and working conditions), social (related to the group relations) and psychological (associated with personality characteristics) [5].

On the attitude to work can be judged by objective and subjective indicators.

1) The objective indicators of social scientists include the degree of responsibility, integrity, initiative, self-discipline, which are determined by the number and quality of the work performed, the number of the proposals to improve it, the desire to increase the level of professionalism.

2) The subjective measures of attitude towards labor is usually the degree of job satisfaction and its elements: the payment, organization, working conditions, relationships with management and colleagues. Higher degree of satisfaction – pride in their work and their organization [6].

There are several subspecies of the target forms of labor behavior. All of them are connected with the desire of the employee to a particular purpose. The first group of objectives related to employment duties, functions executable in the workplace. The form of behavior in this case is called a functional labor behavior and determines the content and organization of work. Targeted economic behavior associated with the desire to achieve a certain level of well-being and quality of life. It is believed that this form of behavior is associated with a constant comparing the cost of their labor compensation for them. There are several formulas for this behavior:

– first is the maximum price revenue efforts;

– the second is a minimum income with little effort;

– third is the maximum income with minimum labor. Suffice it easy to identify the behavior of the worker or that formula and with the passage of time to take action against anyone who behaves in a second, and even more so by the third formula. In a market economy it is acceptable, with few exceptions, the style of behavior, based on the first formula.

There are separate subspecies in the target behavior organizational behavior that is associated with the reaction of the staff to the use of various incentive methods to regulate the activities, regulations, administrative guidelines, which ensure the achievement of organizational goals. In fact, it is "regulated" organization of the behavior, which allows it to get the desired results [4].

An employee who is planning his career, professional development, qualification growth with the aim of moving up the ladder of the hierarchy, the target shows the stratification behavior. It tends to change its status, strata, in which he resides.

Particularly noteworthy are people with innovative behavior. They always keep in mind creative solutions, they are constantly looking for ways to improve the content, organization, working conditions. Not all of their suggestions could be implemented, but these workers kept the progress and future of the organization. The value of such people is extremely high, and the potential is unpredictable.

Because each of us at least a few times in our life have changed jobs and staff, so everyone is familiar with the concept of adaptation to the new functions of the labor and working conditions, to the new technology, technology, to the team. We can be conformal and easily and unscrupulously to accept new conditions. It can be conventional and difficult to adapt to changes in the environment. We may be nonconformists and stay by ourselves, without succumbing to outside pressure. In any case the situation changes in our behavior - adaptive and adaptive, it can influence our operations and distort the correct perception of us by other people [7].

The organization resistance structure, the continuity of its traditions, customs achieved by ceremonially subcomponent behavior, rules of etiquette, manner of employees' treatment, superiors, subordinates how to reproduce the culture of the organization and its structural features.

Quite often we exercise, and sometimes become victims of the so-called characterological behavior when personal character traits, blatant demonstration of the emotions, sometimes mental state sharply striking human behavior in organizations. Often, before the meeting with the head, we are trying to find out about his mood, preferring not to get "under the hot hand." It is possible that the chief of a characterological behavior does not realize that it deprives himself of the timely receipt of important information or suggestions, because during his periods of bad mood nobody wants to speak with him. It is clear that everyone has a limit of emotional stability, but the head is required to ensure the stability of the business environment and communications, or business is harmed. Head with unstable mentality should be recognized as professionally unsuitable for psychological qualities [8].

In organizations where people voluntarily come together to achieve jointly with the corporate and personal purposes and, there are numerous rules, regulations, directives, which are unattainable without a joint results. These regulations and rules may be written or oral, individual and group, ECM and higher level. Their offense, of course, causes a failure in the organization, it hurts. The behaviors associated with the violation of the rules, regulations, disciplinary framework, called disruptive behavior. Failure to comply with the rules of law we are talking about misconduct. Typically, symptoms of this behavior should be prosecuted. A common form of destructive behavior in the organization and shared goals - administrative and managerial behavior: excess and abuse of personal use of their rights and powers, failure to fulfill duties [9]. If a person is just out of place, is incompetent, then his behavior is dysfunctional. Sociologists distinguish selfish, individual target destructive behavior and group destructive behavior (group egoism). In contrast to innovation often appears conservative behavior. It is more difficult to recognize the imitation behavior, when the true selfish purpose appears as pseudo

activity. Some workers realize in the company their antisocial habits and inclinations, condemned by society demonstrate behaviors; In this case, we can talk about deviating, deviant behavior [10].

In difficult conditions the interaction of the employee demonstrates, as mentioned above, the different forms of behavior that depend on many circumstances. Often, analyzing and trying to define the form of the behavior, we have to conclude that there is simultaneous presence of multiple forms of behavior, and this is natural: no classification is able to sort through all the different people, the peculiarities of their behavior and the causes of a particular behavior. If it fails to allocate the dominant, dominant or explicitly prevailing form, then it is easier to determine the causes of behavior and to choose the methods of its correction.

Currently working increases the value of morality in the regulation of different kinds of work. This is due to the desire of constant improving of professional standards in relation to changing public attitudes.

Work ethic society can not represent absolute truth in people's behavior. Each generation has to solve them again and again on their own. But the new development should be based on moral reserve, established by previous generations.

Today, when we have the advanced development of the technical aspects and the cultural lag, it is very important to understand that there is great needed to stabilize the society ethical knowledge.

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UDC 368

SOLVENCY AND LIQUIDITY: ESSENCE AND RELATIONSHIP

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The article describes the theoretical aspects of economic categories "liquidity" and "solvency" of an organization, reveals the theoretical aspects of their relationship and the key analytical activities which improve liquidity and solvency.

Liquidity and solvency are the most important characteristics of financial and economic activity of an enterprise in market economy. With liquidity and solvency an enterprise has an advantage over other companies in the same field. Also, it does not enter into a state-society conflict since it pays in time taxes to the budget, various fees and salaries to its employees. The higher the stability of an enterprise the more benefits it gets regardless of unexpected changes in market conditions.

Under the current economic conditions the enterprises need more efficient production, product competitiveness. The important role in the realization of these tasks is given to the analysis of financial condition.

Analysis of financial condition is characterized by an integrated system of indicators (used for rapid analysis):

1) Indicators of solvency.
2) Financial Soundness Indicators.
3) Indicators of asset turnover
4) Indicators of capital turnover.
5) Indicators of profitability [1].

In the list only solvency indicators are reflected. This raises the question of the liquidity role as an economic category and of its relationship with other items in the list of categories, and with solvency in particular.

Financial stability indicators represent an integral system; the essence of each of them can be fully disclosed only through their relationship within the system (Fig. 1).

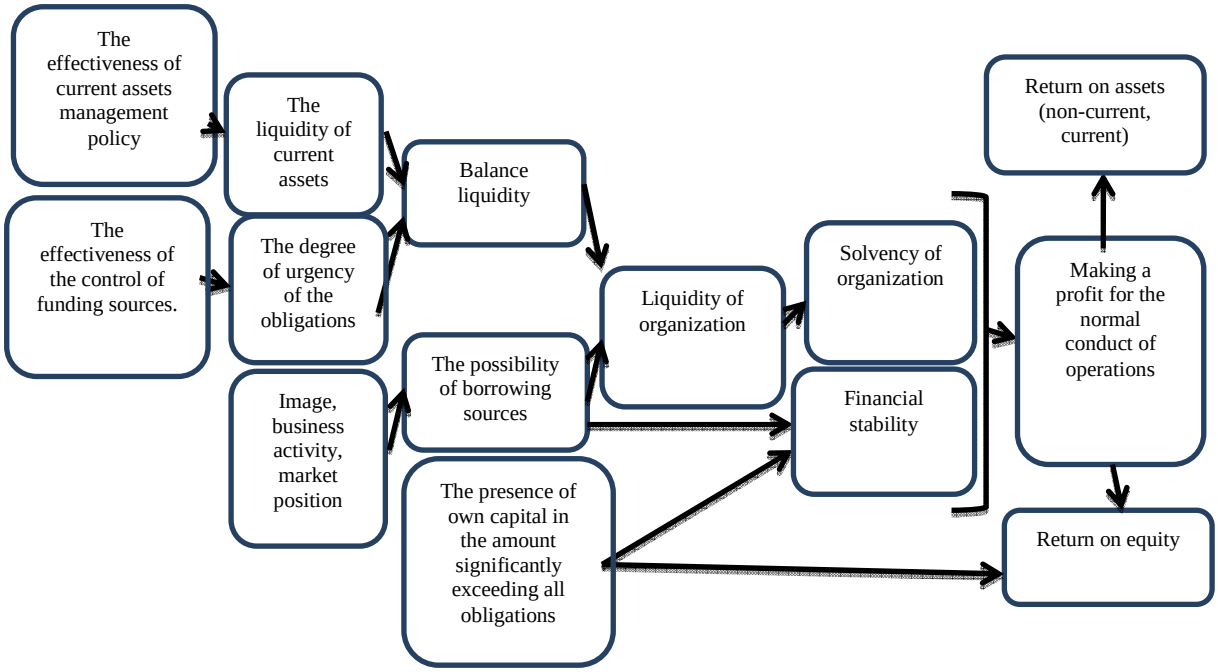

Fig. 1. Relationship of the categories "liquidity" and "solvency"

Source: individual study based on [2, 9].

From the scheme it is clear that the concept of "solvency" of an organization can be partially or totally based on the concept of "liquidity".

Table 1 – The theoretical aspect of the "solvency" category

Author	Solvency
Kovalev V. V.	Ability to satisfy the debt under current payment terms
Berdnikova T.B.	Ability of an enterprise to make full and timely payments on short-term liabilities
Bank V.R. and Taraskina A.V.	Availability of cash and cash equivalents, sufficient for the settlement of accounts payable, requiring immediate repayment
Doncova L.V.	Ability of an organization to meet in time payment requirements of suppliers according to economic contracts, to repay loans, pay personnel, to make payments to budget and off-budget funds
Scheremet A.D.	Financial stability that reflects availability of current assets due to long-term sources of their formation

Source: individual working out on the basis of sources [3–7].

Having studied the theoretical aspects of "solvency of an organization" concept in the context of the opinions of various authors, we formulate a generalized 'solvency of an organization "category feature. The solvency of the organization is the ability of the organization to repay accounts payable both external and internal due to cash and cash equivalents (assets, etc.), emerging as sources on an ongoing basis. So, the solvency of an organization can be based on the liquidity of an organization, depending on the ratio of cash and assets of various degrees of liquidity available.

Thus, there is definite relationship and interdependence between liquidity and solvency indicators. Liquidity determines the solvency of an organization; generalizing element of these categories is a balance of liquidity, and separation of these concepts is not justified.

When considering liquidity they distinguish three interrelated concepts of "liquidity assets", "liquidity balance" and "enterprise liquidity" [4, 6, 8–9]. The liquidity of a company – it is the most capacious concept, which is a component of balance sheet liquidity, which in turn depends on the liquidity of an organization's assets (Table 2).

Table 2 – Theoretical aspects of various types of liquidity

The concept (the author)	Definition
liquidity of assets	The ability to convert assets into cash
balance liquidity	Coverage of company's obligations by its assets, the amount of money matches maturity obligations
Company Liquidity (Markaryan E.A. and Bassovsky L.E.)	The ability of an organization to pay for its current liabilities using current assets
liquidity of an enterprise (Savitskaya G.V.)	The ability of the organization to pay for its short-term liabilities, using as a means of payment not only internal, but also borrowed funds.
liquidity of an enterprise (Blank I.A.)	The ability to quickly realize an enterprise in case of bankruptcy or self-liquidating
liquidity of an enterprise (Saybitinova N.B.)	The ability of an organization to repay short-term obligations, using internal means of payment and borrowed resources

Source: individual working out on the basis of sources [1, 9–13].

The effectiveness of a company depends on the financial condition of an organization as a whole and the liquidity and solvency in particular. It encourages business entities to carry out continuous monitoring of their own finances with the aim to identify problems in the area under consideration and to develop practical recommendations for their elimination. An important measure during the financial monitoring is the selection of analytical procedures. The following list of analytical procedures can be distinguished on the basis of study of different practical measures offered by various authors (fig. 2).

As a result, on the basis of the information obtained during the analysis, final conclusions can be made about the degree of liquidity and solvency of an enterprise, the causes of change, and a range of measures to improve liquidity and solvency of an organization.

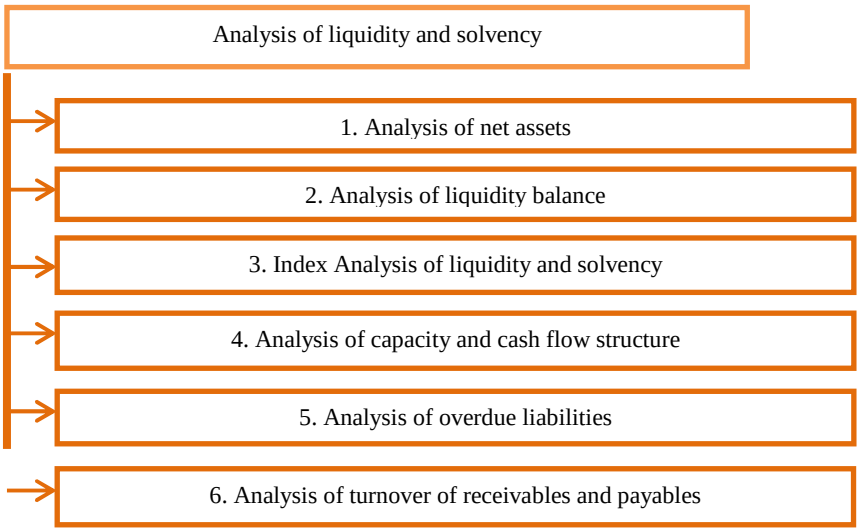

Fig. 2. Tools assessing the liquidity and solvency

Source: own elaboration on the basis of [2, 12].

Liquidity and solvency are the most important characteristics of financial and economic activity of an enterprise in market economy. Having considered these notions in their theoretical aspect, as well as the system of financial soundness indicators, we conclude that these figures have direct relationship. The theoretical aspect of this relationship is expressed through such economic categories as "liquidity balance" and "liquid assets." While assessing liquidity and solvency of an enterprise by using different methods, we have to take into account a lot of factors.

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UDK 336.713

THE MODERN MECHANISM OF THE CREDIT POLICY MANAGEMENT OF COMMERCIAL BANKS IN CONDITIONS OF MACROECONOMIC INSTABILITY

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The article presented the main approaches to the credit policy management and the basic mechanisms for building the loan portfolio. It defined the author's management algorithm of credit portfolio and credit monitoring mechanism of credit risk and developed the credit monitoring mechanism of credit risk.

The priority direction of development of the banking activity is lending to customers. The objects of management credit activity are not only individual credit operation, but also the set of all granted loans based on their issue, redemption, accrual and payment of interest, which in fact determines the Bank's loan portfolio.

Under the control of the credit policy means the organization of activities of the Bank under the lending, aimed at the prevention or the complete absence of credit risk.

Thus, first and foremost, I would like to draw attention to possible ways and methods of credit risk management, as it is one of the most significant of banking risks, in addition, it causes bad debts and losses associated with borrower defaults.

Separately I would like to highlight a management system like the rating system CAMELS, which in a certain way was developed in the USA. There are certain elements that are the indicators used for the ranking, evaluation of the creditworthiness of the borrowers. The most significant it is possible to allocate capital adequacy, quality of management, earnings and sensitivity to risk.

Experts consider capital as the main means of protection of depositors ' funds. Bank with a strong capital withstand significant losses without risking the deposits of their clients. For the assessment of capital adequacy supervisors use mainly ratio analysis.

One of the main directions of banking supervision – determination of the quality of assets involves identifying those of them that may not be recovered or the actual cost of which is lower than indicated in the Bank statements. The third component of the CAMELS rating system is management. As a rule, the office estimated in the least, because it generalizes other important components of the analysis.

Thus, it is important to note that in every system of methods and ways to control the credit policy of a certain country has its own peculiarities and characteristics. Consequently, the development and use of any strategies can draw on foreign experience. However foreign countries in their strategy make use of our domestic management aspects of the commercial Bank credit policy.

For proper credit risk management it is necessary to develop an effective strategy for the credit policy management of commercial Bank. First and foremost, you can define a number of methods used for the management of credit policy to minimize credit risks.

A study of special economic literature has allowed us to study the complex nature of risks in the credit portfolio and to identify the most significant credit risks affecting the quality of the loan portfolio and factors, determining them. The slide prompted a reflection of the relationship between them.

The purpose of any commercial Bank in the first place is to minimize credit risks. Thus, considering the foreign experience, considering specifically the rating system of the US and comparing the credit risk factors of their formation, it is possible to allocate certain risks, the most typical for commercial banks, and to provide the intended system of indicators to measure creditworthiness. Each risk is supported, as already mentioned, a certain factor and a particular variable that characterizes the degree of this risk. Each indicator reflects the nature and level of credit risk.

The novelty of an improved method of assessing the quality of credit portfolio of commercial banks lies in the fact that such technique for the first time:

- takes into account all of the evaluation criteria of quality of credit portfolio (credit risk, profitability, liquidity);
- easy to use, in particular, it includes only six indicators covering the main risks associated with the loan portfolio of the Bank;
- with the values of indicators used in comparable-MUI point system, this technique is convenient and versatile chucked to compare the quality of loan portfolios of several commercial banks and can be used when building the ratings of Belarusian banks.

We present in more detail the algorithm of the credit portfolio optimization (fig. 1).

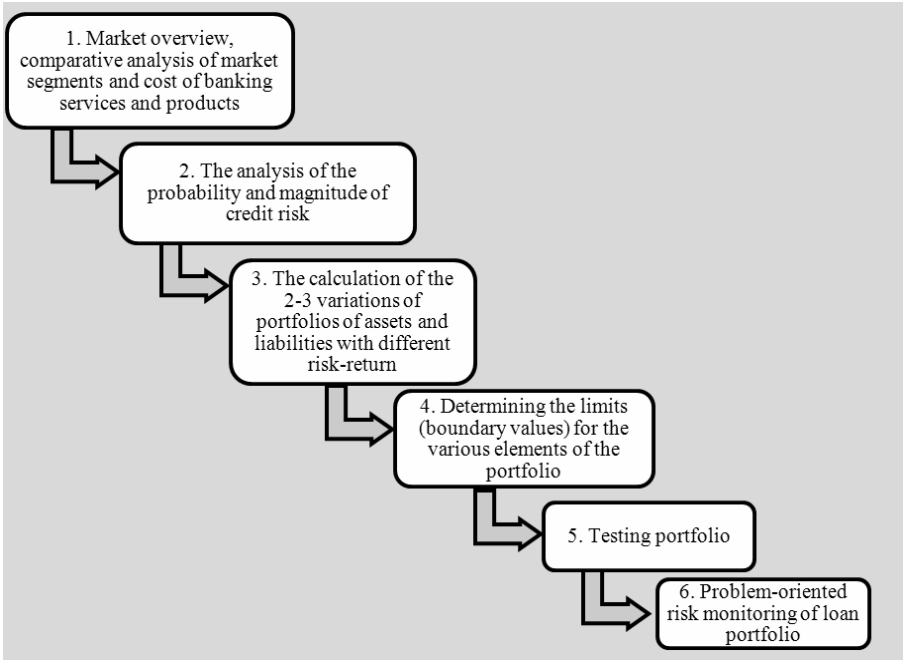

Fig. 1. Algorithm for the optimization of credit portfolio

Source: own elaboration.

Credit monitoring is manifested in constant control, as the passage of individual loans and quality of loan portfolio as a whole. Monitoring organized by the credit portfolio will help greatly not only to reduce credit risks but also to predict them in the near future.

Problem-oriented monitoring based on a selection of indicators that worsen the condition of the credit portfolio in the reporting period and in dynamics. An example of the contents of problem-oriented monitoring can serve as indicators:

• Coefficients marked with the word "No" mean location values for the particular credit risks in the area of acceptable risk.

• Coefficients marked with the word "Observation" may in the future prove to be problematic because to determine the tendency of areas of critical risk in the area of catastrophic risk. Hence, these credit risks and the factors which determined should be subject to careful monitoring by the Bank.

• Coefficients marked with the word "Yes" mean that corresponding to credit risk amounted to the values area of catastrophic risk, which is a worrying signal about the threat of a loss in the amount equal to all property as a commercial Bank. This situation requires the development of measures to optimize the loan portfolio of the Bank.

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UDC 331:664(477)(043)

CHALLENGES OF UKRAINIAN FEMALE IMMIGRANTS AND THEIR CHILDREN IN HOST COUNTRIES

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The article presents the investigation of problems and difficulties of Ukrainian female migrants in Turkey and Poland. A survey was conducted in Turkey among women in several parts of the country. In Poland data from the Ministry of Family, Labor, and Social Policy - Ministerstwa Rodziny, Pracy i Polityki Społecznej (MRPiPS) was used.

Around the end of the 20th and the start of the 21st century migration of women from Ukraine abroad became possible as an independent and personal choice. Ukrainian women have always been a very strong and hard-working part of the society. They have endured wars, revolutions, genocide, famine and the communist past. After the destruction of the "Iron Curtain" of the communist past, Ukrainians began to seek better opportunities for jobs and living abroad. This research has explored and analysed challenges, problems and reasons that forced Ukrainian women to go abroad, in this case to Poland and Turkey, and their opportunities, prospects, and rights for social security etc.

Data and methodology of the research. With the goal of exploring problems and prospects of Ukrainian female migrants in Turkey we have conducted unique research among women who are living in Istanbul, Izmir, Antalya and Ankara. Therefore in this article we used primary statistical data collected from our own questionnaires and interviews with Ukrainian female migrants, obtained by quantitative research methods (questionnaires) and qualitative research methods (semi-structured interviews). We used secondary statistical data from the Ministry of Family, Labor, and Social Policy (Danych Ministerstwa Rodziny, Pracy i Polityki Społecznej – MRPiPS) [1] to explore problems of Ukrainian female migration in Poland.

Problems of Ukrainian female migrants in their country of origin and in host countries. Ukrainian women try to find better opportunities abroad because of problems in their country of origin - unemployment, poverty, low wages and pension, debts, domestic violence, the war, etc. In this case reasons that forced Ukrainian women to go abroad are needs in Ukrainian families; job abroad as forced work; violence in Ukrainian families; the interest in being abroad; marriage to foreign men; self-fulfillment abroad; better future for children; medical purposes; political persecution etc.

Ukrainian women who have lived their whole lives under socialism and then decide to go to capitalist countries, very often cannot adapt and integrate very fast into these societies because the majority of these female immigrants do not speak foreign languages. The laws of host countries mean that very often the women do not have visas or have them only for temporary periods, and because of this they sometimes become victims of violence, discrimination, harassment, slavery or Human Trafficking when they are forced to work as prostitutes in host countries. Of course, there is no entitlement to social security for them in host countries. Very often they can stay in host countries not only illegally, but even without their passports and therefore are even unable to return to their country of origin. Currently more and more Ukrainian women have gone abroad with some of these goals, either to find jobs or husbands, or seeking all these opportunities together [2-6].

Differences in opportunities for Ukrainian female migrants in Poland and Turkey. Poland and Turkey are the nearest countries to the Ukrainian border and in these host countries female migrants try to find better opportunities and prospects for life [7–11].

We may divide Ukrainian women who decide to go abroad into groups such as:

- intellectuals and workers,
- brides and housewives,
- professionals and students,
- business women and scientists,
- victims of Human Trafficking, prostitutes etc.

The majority of Ukrainian women go to Poland to work; they can find jobs there from cleaners to scientists. In 2014 the number of job applications from them, according to the data of the Ministry of Family, Labor, and Social Policy was 143956, and this number of job applications will increase because of the situation in the Ukraine.

The situation in Turkey is different, and currently many young and educated Ukrainian women with Graduate degrees are going to Turkey to marry. The majority of them does not work and do not develop their careers in the host country for various reasons.

Problems of Ukrainian female migrants in Poland. According to the data of the Ministry of Family, Labor, and Social Policy (Danych Ministerstwa Rodziny, Pracy i Polityki Społecznej (MRPiPS), during the period 2007–2014 the number of Ukrainian female migrants seeking an official job in Poland increased eighteenfold, from 7968 Ukrainian women in 2007 to 143956 in 2014. Of all Ukrainian migrants in Poland 39–49% were female, and the majority of these women are under 40 years old. The majority of Ukrainian female migrants working officially in Poland during 2007–2010 were in:

- agriculture (permanent or seasonal work),
- domestic service, trade, industry, food service, the hotel industry,
- manufacturing, information and communication, financial and insurance activities, etc.

According to data from the Ministry of Family, Labor, and Social Policy (Danych Ministerstwa Rodziny, Pracy i Polityki Społecznej (MRPiPS), during the period 2011–2014 Ukrainian female migrants obtained the following number of work permits: in 2011 – 7376; in 2012 – 8429; in 2013 – 8956; in 2014 – 10300.

Therefore, Ukrainian female migrants in Poland obtained 18-24% of all work permits in this country for foreigners, and constituted 40.9% of all Ukrainian immigrants during the period 2011-2014.

The ratio between the number of applications from Ukrainian female migrants and the number of work permits that Ukrainian female migrants obtained in Poland in 2014 is 7.15%.

However, the majority of Ukrainian women in Poland cannot work legally and, so, they are working illegally in the host country. This is the primary problem of Ukrainian female migrants in Poland. The second problem is the level of salaries as they receive even lower salaries than female migrants who have official work permits in Poland.

Problems of Ukrainian female migrants in Turkey. This group of Ukrainian female migrants in Turkey consists of thousands of women and it is possible to separate these women according to their reasons for staying in the host country:

- a job and career,
- labor migration,
- marriage,
- business, new opportunities etc.

It is necessary to divide this group of women into further categories:

- professional women, who are staying in Turkey because of their contracts of employment;
- business women who are owners of companies and employers;
- female labour migrants, who are working legally or illegally in Turkey in the domestic sector of the economy or similar;
- female victims of Human Trafficking or crime and prostitutes;
- female – seasonal workers in the hotels of the Turkish tourist trade;
- the wives of Turkish men.

Turkey is a specific and a special country for Ukrainian female migrants. In this host country other mentality, norms of the society, the religion, and traditions in families and in the country exist. Not all Ukrainian female migrants can adapt and absolutely accept these differences. With the aim of exploring challenges and problems of Ukrainian female migrants in Turkey we conducted a survey among women there and we wanted to know about their causes, problems, difficulties, opportunities, prospects, achievements and outcomes in the host country. The questionnaire of the survey comprised questions about their ages, jobs, children, educational level, employment, pension opportunities, and religion.

The women-respondents were Ukrainians and Crimean Tatars, the majority of them were under 40 years old and with a Graduate degree, and they were living in different regions of Turkey: Istanbul, Izmir, Antalya and Ankara.

As we have already noted, the nationalities of the participants of the survey were Ukrainians (95%) and Crimean Tatars (5%). The majority of them have Ukrainian citizenship (68%), but 32% of them have obtained their second Turkish citizenship even though it is prohibited by Ukrainian law. The majority of Ukrainians are women under 40 years old – 72%. The purpose for the majority of them of coming to Turkey is marriage (75%), and because of traditions of the host country 7% of them have changed their religion from Orthodoxy to Muslim. Out of all the respondents of the survey, 38% have been living in the host country 10 years and more, and the level of knowledge of the Turkish language for the majority (56%) of them is native and advanced.

Most of these women adapted to the host country in first few years. The majority of women, 77%, are married, and for 62% of women this is their first marriage.

Children of Ukrainian female migrants. The majority of women-respondents of the survey have children; 72% of them, and one woman among them has three children (2% of all the women who have children), 28% of the women have two children, and 70% of the women have one child. But only 58% of children were born in Turkey; 28% of children were born in the host country of their mothers, and 14% of children were born in Ukraine but they are children with Turkish nationality.

Of the children of Ukrainian female migrants 40% are boys and 60% are girls. 58% of these children were born in the host country and are Muslim, but the mothers of all the children (39%) didn't mark it in the questionnaire of the survey. Therefore, 25% of children are orthodox, 36% are Muslim.

The ages of children of Ukrainian female migrants, who were respondents of the survey, are 0–5 years – 36%; 5–9 years – 25%; 10–19 years – 25% etc.

The educational level of women. The educational level of women from Ukraine is also very important to explore. So, in the study we have looked at this educational level of women from Ukraine in Turkey, their opportunities to work (legally) and in their professions.

According to the results of the survey, 5% of women are PhD holders; 82% of women have a Graduate degree; and 13% have a College Degree. 42% of women are working, but only 36% of them are working in their professions. 82% women have the opportunity to work. A very important achievement of the research is the study of the experiences of women in respect of discrimination or harassment within their Turkish families and the host society. Therefore, 28% of women replied that they have experienced discrimination or harassment in the host society, and also 13% of women answered the same about their Turkish families.

Comparison of social insurance for Ukrainian female migrants in Turkey and Poland. The majority of Ukrainian women who are wives of Turkish men are not working in Turkey, and they are dependent on their husbands and their social insurance (insurance holders) because according to the Turkish Social Security and Universal Health Insurance Law No.5510 [12], which is also known as the Turkish Social Security Law (the date of enactment of the Law was on May 31, 2006 and the date of entry into force was on October 01, 2008), these women have rights to social security in this host country. In this case, in particular the Article 34 of the Act No.5510, female migrants who are wives or widows of Turkish men and their children can be protected by this Law (Amended on April 17, 2008 – 5754/21st Art.). Therefore Ukrainian wives or widows of Turkish men have the right to receive pensions through the entitlement of their husbands anyway. At the same time there is no Agreement between the Republic of Turkey and Ukraine on social security.

In Poland there exists the Agreement between the Republic of Poland and Ukraine on social security that was signed on May 18, 2012 in Kiev between Poland and Ukraine and another Agreement concerning the mutual employment of workers that was signed on February 16, 1994 in Warsaw [13]. The Agreement would protect Ukrainian female migrants in case of their legal employment in Poland because this time could be added to their pension entitlement in Ukraine. However the majority of these women are working illegally in Poland.

Conclusions. The article presents the results of the comparative characteristics in the situations of Ukrainian female migrants in Turkey and Poland. In Turkey the majority of these women are wives of Turkish men, they are young women under 40 years old, with a very good level of education. Common problems that they have in the host country are lack of jobs, their total dependency on their husbands and very often they have been forced to change their religion. The majority of them cannot work in general or legally and they can receive social security only through the entitlement of their husbands who are insurance holders due to the Turkish Social Security and Universal Health Insurance Law No.5510.

An analysis was also conducted about the situation of Ukrainian female migrants in Poland. The biggest problems of Ukrainian female migrants in Poland are connected with finding legal jobs because the period of work, according to the Agreement between Ukraine and Poland on social security, signed on May 18, 2012 in Kiev, may be added to future pension entitlement for them in Ukraine. However according to data from the Ministry of Family, Labor, and Social Policy (Danych Ministerstwa Rodziny, Pracy i Polityki Społecznej (MRPiPS) the ratio of applications and work permits for Ukrainian female migrants in Poland in 2014 was only 7% because the majority of these women are working illegally in this host country.

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Economics

UDC 33+658.11

PUBLIC-PRIVATE PARTNERSHIP: ORGANIZATIONAL AND ECONOMIC SUMMARY

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The article analyzes the economic-organizational nature of a public-private partnership, identifies the main challenges and PPPs characterized by the risks and suggests the ways to minimize them in the implementation of PPP projects.

At the present stage of transition economy logistics the infrastructure requires a significant improvement. But in times of crisis the funds from the state funding are not enough, therefore, they began to attract the private sector. Public-private partnership (hereinafter – PPP) is the most appropriate method for the realization of different logistics projects.

There is no single approach to the definition of a public-private partnership, and this concept is different in different countries, and different authors. For example, the Law of the Republic of Belarus "On state private partnership" defines this term as the legal registration for a specified term mutually beneficial cooperation between the public and private partners to identify resources and risk sharing that meets the goals, objectives and principles set forth by this law, carried out in the form of agreements PPP [1].

World Bank offers this definition: "PPP is an agreement between public and private parties about the production and the provision of infrastructure services, concluded in order to attract further investment and, more importantly, as a means to improve the efficiency of budget financing" [2].

Thus, we can offer the following definition: PPP is a mutually beneficial cooperation between the state and the private sector in order to attract additional resources, risk allocation and efficiency of budget financing.

The implementation of PPP in the logistics is associated with the implementation of the following list of problems:

1. The development of logistics infrastructure;
2. Implementation of science and technology;
3. Achieving effective financing;
4. Improving the quality of services provided:
5. Increasing the level of employment;
6. Optimization of flow processes for solving socio-important tasks [4].

To perform these tasks using PPP mechanisms is used in various spheres. They can be classified into the following groups: infrastructure, legal, public and state support of entrepreneurship tools [3]. All of them are presented in Table 1.

Table 1 – Instruments of PPP

Instruments	Examples
Infrastructure	Investment Fund; Development Bank of the Republic of Belarus; Special Economic Zones; Technopark; Venture Company; Other corporations.
Legal	Law of the Republic of Belarus "On public-private partnership"
Public	Public organizations (unions of entrepreneurs); Non-profit organizations; The business community; Self-regulatory organizations.
Instruments of state support for entrepreneurship	Tax stimulation; Access to credit; Subsidies and grants; Direct government funding; Government loans and loans; Inclusion in the public investment program.

Source: own elaboration based on the studied literature.

PPP mechanisms are particularly effective in the implementation of transport and logistics infrastructure projects that have a high level of capital intensity, long payback period and return on investment. [4]

Funding logistics projects involves the distribution of risks between the partners. PPP involves the transfer of risk to the private sector, as it copes with them most effectively. The government is also involved in mitigating risks, but to a lesser degree. Types of possible risks are listed in Table 2.

Table 2 – Possible risks in the implementation of PPP projects

Risk Name	Examples
Macroeconomic risks	Changes in exchange rates; Inflation; The growth of the debt; Changes in interest rates; The risk of default.
Political risks	Change or inconsistency of legislation; The risk of rupture of the contract; The risk of military action.
Technical risks	Lack of technical equipment; Changes in environmental conditions; Damage to the equipment;
Financial risks	Excess of expenses over revenues; Revenues from the project did not reach the expected level; A high proportion of the costs in the logistics industry; The ability to implement a new type of tax.

Source: own elaboration based on the studied literature.

In order to avoid or minimize the risk of data, the following methods are used:

1. Recognize the type of risk that in the future to work on mitigation;
2. Risk sharing between the state and the private sector:

– The State may take over a guarantee for the money and the obligations of the private partner, if the proceeds from the operation of the facility will be insufficient to cover their [5, p. 197];

– The state can compensate for a certain amount of investment expenses of the private partner [5, p. 197];

3. Provide incentives for implementing social projects [5, p. 197];
4. Insurance;
5. The provision of state support.

In the context of the economic situation of instability there is a need to invest in logistics centers [6]. To minimize the use of budget funds in order to continue providing state services involve the private sector. The state is activated less means there is risk sharing with the private sector. On the part of the private partner – receive guaranteed profits over the long term.

Thus, we can distinguish among the main features of PPP:

– The presence of two parties – the state and the private partner, which are distributed between the responsibilities and risks;

– Both the state and the private partner has its own goals for the association;

– Temporary or medium-term agreement;

– Focus on the implementation of social projects;

– Pooling of financial, material and social resources;

– The state does not consider the budget as the main source of funding, planning to use them as an incentive to private investment flows [4].

In conclusion, the private business is not the only investor in the development of logistics projects, but also a mechanism to optimize costs and reduce costs. As a result, the state and the private sector union logistics receive sufficient funding and will create all necessary conditions for the further development of logistics infrastructure in the Republic of Belarus.

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Economics

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COMMUNICATIVE TECHNOLOGIES IN LOGISTICS AND INVENTORY MANAGEMENT

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In the article the logistics information systems, their types and scope are investigated. The solution of the problem of the optimal level of reserves at the company is given. Information logistics MRP and ERP systems are considered and studied, advantages and disadvantages are identified. As well as the stages of implementation of communication - MRP and ERP information systems are considered.

At the present stage of modern economic development, the logistics finds more and more broad application. This phenomenon was promoted by development of communication equipment and technologies, and also emergence of the new wave of scientific and technical revolution. In the conditions of fast forming of new information society, a large number of enterprises and firms start paying the attention to new managerial approaches and technologies.

As in the conditions of severe competition business methods are quickly changed, the companies start implementing different information and computer systems. Different information flows that circulate inside and between elements of logistic system, between logistic system and environment form logistic information system.

The Logistic Information System (LIS) is a definitely organized set of the interconnected computer aids, different reference books and necessary means of programming which provides the solution of these or those functional problems of material flows management [1].

Three types of logistic information systems are allocated directly at the enterprise. All types are considered in detail in table 1.

Table 1 – Types of logistic information system and their scope

Type of logistic information system	Application area	The solved tasks of this system
Planned IS	Are created at the administrative level of management for adoption of long-term decisions.	– creation and optimization of links of the logistic chain; – management of seldom changing data; – production planning; – general management by stocks; – reserves management.
Dispositive (dispatching) IS	Are created at the level of warehouse management or workshop for ensuring the debugged work of HP, for decision making on medium-term and long-term perspectives.	– detailed inventory management (warehousing places); – management of intra warehouse and intra factory transport; – selection of loads by orders and their picking, accounting of outward cargoes and other tasks.
Operational (executive) IS	Are created at the level of managerial or operational management for execution of daily affairs in real time	– management of warehouses and stock accounting; – sending preparation; – operational production management and its service.

Source: own development on the basis of sources [2–5].

Thus, from the above table it is visible that in planned information systems the highest level of standardization is at the tasks solution that allows adapting the standard software with the smallest difficulties. In dispositive information systems opportunity to use the standard software package is lower. In executive information systems at the operational level of management, as a rule, the individual software is used.

In management systems the enterprises apply the different methods of management based on the specific algorithms of preparation and managerial decision making with use of information technologies.

The main problem of many enterprises is that there is the optimum control of stocks. Methods of management of stocks are formalized in the form of the following standards of management which are the basis of development of IS:

– material requirement planning and production resources (Manufacturing Resource Planning, MRP);

– enterprise resource planning and resource management optimization (Enterprise Resource Planning, ERP).

The description of given systems is stated in table 2.

Table 2 – Informational logistic systems, their essence, benefits and shortcomings

Name of system	System Essence	Benefits	Shortcomings
MRP	The requirement planning methodology in material resources consists in determination of final resource requirement according to the volume schedule of production. Key concept of the methodology is the "explosion" concept, i.e. reduction of treelike structure of the product to the linear list according to which the requirement is planned and the order of component parts is performed. The material requirement planning system is one of the logistic concepts, most popular in the world, on the basis of which the large number of micro logistic systems is developed and functions.	– satisfaction of materials requirement, components and products for production planning and delivery to consumers; – production planning operations, delivery schedules, transactions purchasing; – allows to define how much and in what terms the end products must be made; – possibility of optimization (synchronization) of time of material entry and products release (sale); – decrease in the level of warehouse stocks; – more exact information for production accounting.	– considerable amount of calculations and preliminary data processing; – increase of logistic processing orders costs and transportation when firm aspiration to reduce even more stocks of material resources or to pass to work with small orders with high frequency of their accomplishment; – nonsensitivity to short-term demand changes; – the large number of refusals because of big system dimension and its complexity.
ERP	The organizational strategy of production integration and transactions, managements of the manpower, financial management and asset management oriented to continuous balancing and resource optimization of the enterprise by means of the specialized integrated package of the applied software providing the general model of data and processes for all activity fields. The ERP system is the specific software package implementing strategy of ERP. ERP systems help to manage resources of the enterprise and to model its opportunities. Besides, all processes become transparent.	– consolidation of all the enterprise business processes for uniform rules within one system; – operational obtaining information by the management on all aspects of enterprise activity; – planning and control of the company activity (short-term and long-term plans of different divisions are coordinated); – increase of effective management of the company and its competitiveness; – it is possible to implement in parts (modules), having automated, for example, at first production, and then work with the personnel; – covers all activities that allows to automate practically all business processes.	– high cost; – long and difficult implementation; – need of serious review of the company performance; – the system cannot be implemented at the enterprise where business processes are not debugged; – preliminary independent research of the enterprise by the consulting company is required.

Source: own development on the basis of sources [6–9].

ERP and MRP-systems are usually implemented in large organizations, at the enterprises with difficult production, the wide network branch, the big range of products raised by the volume of warehouse operations.

The advantage of the ERP system is that they allow to integrate some tasks: it is possible to take into account and plan monetary assets at the same time, and also to trace their movement; create cost value and estimate labor productivity at the enterprise. The possibility of "the dynamic analysis" and "dynamic plan change" for all chain of planning is an important difference from methodology of MRP. Specific opportunities of methodology of ERP significantly depend on program implementation. The concept of ERP "is vaguer", than MRP. If MRP obviously focuses on production companies, the methodology of ERP is applicable both in trade, and in the field of services, and in the financial sphere. ERP-concept is the first one directed on the business management, and not just production management as MRP.

All communication informational systems pass implementation process. The process of implementation

of given systems includes some stages:

– the initial stage is connected with accumulation of experience in COMPUTER use and automation of accounting calculations at the task-specific level;

– the control stage is characterized by stabilization of COMPUTER park, determination of spheres of their application, information search on the Internet and the organization of local networks in the enterprise;

– the integration stage is characterized by use of network solutions of different level, COMPUTER-aided decentralization of management and the new organizational basis of the enterprises which is based on broad application of information technologies in management, application of the complex corporate information systems integrated into the Internet [10].

Thus, it is possible to draw the following conclusions:

1) MRP is a production planning strategy providing both operational and financial planning of production, providing wider scope of resources of the enterprise. MRP sets the principles of detailed production planning, including orders accounting, capacity utilization planning, requirement planning in all resources of production (materials, raw materials, component parts, the equipment, the personnel), manufacturing costs planning, production course modeling, its accounting, finished product output planning, the operational plan correcting and shop orders.

2) ERP strategy helps in management of finance, financial accounting, sales management and purchases, the relations with debtors and creditors, personnel management, production, inventory management. Also such systems allow managing customer relations, supply chains, to do trade via the Internet.

3) Using information technology allowed improving the efficiency of materials management on essentially new level. Using information technology results in reduction of logistical cycle, decrease in mistakes quantity, the personnel reduction, logistic service improvement, fast response of the company to internal and external changes, company competitiveness increase.

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THE DISTRIBUTIONAL MANAGEMENT OF READY-MADE PRODUCTS IN THE LOGISTICAL SYSTEM ON BREAD-BAKING PLANTS OF THE EAEU MEMBER-COUNTRIES

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One of the key factors of the stable development of food industry of the Republic of Belarus is the creation of the effectively working economic links between a producer and a consumer as well as the formation of civilized environment for product selling of native producers and the improvement of the whole merchandising system. This article examines "The enhancement of distributional management of factory ready-made production on the example of a branch of Novopolotsk bread-baking plant JSC "Vitebskhlebprom" (the Republic of Belarus) and CJSC "Samara bakery plant" (the Russian Federation).

In the present-day conditions bread-baking plants make 75% of bread and bakery goods of the total production in the Republic of Belarus and supply more than 7 million people with its production [10]. Nevertheless the demands of free market economy, the optimization of all kinds of costs, the increase of the competitiveness of enterprises and their goods, the demand of the organization for the effective distributional production management are still the questions to open. A need to create new forms and methods of distributional management of ready-made production has appeared, in particular in the usage of the instruments of distributive logistics.

In the present-day conditions the use of logistical approach to the management of an enterprise makes it possible to have a more quick reaction to the changes in the conditions of the factory's activity environment.

In logistics distribution is defined as physical, appreciable, substantial contents of this process. Objective laws connected with the distribution of ownership are also taken into consideration, but they are not the main subject of the survey and optimization. The main subject of the study in distribution logistics is the rationalization of the process of physical distribution of the available stock of materials. How to pack a product, which route to direct, if the net of warehouses is necessary or if an intermediate seller is needed – these are the main tasks that are solved by distribution logistics [1].

If we take into consideration the concept of distribution, we can give the following definition: distribution logistics in bread-baking branch is understood as the process of management of physical distribution of bread-baking products from the sphere of production with the aim of the most complete satisfaction of the needs of consumers with the minimal costs.

It is also important to know what the supply chain means. It is a range of organizations, people, technologies, processes, information and resources which are involved in the merchandising of a product or service from a supplier to a customer [2]. So, the process of the production of goods finishes with their sales. That is why this phase of the life circle of products is a kind of evaluating, as you can judge about the accuracy of the factory's strategical policy and the effectiveness of all its parts on the basis of the fact how easy and profitable the sale of produced goods is. Creation of stable, flexible and effective structure of merchandising of the production from a consumer to a supplier in the process of realization of external economic activity is one of the most important and difficult task of a factory.

One of the questions solved by distributional logistics is the planning distribution channels. A distribution channel is a path which the goods follow from a producer to a final consumer.

The following commercial flows are formed inside the sales channel:

- a flow of ownership;
- a physical flow is a movement of goods along the channel from a producer to a final customer;
- a flow of orders being formed sequentially along the channel from a final customer to a producer;
- a financial flow, coming from a customer;
- a flow of information form a producer to a customer and vise versa [3].

The sale of bakery goods is directly influenced by a specific character of the goods, to be exact, the selling by the date is not very long (for bread and bakery goods it is less than three days, for confectionery it is 15-20 days). It limits the possibilities to widen the territorial borders of market sale, influences the production size greatly, as they are formed by the weekly changing orders.

In this survey two bread-baking plants have been analyzed. They are CJSC "Samara bakery plant" (the Russian Federation), which takes leading positions in the market of Samara district in the production of puff bakery goods and cakes [4] and the branch of Novopolotsk bread-baking plant JSC "Vitebskhlebprom" (the

Republic of Belarus), which produces the goods in necessary amounts, range and quality, taking into account a more complete guaranteeing of people's demand for bakery and other goods [5].

In this research paper the analysis has been made with the help of the method of mathematical statistics of the influence of product sales structure through the trade channels on the receipts from the sold goods and on the financial result for CJSC "SBP" and the branch of Novopolotsk bread-baking plant JSC "Vitebskhlebprom". relevant interconnections and objective laws have been applied for the realization of sale amount forecasts of the production of the analyzed plants and the dynamics of functional effectiveness of retail logistics at the bread-baking plant.

In the theory and practice of economical analyses the estimation aggregates of structural shifts have an important role.

The K. Gataev's integral coefficient of structural shifts [6] is represented in the formulae 1:

$$K_{\text{int}} = \sqrt{\frac{\sum (d_2 - d_1)^2}{\sum d_2^{\,2} + \sum d_1^{\,2}}}, \quad (1)$$

where d_1 is a unit weight during the basic period;

d_2 is a unit weight during the reporting period.

The represented coefficient is based on the difference between the unit weights, nevertheless it takes into account the value of the unit weights of both periods.

A. Salai suggested using another overall index of structural shifts (formula 2) [6]:

$$I_s = \sqrt{\frac{\sum \frac{(d_2 - d_1)^2}{(d_2 + d_1)^2}}{n}}, \quad (2)$$

where n is the number of gradations.

To improve the analyzed criteria and to eliminate their shortcomings the index of Ryabtsev is used – I_R (formula 3) [7]:

$$I_R = \sqrt{\frac{\sum (d_2 - d_1)^2}{\sum (d_2 + d_1)^2}}, \quad (3)$$

The tables 1 and 2 show the results of the calculations of CJSC "SBP" and the branch of Novopolotsk bread-baking plant JSC "Vitebskhlebprom".

Table 1 – Calculation table of structural and dynamic analyses of the receipts through the distribution channels of SBP (2016 to 2015)

Channels	d_1	d_2	$d_2 - d_1$	$(d_2 - d_1)^2$	$d_2 + d_1$	$(d_2 + d_1)^2$	4/6
Trading networks	69,0	74,0	5,0	25,0	143,0	20449,0	0,001
Wholesale	13,5	8,0	-5,5	30,3	21,5	462,3	0,065
Retail	10,5	10,0	-0,5	0,3	20,5	420,3	0,001
Others	7,0	8,0	1,0	1,0	15,0	225,0	0,004
TOTAL:	100,0	100,0	0,0	56,5	200,0	21556,5	0,072
K. Gataev's coefficient of structural shifts						0,072	
A. Salai's overall index of structural shifts						0,134	
Ryabtsev's index						0,051	

Note: the personal research based on the data of the plant.
Source: [8].

The structure of distribution channels of the products of SBP is noted for its heterogeneity. So, the obvious leader is the channel "Trading networks", which takes almost 75% of the revenue. Its part is increasing and in 2016 it reached 74%. A considerable decrease in the amount of wholesale customers (from 13,5 to 8% during the analyzed period) hasn't influenced the company's financial state. It is stable – the plant has regular profits, though they are not very high (in 2015 they were 2197 RUB) [8].

The changes in the structure of receipts are not considerable, which confirms the value of Ryabtsev's index. In many ways it is caused by the stability of such trade channels as "Retail" and "Other customers". Their part is average and makes almost 20%.

So, the active development of own trading networks gives SPB an opportunity to have a small but stable annual after-tax profit.

Table 2 – Calculation table of structural and dynamic analyses of the receipts through the distribution channels of the branch of Novopolotsk bread-baking plant JSC "Vitebskhlebprom" (2016 to 2015)

Channels	d_1	d_2	$d_2 - d_1$	$(d_2 - d_1)^2$	$d_2 + d_1$	$(d_2 + d_1)^2$	4/6
A	1	2	3	4	5	6	7
Wholesale	29,8	32,5	2,7	7,3	62,3	3881,3	0,002
Trading networks	25,8	30,3	4,5	20,3	56,1	3147,2	0,006
Retail	33,6	26,1	- 7,5	56,3	59,7	3564,1	0,016
Others	10,8	11,1	0,3	0,1	21,9	479,6	0,0
TOTAL:	100,0	100,0	0,0	83,9	200,0	11072,2	0,024
K. Gataev's coefficient of structural shifts						0,123	
A. Salai's overall index of structural shifts						0,178	
Ryabtsev's index						0,087	

Source: the personal research based on the data of the plant [9].

The structure of the distribution channels of the products of the branch of Novopolotsk bread-baking plant JSC "Vitebskhlebprom" is not noted for great changes. The value of Ryabtsev's index doesn't outnumber 0,137. In 2015 the channel "Retail" was on the first place (33,6%) and the channel "Wholesale" took the second place (25,8%). In 2016 the situation changed – "Wholesale" (32,5%) and "Trading networks" (30,3 %) took the leading place. For other customers the index varies not more than 11%.

This bread-baking plant has the following tendency – the decrease of the influence of retail trade causes the company's unprofitability. The orientation of a low cost price segment has failed.

Within the study the reconstruction of operational control of the company's sales is suggested by using the performance indicators of functioning of the sales logistics of the bread-baking plant for four components of this system functioning.

1. A financial component includes the increase of profitability, the expense reduction, the increase of a company's share in a segment;

2. A client's component includes the degree of customer's satisfaction increase due to the widening of the goods range and the level of service increase of as well as the attraction of new customers;

3. A component of business processes includes bread-baking goods delivery in-time, the purchase of high-quality materials;

4. A training component includes the development of a strategic sphere of competence, the increase of the staff's qualification and the complacency of the staff.

An active absorption of a new market niche (production of frozen half-finished products, wormed before the salling) will lead to an active interaction of a plant with trading networks, which will positively influence sales volume. The profitability of sales will increase, that means that the plant will overcome unprofitability, as a result the effectiveness of sales logistics will increase [11].

Effective organization of logistical distributional system ensures the company with a sheer reaction on the customers' needs, as the company's distributional logistics interacts with them directly.

As we suppose, while building a distributional system of bread-baking plants of the EAEU member-countries we need to solve a number of tasks:

1. Introduction of management organizational structures, creating distributive logistical functions among different departments of the company.

2. Formation of the strategy and tactics of physical production distribution on different levels of distributional channels.

3. Organization of the effective system for stimulating all members of a supply chain.

All the tasks mentioned above will increase the effectiveness of each sphere of the logistical system of plants, the turnover of current asserts, the decrease of the terms of introduction of new kinds of products in the production process.

It is also important to be orientated on how the Samara bakery plant organizes its activity and to take as an example the available ideas.

The data of improvement can help Novopolotsk bread-baking plant to bridge many problems at present, avoid problems in the future and also find new markets as well as to get a bigger profit from selling their own production.

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THE ROLE AND IMPORTANCE OF THE MECHANISMS CONTRIBUTING TO MAXIMIZING PROFITS IN PROFESSIONAL SPORTS

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The article is devoted to possibilities of using mechanisms that maximize profit in professional sports. Examples of the use of these tools in world sport. There are opportunities for the sports industry of the Republic of Belarus in this direction of improving economic policy.

A key link in the stability of the economic policies of professional sports clubs (PSC) serves the balance under articles profit. Indicators of financial and investment activities are the monetary expression of sporting achievements of PSC, reflect the result of financial and investment activities of the team. The high profit before income tax of PSC provides an additional opportunity to invest in intangible assets, infrastructure, etc. Practical experience shows that in the budget of PSC comprehensive income on the match day, so it is more stable from an economic point of view.

Consider the possibility of profit maximization of PSC in the context of the operating activities in the formation of revenue items on the example of professional football. The results of the team's performance will have a direct impact on commercial activities of PSC. Strategic planning of sports achievements of the team is a major component of the budget of PSC in the coming period, as well as forecasting of the statement of profit and loss. Sports results have a direct impact on the main article profit of PSC. PSC management is relevant sporting achievements and investment in the development of the team during the reporting period.

In the Republic of Belarus the budgets of many PSC rely only on the investments from local budgets, total income on the match day and the sales of TV rights are negligible or absent altogether. From sponsorship contracts, for example, in the Premier League, we can highlight the areas of concern "Belneftekhim", banks and insurance companies.

Belarusian business structures are ready to invest money in the industry of professional sports, but, typically, sports organizations have nothing to offer to attract these funds into their projects. Money invested in sport organization, must be addressed, otherwise professional sport in the Republic of Belarus not to pass on an economic platform and not be transformed into a business [7].

Bonus from playing in the European Cup and Club World Cup is a significant part of the revenue of PSC. There is always the opportunity to replenish the club's budget, participating in the European Cups, when the Belarusian clubs left in European tournaments, the team earned from UEFA a significant premium [17, 18]. In addition, in 2014, the Association "Belarusian football Federation" has allocated a prize Fund that at the end of the season was distributed among the top three, for a total amount of 300 thousand US dollars [4].

Profit from the events of PSC income not related to the game reflects the degree of development of the product, ticketing and pricing policies, as well as the elasticity solutions manual in a transforming environment. These indicators give the possibility to calculate the profit of PSC from implementing ticketing and club goods in the long-term cost effectiveness for home games. The profit from each game per user is the main indicator of the impact of commercial policy. Effective ticketing policy of the PSC must meet the following criteria: stability, according to consumers and flexibility in the regulation monitoring of upcoming games based on achievements over the past matches. Commodity and ticketing policy provides for the establishment of the implementation of the ticketing and club products, which may include websites, brand stores, specialized establishments and infrastructure for the stadium.

The consumer behavior of fans can be interpreted as a fundamental basis for promoting PSC. A fundamental factor in this case is the level of achievements of PSC, in the absence of positive dynamics of the interventions are very difficult to guarantee the output on the break-even point and the higher the yield. In the absence of significant sporting achievements of the team of PSC is necessary to conduct an effective marketing policy and trying to increase profits through the implementation of systems of interaction with customers, through which PSC transform it economically passive fans into the action as the main consumers, expressed in the form of a game and accompanying ingredients, such as team merchandise, souvenirs, etc.

One of the main mechanisms of increasing the profits of the infrastructure are the VIP lounges, the audience of such places pay much greater cost for special visual status and opportunities that provide them with the managers of sports. For example, in Germany the total number of VIP lounges in relation to the total number of seats is 3 to 5 %. Terms of the sale of the skyboxes give about 15-20 % of the proceeds from ticket programs [2].

For senior managers and key functionaries of the business processes in the industry of professional sports,

the main task is to organize any events at the highest level, and to be in demand by consumers as a quality product, which includes certain factors: victory or performance at the highest level of PSC, participation in international tournaments, the infrastructure provides merchandising services, as well as good information support.

For business processes in the industry of professional sports, as in other sectors of the economy, it is important to use PR opportunities. The PR service consistently show a significant increase of its necessity in professional sports based on the trends in the industry of professional sports has acquired the most attractive position relative to other investors and sponsors.

Currently, there are many PR-technologies of maintenance of investment attractiveness of PSC generating a profit. According to professor northwestern University USA, a recognized expert in the field of public communication and image-making, Irving Reyna, professor graduate school of management, G.L. Kellogg, northwestern University, USA, honorary doctor of the Russian University of Economics named after G.V. Plekhanov Philip Kotler [16, p. 264–289] professional athletes, owners of PSC, coach, sports development programs, professional leagues, sporting goods, sporting events, sports television programs and professional sports teams can be a sports brand. Sports brand is a strategic asset, and the only component of the property that can remain unchanged for several years, while maintaining its working capital cost. It is also one of the intangible assets.

The brand value of the football club Manchester United [15] is estimated at 351 million U.S. dollars, accounting for 24 % of the value of the company. The value of the brand also includes the annual revenue from sponsors at 94 million U.S. dollars, and proceeds from media rights at the level of 70 million U.S. dollars. European PSC have higher brand value than American because European clubs have income from sources that they don't have to share with other teams from their country, or from sources, which to a lesser extent sponsor their competitors.

Business brands are evaluated based on how much the market value exceeds the carrying value benchmarks for the industry [13, p. 163–167]. Cherepanov V.Y. in the context of her dissertation research, "Evaluation of brand value and the trademark of the professional football club" [11] have developed the theoretical framework of the valuation of brands and trademarks of PSC. Using valuation for the efficient management of brand and trademark, PSC provide the basis for increasing the value of their business and the level of investment attractiveness. The practical aspect of the work was the possibility of a more qualitative assessment taking into account specifics of activities of PSC and distinctive features inherent to their brand and trademark. According to V.Y. Cherepanova further direction of research, based on the results achieved, can become a complex development of measures for profit maximization PSC.

Pioneers in trying to focus on the brand, the process of providing services can be considered presidents of multinational consulting company TMI in the USA and New Zealand Janelle Barlow and Paul Stewart. In his book "Service oriented to a brand" [12] the authors open up new perspectives, combining the dynamics of customer service with complex emotional connections that create a strong brand. Practical recommendations contained in the above labor will implement a service-oriented brand to the company through a policy of human resource management.

PSC promote their brand in society, strongly encourage their athletes to participate in various marketing projects and promotions of world famous companies brands. These activities increase the image of the PSC and added to the budget of huge financial infusion. So, according to estimates of the sports analysts, the following professional athletes in its advertising and sponsorship portfolio store a variety of different contracts.

So American basketball player Derrick Rose in addition to the contract with "Adidas" for 200 million U.S. dollars for a period of 13 years has collaborated with the brands of "Powerade", "Wilson Sporting Goods Co." "Skullcandy" and "2K Sports" in 2012 bought a stake in a network of pizzerias "Giordano's". The golfer from Northern Ireland Rory McIlroy signed with Nike for 10 years, the amount of which 200 million U.S. dollars, in parallel to continued cooperation with the Swiss luxury watch brand "Audemars Piguet". Despite the fact that footballer David Beckham ended his professional career, he remains an Ambassador of the brand "Adidas", which is a lifetime contract for 160 million US dollars, represents the interests of companies "Burger King" and "Sky". He advertises the brand "Belstaff, as well as the car manufacturer "Jaguar" chose him as their Ambassador to China. He works closely with the Swiss Department store chain H&M, which manufactures a proprietary line of men's and children's underwear [9].

American golfer Tiger Woods contract with Nike for 5 years, the amount of which is 100 million U.S. dollars. Among basketball players NBA Lebron James, the biggest advertising star, makes Nike contract for 93 million U.S. dollars, contracts with McDonald's, Coca-Cola, Samsung and other brands, sales of his signature sneakers have reached the amount of 300 million U.S. dollars [6].

To the need to minimize risks to promote a specific professional athlete of goods from several organizations, companies try to minimize such a possibility in the contracts, but this service, as a rule significantly increases the amount of the contract. The most successful PSC in the world give much importance

to formation of the attractive image. They receive income from articles profits, which enable to increase significantly the ranking of PSC. A rich selection of PR-technology contributes to the efficiency and stability of management policies in the field of PSC image.

From the ordering of certain ways, forms, methods and operations on the basis of which integrated public relations, the Institute of public relations has been formed [8, p. 3], involving multiple activities aimed at improving relations between the organization (PSC) and the public, as well as with those who join with it in business contacts both inside and outside. No PR seems to be possible to maintain management and business in the industry of professional sports. PR in the industry of professional sports plays a small value for enhancing the sustainability of PSC and athletes and for the whole society, through the promotion of a healthy lifestyle.

The most striking example of profit on the resource usage of sports facilities to promote shows, concerts, etc., for the Republic of Belarus can serve as a multifunctional cultural-sporting complex "Minsk-Arena", which is one of the most modern multifunctional buildings in Europe, impressive for its architectural design in the style of hi-tech, designed for international sports and cultural events [5], such as concerts of Russian and foreign stars, luxury ice shows [1].

The trim command shows the efficiency of the sports school of PSC. The number of foreign players in PSC can be viewed from two perspectives: one, the presence of elite legionaries tells about the significant investment potential of PSC, on the other hand, the increase in their number indicates a deficit of their wards, and as a consequence, a low level of sports schools and one of the basis for the successful functioning of PSC in the long run. In his thesis A.G. Dmitriev "Optimization model transfer strategies of professional football club" [3] has developed models of analysis, selection and performance management transfer strategy of PSC that will implement the behavior of PSC in the transfer market, which can be used to transform management objectives into appropriate management decisions. The performance of PSC players for the national teams in the international arena has a direct impact on increasing the number of fans of the team.

One of the best examples of profit maximization can serve as policy of the football club "Manchester United", which takes place using some of the tools listed above. According to the report Deloitte "Football Money League 2015" [14], despite the games shortcomings in the season, "Manchester United" showed tremendous revenue growth, almost 100 million euros, ahead of Barcelona and Bayern Munich and behind only real Madrid. The income of the club in the main areas during the reporting period was as follows: total revenues on the match day is 129.3 million euros (25 %), the right to broadcast is 162,3 million euros (31 %) and commerce, which includes revenue from merchandising and sponsorship contracts is 226,4 million euros (44 %), the budget of the club respectively amounted to 518 million euros. According to forecasts, Deloitte "Manchester United" in 2017 will be back in first place in the ranking.

For comparison, revenues, and budgets of clubs of the higher League of the Republic of Belarus on football over the same reporting period is significantly lower, the total budget of all teams amounted to 34.1 million US dollars [10] that at 17.3 times less than the budget of "Manchester United". As can be seen from this comparison, the budgets and income of the Belarusian PSC strongly lag behind the foreign.

Based on the foregoing, the actual development of modern methods and mechanisms to improve the capacity of PSC to maximize profits for the major revenue items of the budget that is dictated by intensively changing market conditions, and is aimed at improving the quality of sports products and services in the industry of professional sports, which in turn will have a positive effect on the level of the whole industry in the country.

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OPPORTUNITIES FOR THE DEVELOPMENT OF HUMAN RESOURCES IN THE INDUSTRY OF PHYSICAL CULTURE AND SPORTS IN THE REPUBLIC OF BELARUS

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The article is devoted to the personnel potential of the industry of physical culture and sports. Considered a multilevel system of training specific to this industry. Possibilities of development of personnel potential of the industry.

The development of the industry of physical culture and sport (PhCS) is considered to be one of the most important areas of public policy, and in its turn, an effective tool for the improvement of the nation and strengthening the image of the Republic of Belarus at the international arena [4].The national security concept of the Republic of Belarus [6] is to increase the overall level of population health and it is a one of the most important national interests.

Integrated regulation of PhCS, as a sector of the economy, is realized by all the functionaries of the system, and with the help of its material and production elements, which belong to the different sectors of the economy, and is aimed at creating a single economic complex. This statement, allows to full characterize PhCS as a full-fledged sector of the national economy of the Republic of Belarus.

Sectorial labor market in the sphere of PhCS in the Republic of Belarus presents a multi-level system of training, which includes institutions of secondary and higher education, and specialized educational-sports institutions. Higher education institutions of the Republic of Belarus are presented in their turn by two stages of higher and postgraduate education aimed at scientific support of the industry and obtaining the highest qualification in various areas.

The number of employees and students in the industry is constantly increasing (Fig. 1).

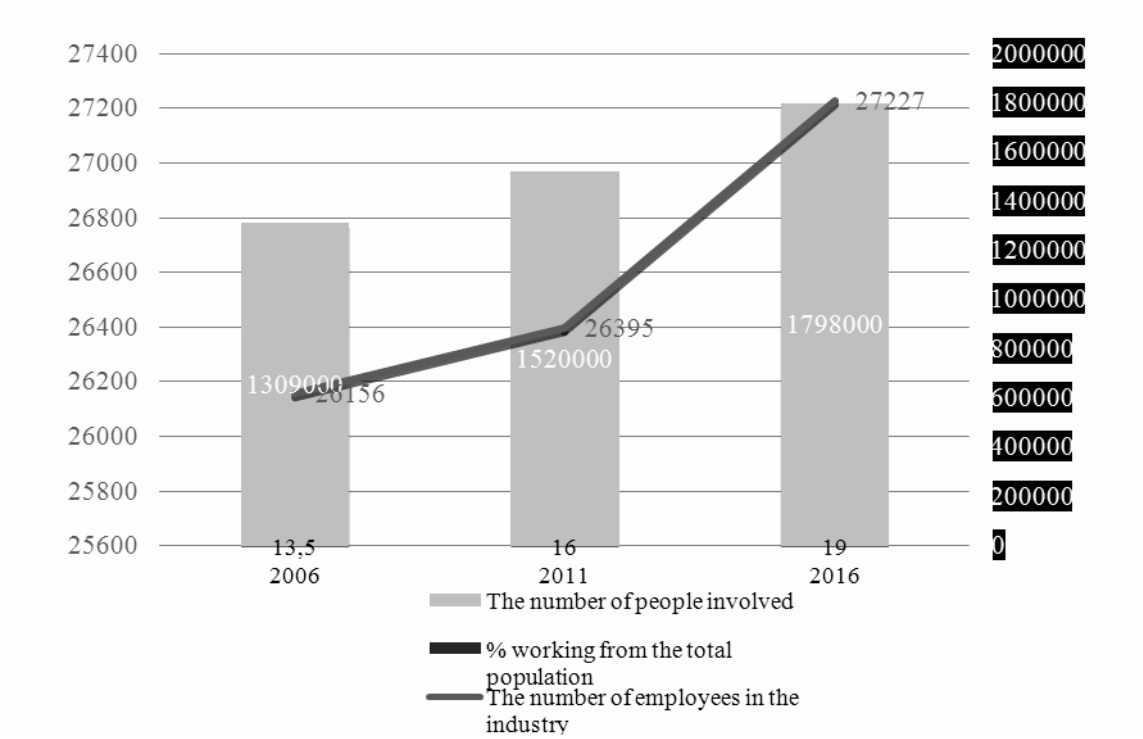


Fig. 1.Dynamics of the number of student and workers in the sector of PhCS in the Republic of Belarus, people

Source: own development based on data analysis [3–5].

In order to train the sports reserve and high-class athletes a system of specialized educational-sports institutions is created including secondary schools – vocational schools of the Olympic reserve, training-sports

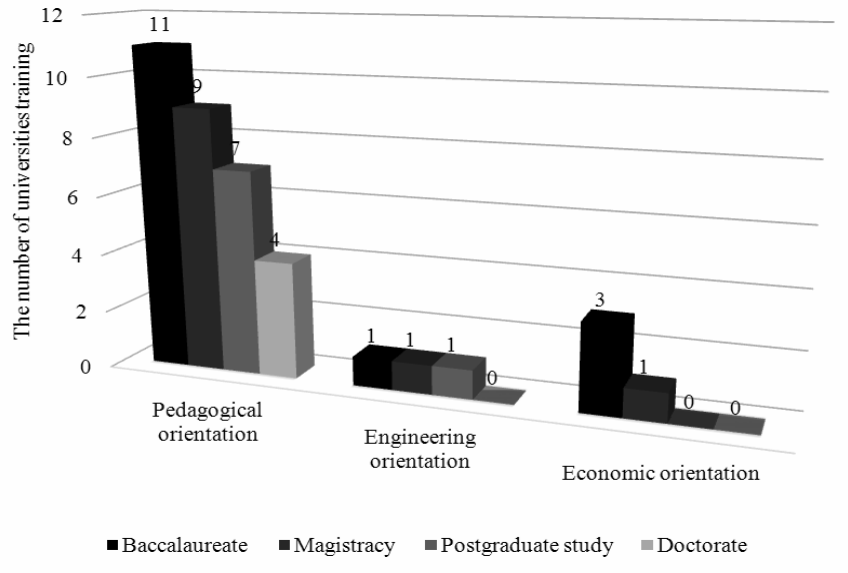
departments according to the kind of sport, specialized sport classes, youth sports schools, specialized youth schools of Olympic reserve, schools of higher sports skills, the centers of the Olympic training.

According to the State program of physical culture and sports development in the Republic of Belarus for 2016-2020 [5], it is necessary to improve human resources in PhCS, including not less than 3.2 thousand people at the first stage of higher education, at least 185 people at the second, as well as 80 scientific workers of higher qualification.

The process of physical and sports activities and training is a pedagogical process. Personnel training for the industry of PhCS at higher educational institutions of the country was carried out only in the specialty of "Physical culture". It imposed certain restrictions on the personnel potential of the industry in other areas (engineering, medical, management, economic, etc.).

At the present stage significant changes have taken place, institutions of higher education of the Republic of Belarus have developed programs for training in diversity of specialties. The system of multilevel higher education provides an opportunity to get not only the bachelor's degree but also the master's degree or a scientific degree.

In the system of the Ministry of education of the Republic of Belarus personnel for PhCS industry is trained at universities in several areas: pedagogical, engineering and economic (in the context of other industries) (Fig. 2).



* – as part of specialization; ** – the program of practice-oriented course
Fig. 2.Human resources in the industry of PhCS of the Republic of Belarus according to training courses at higher educational institutions

Source: own development based on data analysis [1, 2, 7–9].

For pedagogical aspects of the industry, the training is being conducted by 11 universities [1, 2, 7–9, 11–14, 16, 17]. The first stage is represented by diversity of professions, "Physical culture" can be considered prevailing, has wide geographic distribution in the country and includes many specializations. Belorussian state University of physical culture and sports [11], and even other universities also offer training in several other specialties: "Physical culture (therapeutic, preschool)", "Improving and adaptive physical culture", "Physical rehabilitation and ergo therapy" and "Sports-pedagogical activity".

Pedagogical training at the second stage of higher education in the specialty of "Theory and methodology of physical education, sports training, improving and adaptive physical culture", is provided by all the marked universities [1, 2, 7, 9–14, 16, 17], in addition to Baranovichi state University. The possibility of obtaining postgraduate education in the specialty of "Theory and methodology of physical education, sports training, improving and adaptive physical culture" is provided by 7 universities [1, 7, 10, 11, 13, 16] and only 4 of these have opened the doctoral program [1, 11, 10, 16].

On engineering specialties, preparation is offered by 1 University of the country [19], which in addition to bachelor's degree programs ("Technical support of sports facilities operation", "Technical support of sports technology," "Design and manufacture of sports equipment") and master's degree programs ("Methods and means of technical support of physical culture and sports"), also offers post-graduate courses ("Methods and

means of technical support of physical culture and sport").

The economic training at the universities of the Republic of Belarus is realized only in the specialty of "Business administration", as a form of specialization: "Entrepreneurial activity in the sphere of physical culture, sport and international tourism". Training in this specialization is carried out only by three institutions [9, 15, 19], and the preparation at the second stage can be characterized as a practice-oriented course on the specialty of "Economics" of a master program "Economics and psychology of sport" [18].

While summarizing the results of the analysis of training at the universities of the Republic of Belarus for the PhCS industry in educational, engineering and economic fields, it can be noted that the results illustrate the first attempts to open new specialties of an economic profile for the industry, hence there is demand for specialists in this area. Opening of specialties of new generation will contribute to the integration of the educational system of the Republic of Belarus into the world educational space (Bologna process).

Because of these processes it becomes clear that professional sport needs not only professional sportsmen, coaches, sports engineers, but also professional economists, managers, financiers and accountants. Professional sports needs people who will be able to calculate the cost of building sports facilities or of major sporting events and will not possess only fragmentary knowledge about finance, management, marketing, who will be familiar with the products (goods, services) of professional sports organizations.

The task of economic evaluation of sporting events is of current interest, especially with the reduction of budgetary allocations and evolving competitive environment around these funds. In changing market conditions, there is a question of effective realization and regulation of the allocated funds.

Taking into account everything mentioned above it would be rational to open a new economic specialty of the first level (bachelor) of higher education for the industry of PhCS of the Republic of Belarus, such as "Economics of professional sports" and add it to the National classifier of the Republic of Belarus, in connection with the need of highly qualified specialists of this qualification in all regions of the country.

The Republic of Belarus is a state where such organizations as football, hockey, handball, basketball and volleyball clubs and other professional sports organizations are being developed. Specialty "Economics of professional sports" is of special importance for the leading professional sports clubs in team sports. Professional athletes of these clubs increase the potential and affective performance of the national teams of the Republic of Belarus.

The largest sports organizations in the country are the National Olympic Committee, federations (associations) according to the kinds of sport, professional sports clubs (hockey Dinamo Minsk, football BATE Borisov, basketball Tsmoki-Minsk and others).

The efficiency of sports organizations (enterprises) of a city, a region and of the Republic of Belarus in general depends on the level of knowledge and skills of the specialists in the field of Economics of professional sports. Thus, these organizations are potential employers for graduates of specialty "Economics of professional sports".

Today there is an acute problem of employment of graduates of educational institutions in the whole country, but for the industry of PhCS, there is a relatively easy solution, due to the fact that a large part of the professional staff carries out professional activity in various educational institutions of the country. This aspect allows all young professionals to obtain their first job after graduation.

Bachelor's program in this specialty is not opened, and it should be noted that because of the lack of specializations of economic direction for the industry of PhCS in higher educational institutions, the need of economic entities of PhCS industry in highly qualified personnel cannot be satisfied. This is a prerequisite for the development of the specialty "Economics of professional sports".

After the first stage of education in the specialty of "Economics of professional sports", there is the necessity to continue training for graduates (master's degree), as well as to obtain research experience (postgraduate, doctoral). In connection with the given statement there is a need for restructuring of programs of graduate (master's degree) and postgraduate (postgraduate, doctoral) education.

Some additions made to the list of industries and activities in the specialty "Economics and national economy management" could become the solution of the problem. It seems possible to add "sport" to the list of industries and spheres of activities at all levels of (graduate, postgraduate, doctoral) education.

For the sake of preserving and strengthening the competitive sports capacity of the state, and to prevent the outflow of talent to foreign countries, it is necessary to create conditions for further education of talented youth in the sphere of Economics of sports in the Republic of Belarus.

Improvement of the personnel potential of the PhCS branch is aimed at creating in the Republic of Belarus of a multi-level system for continuous training of specialists in economics for the main economic entities of this sector in current market conditions.

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UDC 33+658.11

PRINCIPLES OF MODEL FORMATION OF PUBLIC-PRIVATE PARTNERSHIP IN THE CONSTRUCTION OF LOGISTICS CENTERS

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This article describes the general and specific methodological principles of creating logistics centers based on public-private partnership (PPP). The author proposes structural and resource model of interaction of PPP in the construction of a logistics center.

Based on the study, analysis and generalization of foreign and domestic scientific sources, we find it necessary to examine the principles of the models of public-private partnerships, together with the general principles of logistics, to attract domestic and foreign investment in the construction of logistics centers, to improve the management system of product distribution. The analysis of the examined sources allowed to formulate the following basic methodological principles of creating logistics centers [1, 2, 3, 4].

The principle of the system approach, which requires significant investments in supporting infrastructure. It creates favorable conditions for co-operation between the public and the private sector to provide a full range of logistics services, including warehousing, freight forwarding, and others.

The principle of total cost, providing for consideration of the totality of the costs of management of material, information, finance, service, personnel flow across the supply chain, from the inception of the project to establish a logistics center to its operation and obtain services the final consumers.

The principle of global optimization is ensured by achieving a global optimum, using as a criterion for logistics costs in the production of complex logistics and transport, and transport and marketing systems.

The principle of integration, and logistical coordination in the activities of logistics centers based on the achievement of a coherent integral participation of all services of the logistics center in the management of the implementation of the main objective function. The role of the coordinator in the logistics center must perform the management company 4, 5PL-provider.

The principle of the development of the necessary complex subsystems, ensuring the formation and effective functioning of the logistics center: technical, technological, informational, organizational, economic, human, environmental and others.

The principle of total quality management, based on ensuring the reliability and quality of operation of each structural element of the logistics center to ensure the overall quality of the goods and services supplied to final consumers.

The principle of humanization of all the features and technological solutions in the logistics centers means matching resource-saving technologies, environmental requirements on environmental protection, social, national, ethical standards of staff.

The principle of sustainability and adaptability, according to which the logistics center is to sustainably operate at acceptable levels of deviation parameters and environmental factors (changes in the conditions of supply and procurement of material resources, transportation routes and variations in tariffs, etc.).

Using the theory of compromise between the partners, due to the complexity of the design, the impossibility of rapid construction of logistics centers and profit in the initial stages of their operation, which leads to the fact that the partners will not be able for a certain period of time to be profitable.

The development of logistics services in integrated logistics services in the delivery of goods will ensure timely delivery of products and their safety, reasonable fees for additional services rendered. To do this, create logistic centers for use in logistics schemes involved the delivery of benefits and reduction of transport at the expense of transport and logistics costs.

The principle of modeling and information and computer support, intended use in the analysis and optimization of logistics centers of mathematical objects, graphics, simulation and other models. This is due to the fact that the establishment of logistics centers requires the prior simulations based on various models in order to avoid errors (failures).

Thus, the logistics center should operate on the principles of integrated logistics operator in the different modes of transport, allowing rational to organize the transportation process in the interest of the customer and the carrier. For the reliability and quality of logistics services, logistics centers must be created with the use of public-private partnerships as the organizational framework introducing new forms of interaction. Unfortunately, the principles of the system approach and the theory of compromise observed not in full, which affects disproportionately developing links in the transport and logistics infrastructure.

Basic specific principles for the implementation projects public-private partnerships are presented in Table 1.

Table 1 – Specific principles for the implementation projects public-private partnerships

Principles	Characteristic
Equality interests of the parties and freedom to choose action	equality of all partners in accessing services; the right to enter into PPP contracts; Freedom to choose partners, forms and methods of achieving the objectives
Responsibility for the execution of the contract	services in full compliance with the terms of the contract and the responsibility for their implementation
Competitiveness	selection of the private sector to the competitive process, there is at the stage of signing a contract with the public sector, which allows the investor to choose effective and reduce the overall cost of the project
Non-Iinterference	after the signing of the PPP contract, the public sector does not interfere in the economic and administrative activities of the private sector
Transparency and feedback	open access to full information on PPP project; providing consumers with information feedback channels
Stimulation and guarantees	attracting private investors to participate in PPP projects with the help of political and economic preferences
Onerousness	reimbursement of private sector investments, unearned income in the event of termination of contact PPP, except for breach of contract parties
Equal attitude towards investors	equal treatment of foreign and domestic investors
Realized projects PPP project company	the project company generates capital from private investors and attracting debt financing
Continuity of rendering of services	services to consumers should provide continuous, as defined public-law nature of the relationship of PPP

Source: personal elaboration based on the study of the scientific literature.

Thus, the construction, operation and further operation of logistics centers based on the application of the general logistics and specific principles of public-private partnership, will implement the overall strategic as well as tactical and operational goals of logistics centers in the rational use of material, information, financial and human resources and the harmonization local criteria for the operation of economic agents with the purpose of functioning of the global logistics center.

The interaction of the state and the private sector is an important indicator of the state of society as a whole. The relationship between the impact on the nature of power, style, and technology management. There are four basic models of interaction [5]:

– ideal (theoretical) model that recreates the interaction of the state and the private sector in a perfect market environment;

– national model reflects the general features of the interaction of public and private sector, formed as a result of the evolution of the real practice of state construction, business development and cooperation;

– standard model describes the interaction of public and private sector, which has developed on the basis of experience, established norms and rules;

– real institutional model that shows real cooperation of public and private sector, peculiar to a specific territory.

As part of a particular model between the subjects of mutually beneficial exchange of resources occurs. Both the public and private sectors, have the resources, access to which can be useful and beneficial to others. The government has economic, political, administrative and information resources, and the private sector – financial, expertise and innovation. Sharing these resources is the basis of their economic relations, which is shown in Figure 1.

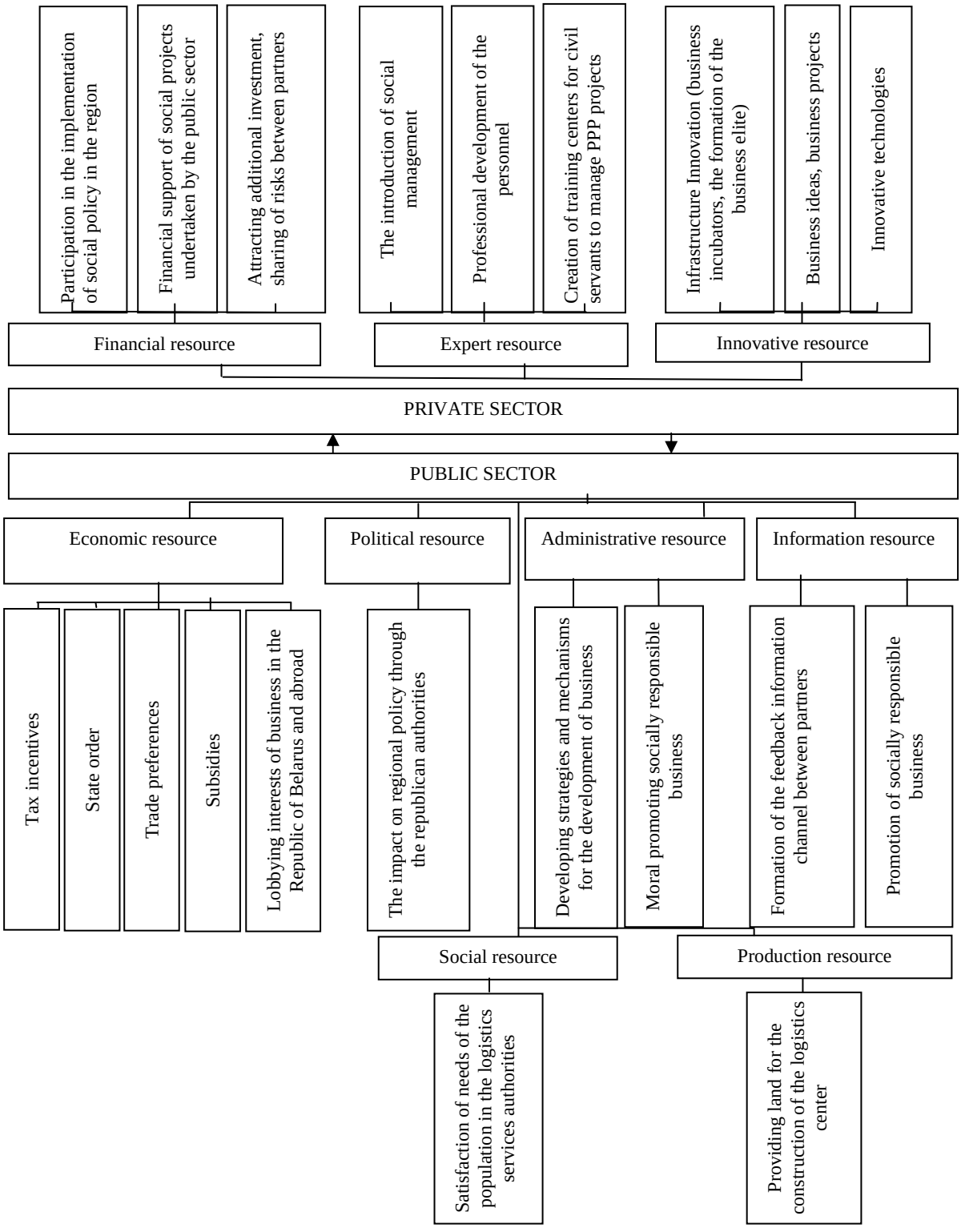

Fig. 1. Structural-resource model of interaction of PPP in the construction of a logistics center

Source: personal elaboration based on the study of the scientific literature.

Thus, the formation of the project management of public-private partnership to build logistics centers should be guided by the following basic principles [1]:

– managing the logistics center must wear a three-level character: national, regional and local. This will require a clear delineation of functions and powers between the authorities of different levels, agreed to take joint decisions in the sphere of mutual interests;

– accounting the specificity of the market economy, providing, in particular adherence to mutually beneficial terms of cooperation, the creation of a unified system of economic and legal relations between the participants of an integrated logistics system of product distribution through harmonization of their interests through the achievement of the economic trade-offs and the redistribution of aggregate synergies between the services of the logistics center;

– ensuring the competitiveness of logistics centers based on the implementation in practice of the organizations marketing methods and logistics management, maximum satisfaction of quantitative and qualitative requirements of customers through the development of logistics services;

– application of the mechanism direct state regulation of the market of logistics services on the basis of the licensing business in these areas to improve the quality of logistics services through the application of principles of product distribution logistics;

– provision of equity financing of transport and logistics infrastructure with the involvement of the budget and extra-budgetary sources, including the private sector, foreign capital;

– providing the necessary organizational, economic and technical conditions of production and to create an integrated information management system for service logistics center;

– organization of training and retraining in the field of freight forwarding, shipping and warehousing, distribution, service and other logistics activities with learning advanced technologies and logistical approach to the management of commodity-material and attendant service, information and financial flows;

– creation of a system of government support and regulation ensuring conditions most favored partners through the introduction of state regulation, including concessional lending investments into transport and logistics infrastructure, tax breaks, allocation of land for the construction of logistics centers, as well as other objects of transport and logistics infrastructure, legal regulation aimed at ensuring favorable conditions for equal partners;

– ensuring the integration of the regional logistics system with the republican, international product distribution logistics system based on the formation of inter-regional and international integrated transport and logistics systems.

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FEATURES OF SOCIAL POLICY OF DOMESTIC ORGANIZATIONS

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Social policy of an organization is one of the most important activities of an organization and management. Availability of social facilities and their efficiency increase staff motivation, allow attracting and keeping the best professionals. This article presents the theoretical aspects of the social policy of an organization. The various elements of social policy used in the institutions of the Republic of Belarus in the current difficult economic conditions are considered.

The consistent increase in the level and quality of life, the creation of the state, convenient to the people, is the main goal and the pivotal direction of the state policy of the Republic of Belarus. Therefore, the development of the Belarusian national economic system is carried out with the focus on the social sector.

Social policy is an important element of the strategic development of an organization. It is a complex, integrated facility that requires a correct understanding and views. From whatever side we have not considered social policy, it is linked with human needs – physical, spiritual, intellectual, always existing in the relationship [1, p. 6].

State model of socially-oriented market economy requires social guarantees to the population not only at the level of implementation of the state policy, but directs all economic entities to raise the level of material well-being of its employees not only by wages but also by obtaining social benefits.

At the present stage of development of economy of the Republic of Belarus the number of organizations, which are striving not only to produce products or provide services for profit, but also to take care of employees, investing in health and safety and the provision of tangible and intangible benefits for employees and their families, are increased.

Increasingly, social packages are being introduced that are aimed at attracting skilled workers in the organization. Modern social package is up to 15% of personnel costs, including such important components of investment in human capital as the cost of medical services, education, training, various forms of leisure activities.

As practice shows, the most popular components of the social package in Belarusian companies are [2]:

– compensation for the depreciation of the employee's personal car, which is used for business purposes, as well as the cost of fuel (86% of employers);

– mobile payment (44% of employers);

– staff training (35% of employers);

– providing official vehicles or compensation for travel (17% of employers);

– payment of meals (1 5% of employers);

– housing non-resident worker (10% of employers);

– payment of subscriptions to the gym or the swimming pool (6% of employers);

– organization of recreation and leisure activities (5% of employers).

Studies have shown that any benefits (paid, free of charge) benefit not only employees, but also employers. Employees receive additional benefits that make working conditions more comfortable. Providing its employees with benefits not provided by the law, the organization attracts new employees, reduces staff turnover, and encourages efficient and high-quality work. In addition, employers are providing employees with social benefits, and pursue goals such as increasing productivity, reducing morbidity, improving the moral and psychological climate in the team, attracting and retaining qualified personnel in the organization.

However, in the current economic conditions financial state of many entities has significantly deteriorated. Payment of social services which was made mainly from the profit has become not always possible, due to lower levels of income in contrast to consumption. To keep social facilities on the books has become problematic, and not only for large organizations. This leads to a decrease in the effectiveness of social policy in general.

In this regard, many organizations and enterprises of the Republic of Belarus take the decision to withdraw from the balance social facilities in order to reduce their losses. This is the right and necessary decision in the case when the organization is on the verge of bankruptcy or when the object of the social sphere requires too high costs, without being vital for the organization.

The release of objects of social sphere may be carried out in three ways:

– through the transfer to the municipal property;

– by sale;

– by outsourcing and creation of a unitary enterprise.

Sale or transfer of social assets to the private owner is, in our opinion, the best one for this release, but not suitable for all kinds of objects.

Outsourcing and creation of a unitary enterprise has its advantages and risks. This method is currently the most widely used by national organizations and is considered the most effective, because It allows you to save elements of social policy and staff motivation.

The least effective for the organization and its employees is to transfer social facilities on the books of municipal authorities. As a rule, the city's budget is limited financially. In addition, there are many other social sites that require expenditures for maintenance and construction (roads, schools and pre-schools, clinics and hospitals, greening of the city and others).

Even a large organization JSC "Naftan" faced difficulties with social responsibilities and its social policy and is trying to get rid of social facilities now to save its funds.

JSC "Naftan" is one of the first oil processing organization in Belarus and one of the leaders in this industry. For many years the company has been developing, expanding and improving its social infrastructure. Additional income resulting from the modernization of production, allowed and allows today to create new jobs, build housing, maintain social facilities in good condition. "Naftan" was created for the purpose of industrial and economic activities aimed at generating income to meet the social and economic interests of the employees of the organization, the interests of the owner of property of the organization. Not only the well-being of its employees, but also the welfare of the city and of the region depend on the work of the organization.

At present on balance sheet of JSC "Naftan" are: Palace of Culture, which has the first (i.e. the highest) category; Palace of Water Sports "Sadko" (ICE); three-star hotel complex "Naftan; recreation complex "Yakovtsy"; children's health camps "Comet" (OL) and "Leninets"; clinic; greenhouse complex; subsidiary farm; housing; catering.

Having reviewed the results of JSC "Naftan" social facilities functioning, we have made the following conclusions:

– payment for labor with deductions makes up bout 40% in the costs structure;

– almost all objects have a negative financial result, which is due to the directional nature of social services;

– there is a positive trend in terms of objects payback. The figure increased in 2014 as compared to 2013.

There are following forms of non-material stimulation of employees at JSC "Naftan":

– vouchers to "Naftan" sanatorium are partly paid (90%, 95%, 100% of the total cost);

– tickets to the recreation complex "Sadko" are provided with payment of 85% of the cost;

– vouchers to the recreation center, summer camps for children;

– provide loans for consumer needs for young families at the request of the structural units;

– payments are made due to unforeseen circumstances (illness, natural disasters, etc.);

– provide special food for employees working in harmful working conditions.

All types of service are very important for the Company's employees, and for the city as a whole. The welfare of the city, the health of employees and their families depend on the activity of many objects. Some of these objects should be saved on the balance sheet of the organization. For the objects that are worth saving we have developed a number of proposals that will help to improve their efficiency. Some unprofitable and marketable objects have to be passed or sold.

"Sadko" Palace of Water Sports.

The emphasis should be made on the exclusivity of services.

Particular attention should be paid to the quality of service. Flexible marketing must be used, a strategy that takes into account features of the main target groups, ensuring a constant stream of visitors and allowing to win loyal customers in the long term. In order to prevent the outflow of visitors and to unload the pool in the evening peak hours, as well as to develop the market segment which is not busy in the morning, diving clubs can be organized, offering part (morning) hours at a reduced price. Also the day ticket can be introduced which means that swimming for adults and children on Sunday costs less than on weekdays. It is necessary to attract new customers, to increase attendance. Placement of advertisements as well as creating of new sports clubs may help.. The activities of the ICE "Sadko" are affected by the seasonal factor. Because of this the month of June can be used to organize together with trade unions the campaign "Month of swimming with prizes" for the most active visitors.

Palace of Culture "Naftan".

Proposals to optimize the financial results of the Palace of Culture:

1. The regulation of workers' wages, depending on occupancy groups.
2. The opening of new clubs for fee.
3. The increase of revenue due to touring artists, their concerts and tickets of the Palace of Culture.
4. Organizing and conducting exhibitions for the residents of the city.

Sanatorium "Naftan".

Measures to increase the self-sufficiency of the sanatorium, to intensify the work of staff, to attract holidaymakers to the health resort "Naftan":

1. Formation of a more flexible work schedule of medical personnel.

2. The active advertising policy, the improvement of the resort site, contracts with travel agencies for the implementation of vouchers in order to maximize the occupancy.

3. Provision of paid medical services: consultations of medical specialists (physician, neurologist, physiotherapist), as well as physiotherapy services for residents and foreigners. To provide a unique range of services with the help of magnetic resonance imaging.

"Oilman" Sports Complex.

In order to improve financial results and reduce costs sport center "Oilman" can offer the following activities:

1. Open a new section.

2. Organize paid sports services according to the most popular activities.

3.Introduce competent pricing system (gradual increase of prices).

"Greenhouse".

This place is too expensive for the Company; production facility is not in high demand, so it is recommended to sell the greenhouses to other owner. The object is noncore, consumes large amounts of electricity, and is uncompetitive compared with other specialized farms and foreign suppliers of vegetables.

"Comet" wellness camp.

It is an important social object, but it requires significant changes in the operation:

1. Modernization of existing boiler equipment by replacing specific problem sites with modern devices using the latest achievements of science and technology.

2. Saving heating oil (boiler operating mode).

3. The competitive selection procedures for the provision of health services, including for Russian children in 4 shifts.

Public catering companies of JSC "Naftan" are able to improve their financial situation through a series of events.

1. Combine the catering facilities under a single leadership.

2. Increasing the catering margins to 70%, increase of net profit due to their own production and alcoholic drinks for banquets.

3. Organization of trade fairs with an expanded assortment of culinary and confectionery products of own production; hold days of national cuisine.

4. Expansion of the assortment of foods through the development of specialties in order to attract more visitors.

The hotel complex "Naftan".

The object has an important place in the city's infrastructure. However, studies have shown that the problem of the financial plan is related mainly to inefficient management. To improve the efficiency it is required to conduct a number of activities.

1. Organization of services for festive corporate events, celebrations with flexible discounts for their own production.

2. Close cooperation with travel agencies, department of physical culture, sports and tourism on the catering of tourist groups and sports teams.

3. Organization of celebrations. Catering.

4. Opening of the buffet at the Palace of Water Sports "Sadko".

5. Include breakfast cost into the accommodation cost for all hotel guests.

We need to improve social policy in the management of social facilities to increase the efficiency of the measures. These objects provide services, so it is important that the staff is satisfied with the working conditions, as this affects the quality of services.

In order to increase motivation and to increase the effectiveness of each item included in its structure the following changes to the bonus system can be offered:

– to set interest for the implementation of each of the parameters in a fixed amount without reference to the multiplying factor a distinguished award when all indicators will be brought to 90%;

– for each percent of increase in turnover and self-sufficiency, compared to planned target, bonus increases by 0.2 points (maximum size in terms of premium - 35%);

– bonuses for the lack of comments and complaints as production standards on a particular subject.

The proposed activities will, in our view, increase sales revenue, reduce costs, improve the competitiveness of the objects, reduce the number of customers, not satisfied with the service, and to keep these objects not only for the employees of JSC "Naftan", but also for residents and visitors.

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UDC 657

ESSENTIAL AND PROBLEM ASPECTS OF THE FORMATION OF CONSOLIDATED FINANCIAL STATEMENTS' INDICATORS IN THE CONTEXT OF CONVERGENCE WITH IFRS

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The article considers essential and problem aspects of the formation of consolidated financial statements' indicators in the context of convergence with IFRS. Different approaches to defining the essence of the concept of consolidated financial statements have been studied herein. According to the results of the research, the author's definition of the consolidated financial statements has been suggested in the work that will allow to organize the process of preparing of the consolidated financial statements at a higher level.

In modern conditions, the creation of groups of companies under the control of the parent is one of the promising areas of business development. The only source of such information is consolidated financial statements as they contain information about the property and financial status of the group, i.e. of several legal entities, rather than of a single entity, which goes beyond the property isolation; they are based on the data of the individual statements of enterprises of the group [1].

The purpose of the study is to substantiate scientifically the essence of the consolidated financial statements of the organization, to analyze problem aspects of the formation of its indicators in the context of convergence with IFRS.

In the course of studying the problems on the topic of the scientific work, we have studied the works of various authors concerning the following questions: managerial accounting, formation and analysis of the consolidated financial statements. Currently, there are different approaches to defining the essence of the concept of consolidated financial statements. Therefore, we have considered the opinions of various authors on this definition. We have also analyzed the essence of the concept of «Consolidated Financial Statements» basing on the approaches.

In modern literature, there is no generally accepted definition of the essence of the concept of «Consolidated Financial Statements». Hence, the following approaches to the definition of «Consolidated Financial Statements» were formed:

– Accounting – in which the consolidated financial statements are defined as the financial statements prepared by a group of companies considered as a single economic entity (Large accounting dictionary; management accounting glossary; instructions on the disclosure of information about the activities of the bank, non-bank financial institution, banking group and bank holding company, approved by the Board of the National Bank of Belarus; Jesse Russell –«Consolidated Financial Statements»; International Financial Reporting Standard (IFRS) 10 «Consolidated Financial Statements»; International Accounting Standard (IAS) 27 «Separate Financial Statements»; Accounting for investments in subsidiaries: consolidated accounting procedure (Volovich M.); Slepov Yuriy; Yakubovskaya Lilia; A. Krasov; Glebov Vladislav; N. Kondrakov; Medvedev M. – Accounting Theory; National Standard of Accounting and Reporting «Consolidated financial statements» approved by the Decree of the Ministry of Finance of the Republic of Belarus of June 30, 2014 №46; Law of the Republic of Belarus «On Accounting and Reporting» № 57-Z on July 12, 2013).

– Economic – consolidated financial statements are defined as the financial statements of a group presented as the financial statements of a single organization (Explanatory Dictionary (business); Balansovedenie – Zabbarova O.; N. Puzik, The Decree of the Board of the National Bank of the Republic of Belarus of 27.12.2007 № 408 «On the Approval of the National accounting standard 27 «Consolidated and separate financial statements» (NAS 27); «Regulations on the consolidated financial statements» (approved by the Bank of Russia 30.07.2002 № 191-P) (ed. from 03.12.2012) (Registered in the Ministry of Justice of Russia 11.10.2002 № 3857)).

– Legal – consolidated financial statements are defined as the union of the statements of two or more companies that have certain legal, financial and economic relations (Financial analysis: methods and procedures – Textbook (Kovalev); Mandroschenko Victor, Tatiana Kharitonova – chief Economist SC «Yurenergo»; V. Getman – M.: Accounting).

We present the approaches to the essence of the concept of «Consolidated Financial Statements» in the form of a diagram.

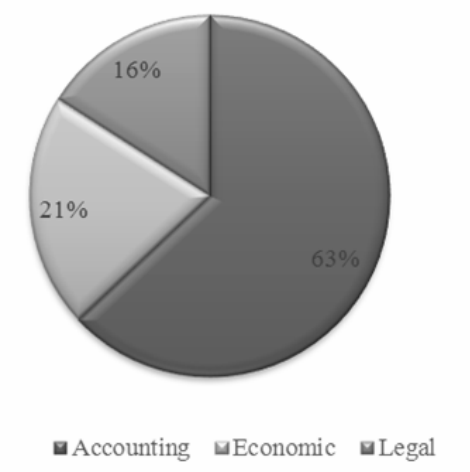

Fig. 1. Approaches to the essence of the concept of "Consolidated Financial Statements"

The results of the study have shown that the concept "consolidated financial statements" mainly refers to the financial statements, which is 63% of the total number of these approaches, from the point of view of the economic approach – 21%, the adherents of the legal – 16%. Some authors believe that the consolidated financial statements are reports, facts, the system of indicators, which is 18.52% of the total number of these approaches.

Thus, according to the study conducted, we suggest the following definition: *consolidated financial statements are the financial statements of a group of companies considered as a single economic entity, being in certain legal, financial and economic relations.*

The novelty of this definition is in taking into account the group of companies, in which it is possible to distinguish a parent company and its subsidiaries.

Since the national system of Accounting and Reporting is in the process of convergence with the International Financial Reporting Standards, we studied the concepts of the National Standard of Accounting and Reporting «Consolidated financial statements» №46, IFRS 10 «Consolidated Financial Statements» and IAS 27 «Separate Financial Statements».

Taking into account the results of the conducted research, it is possible to draw a conclusion that the definitions of the national standard and international one are different. In Belarus, the consolidated financial statements represent the accounting statements, IFRS 10 and IAS 27 – financial statements. It is also worth noting that the accounting statements are a unified system of the data on the property and financial status of the organization and the results of its business activities which is based on the accounting data on the established forms. Financial statements are a set of reporting forms drawn up on the basis of the data on financial accounting with the purpose of providing users with general information about the financial position and activities of the enterprise, as well as changes in its financial position for the reporting period in the prescribed form in order to make the users able to take certain business decisions. The International Standard 10 «Consolidated Financial Statements» and 27 «Separate Financial Statements» list the following elements of financial statements: assets, liabilities, equity, income, expenses and cash flows. In the national standard №46 elements of financial statements are not mentioned. IAS 27 and IFRS 10 mark such concepts as a parent organization and its subsidiaries. In the national standard №46 such concepts do not exist. National Standard №46 presents the consolidated statements as the financial statements of a single organization, and IFRS 10 as the financial statements of a single economic entity.

Thus, IFRS 10 compared with the national standard №46 gives a broader definition of the consolidated financial statements.

The following are the examples of organizations that make up the consolidated financial statements:

– Republic of Belarus JSC "Naftan", holding "ST Group", JSC "Bank of development the Republic of Belarus"; bank holding company "Priorbank" Open Joint Stock Company, Open Joint Stock Company "Belagroprombank"; LLC "Eurotorg"; Holding "Horizon", etc.

– Russian Federation PJSC «LUKOIL», JSC «Akron», Open Joint Stock Company «Aviation Company «Transaero», Open Joint Stock Company «Sberbank of Russia», JSC «Helicopters of Russia», JSC «NOVATEK», JSC «Surgutneftegaz», PJSC «VSMPO-AVISMA Corporation» and others.

– The Republic of Sakha (Yakutia) Open Joint Stock Company "Yakutsk Fuel and Energy Company".

Organizations, united in a group of organizations must apply the same methods of accounting in the accounting periods for which consolidated financial statements are prepared. The individual financial statements

of the companies united in a group of companies, should be prepared on the same reporting date. The consolidated statements of the parent company are drawn up according to the forms established by the company on its own [2].

Hence, it is possible to draw a conclusion that in Republic of Belarus the organizations make up the consolidated statements. Therefore, it is possible to note that practice of national accounting is gradually approaching to the international one. Consequently, the preparation of the consolidated financial statements gives an opportunity to define the financial position and to ensure unity of the approach to the recording of the final financial results of the group of companies for investors.

Under the results of the research, the authors suggest the definition of the consolidated financial statements, representing the group of companies, in which there is a parent company and its subsidiaries. The definition will allow to organize the process of preparation of the consolidated statements at a higher level and will also facilitate the process of making management decisions in a timely manner.

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UDC 658.152

THE ORGANIZATION INVOLVED IN THE PRODUCTION OF INDUSTRIAL ENTERPRISES OF THE PARTICIPATING COUNTRIES OF THE EAEC SECONDARY MATERIAL RESOURCES ON THE PRINCIPLES OF LOGISTICS

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The use of secondary material resources is a significant factor of economy of material resources in the national economy. A major role in the expansion of the scope of waste production is the correct definition of current and capital expenditures on the waste. It is important to understand that the generation of waste. This is an inevitable process, so it is necessary introduction of new resource-saving technologies and use of raw materials.

Production is a main source of goods necessary for human life, to satisfy its needs. Material production is the basis of existence and development of human society. The aim lies in promoting economic growth, employment, stabilization of prices, the fair distribution of income, the economic security of the poor and improving the quality of life in general.

One of the effective tools of increasing the effectiveness of companies is a logistics management concept. Many companies seek to optimize the management of their supply chains and create added value in the process of movement of goods to the final consumers. Currently, supply chain management is a holistic concept of doing business that combines organizational principles and possibilities of modern information technologies.

One of the key areas of supply chain management that causes more and more interest is reverse logistics. Return logistics is an important function of the supply chain and requires a special relationship with the company and its logistics management. The scale of the return logistics on a global scale is huge. Reverse logistics costs accounted for 4 – 6% of the total logistic costs [4].

Availability of resources is a prerequisite for sustainable economic development and quality of life for present and future generations. Extensive growth of resources consumption (many of which are non-renewable) already has resulted in a certain dependence on raw materials of the economy of many subjects the Republic of Belarus, and to the exacerbation of environmental problems associated with the impact on the environment as a result of extraction of raw materials, production and recycling of waste. Formation of Belarus as a technologically advanced country, integration into the world economy will be impossible in today's legal and economic area without finding ways of effective and environmentally sound management of natural and man-made resources. This problem can be solved by creating a low-waste closed cycle, and also through encouragement and technical support of complex use of secondary resources that are formed in the processes of production and consumption.

Waste generation – this is inescapable process that inevitably accompanying human activity.

In the extraction of natural raw materials, in the manufacture of a product, then its consumption generate waste production and household consumption: packaging waste, worn out clothes and shoes, used batteries, galvanic cells and fluorescent lamps, as well as lost consumer properties of furniture, appliances and household equipment, decommissioned houses and industrial buildings, industrial equipment, motor vehicles, electrical and radio engineering, waste oil and process fluids. A significant amount of waste is generated in wastewater treatment plants - both in manufacturing and in the utilities sector of the economy.

Currently, world cities generate about 1.3 billion tons of solid waste per year. This volume is expected to increase to 2.2 billion tons by 2025. Waste generation rates will more than double over the next twenty years in lower income countries. Globally, solid waste management costs will increase from today's annual $205.4 billion to about $375.5 billion in 2025. Cost increases will be most severe in low income countries (more than 5-fold increases) and lower-middle income countries (more than 4-fold increases) [6].

As the world hurtles toward its urban future, the amount of municipal solid waste (MSW), one of the most important by-products of an urban lifestyle, is growing even faster than the rate of urbanization. Ten years ago there were 2.9 billion urban residents who generated about 0.64 kg of MSW per person per day (0.68 billion tons per year). This report estimates that today these amounts have increased to about 3 billion residents generating 1.2 kg per person per day (1.3 billion tons per year). By 2025 this will likely increase to 4.3 billion urban residents generating about 1.42 kg/capita/day of municipal solid waste (2.2 billion tons per year) [6].

The problem of rational nature management includes protection against pollution of waste production and recycling of secondary material (SMR) and secondary energy resources (SER). The ideal would be to organize production so that across the state were mainly SMR and SER, as the raw material would go only to replenish losses and the expansion of production.

One of the fundamental principles of modern design companies is greening technologies. It includes:

1) improvements in terms of ecology existing technological processes;

2) the creation of low-waste (waste-free) production;

3) cleaning of emissions, effluents, solid waste disposal.

In the context of this research is to broadly inform about economically and environmentally sound technologies for waste management, about the directions of the industry formation of the complex multilevel waste recycling, including the use of their raw materials and energy resource.

At present only 2% of raw materials becomes necessary for human products, all the rest becomes waste, some of which are toxic [1]. So now, when the danger of environmental catastrophe has increased in the process of production began to include a new stage disposal and recycling of production wastes and consumption with a view to their reuse, it is possible to close the logistic chain and gave rise to reverse logistics.

Reverse logistics is a movement control system waste generated in the production process, packaging or distribution, in order to increase the efficiency of environmental protection and optimization of the associated costs [2]. The object of reverse logistics is the reverse flow of secondary material resources which, after appropriate processing placed on the market of recycled materials and can be reused in the production process.

The use of secondary material resources is a significant factor in economy of material resources in the whole economy of the country.

The expansion of the scope of the use of waste products plays an important role proper definition of current and capital expenditures for the waste and, therefore, the pricing on them. Of great importance are the organizational issues, that is: establishment of the responsibility for the collection and processing of used industrial and consumer waste. These problems become particularly acute in view of the fact that the secondary material resources obtained in almost all spheres of human activity. The total volume of their formation is a year per capita exceed the ton [3].

If we talk about the use of production waste, they are forming in a single industry, as a rule, are the raw materials for other industries. Industry, where the waste is produced, should coordinate its work on the collection, storage and processing of waste from other industries, which is interested in the recycling of this waste.

Given the need to find new material resources to solve the problems of improving the ecological situation and the conditions dictated by external economic activity, the use of waste production and consumption should be one of the basic principles of the state industrial policy.

Currently, in the Republic of Belarus No businesses that recycle waste products, and create of them are new product. Therefore, any domestic enterprises can be applied various strategies of foreign companies.

For example, to offer customers the money back if they return the packaging made of glass, plastic and metal. When buying a product in such a package to its price added a small sum for which the package is returned to the point of its production.

Another method of increasing the use of secondary resources is a ban on the burial of certain materials as waste, such waste may include waste oil, old batteries, tires and garden waste. The purpose of this method is to create a policy for the proper disposal of banned products.

In Austria, collected and disposed of such waste as cooking oils. These wastes are used to produce biodiesel. Glycerol obtained as a by-product is used as biogas, or it is purified and sold as raw materials for the chemical, pharmaceutical and cosmetic industries.

In addition to the above, it is possible to introduce the principle of producer responsibility for manufactured products, that is, the manufacturer is responsible for the collection and disposal of produced products and regulate them, as the collected waste must be used (recycled and / or recovered). It stimulates manufacturers to produce resource-saving products that are easier to recycle and contain no ecologically dangerous substances.

The root of the garbage problem of the countries-members of the EAEC is not a constant increase in the volume of solid waste, and the inability to properly dispose of these wastes. Data available from the company "Russian Technologies" suggest that at least 40% of the accumulated waste in the country is a valuable secondary raw materials. However, the processing receives only about 7-8% of household waste, and trash the rest just transported to landfills. In Kazakhstan per capita to 2 tons of accumulated waste a year and recycling being only 3-5% of garbage [5].

World garbage the market today is estimated at about 120 billion dollars. In Russia, waste management, according to estimates from different companies, can bring from 2 to 3.5 billion dollars per year [5].

Today, the scope of investments in waste processing can be considered as very promising since high demand for secondary raw materials.

One of the major plastics processing companies in the Russian Federation is a factory "Plarus". The company operates in Solnechnogorsk since 2009. There bottles are first sorted by color, then washed and cut into

flakes and then melted into pellets from which the bottle can be done again (as well as helmets, basins, films, strings, tile, etc.). The technology, called "bottle to bottle" only in this plant, the only one in Russia.

Programs for recycling, often organized by local businessmen and environmentalists are already operating throughout Russia. For example, one of the companies in the city of Aramil of Sverdlovsk area buys results in waste mixed polymers of different types and makes of these benches. Separate collection is organized by entrepreneurs, for example, in Vladimir and Vologda.

In Moscow, some sports clubs hand over cups for recycling.

In Solnechnogorsk and Moscow, "Plarus" together with Coca-Cola launched a project "Give the bottle a second life" – within its framework throughout the city there are grids that you can throw the bottle.

It is also considered appropriate if the renovation or expansion of existing ones, as well as the design of new businesses will provide for the development of measures on the use of BMPs. The refusal of consumers from the use of secondary energy resources at both the existing and planned facilities can be justified only the expectation that confirms the ineffectiveness of economic or technical impossibility of using SMR.

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THE DEVELOPMENT OF LOGISTICS ACTIVITIES OF FREIGHT–FORWARDING COMPANY

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The article deals with the issues of logistic approach to the organization of the freight-forwarding company, in particular the reorientation of the company as a logistic level 2PL provider to technology providing 3PL level services. The results of the calculation of the economic benefits of implementing 3PL technology as an example of a particular company are given.

The main directions of use of logistics in the activities of freight-forwarding companies in Belarus and abroad are an extension of the number of types of services provided and ensuring quality freight-forwarding service that is clearly seen when considering the dynamics of the development of the operators of logistics services. 2PL logistics operators provide traditional services for transport and warehouse management. 3PL – Third-Party Logistics, involves the provision of logistics services beyond the standard list, including warehousing, transhipment, handling of goods, additional services with significant added value and the use of subcontractors [1].

Logistic services in Belarus are far worse than world logistics. There were 3 million companies in the Republic of Belarus in 2016, and only about 20 of them have 3-PL service provider. Logistic services market is 99.5% formed by 2-PL providers, and the market of 3PL-service is less than 0.5%. At the same time 3PL-providers that are up to the world standards are poorly represented on Belarusian market. Thus, 3 PL-providers deficit is viewed in Belarus [2].

According to the world practice, 3PL-providers functions include:

1) transportation (organizing, carrying out and controlling the delivery of goods);

2) storage (warehousing organization, the operator carries out identification, sorting, labeling, and information support of the storage process);

3) planning (preliminary and operational planning of complex measures, as well as the optimization of the process as a whole);

4) documentary support.

Basis of every logistics system is the organizational structure and functional logistics support. A special role is played by information support of 3PL-operator, which brings together the information space of the central office, warehouse management system and automatic delivery of electronic documents [3].

Consider the capacity and effectiveness of the transition to the status of 3PL – provider on the example of "Krafttrans". "Krafttrans" on the International Classification of companies providing transport and logistics services is a 2-PL operator with the prerequisites to become a 3-PL operator. Based on the analysis of industrial and economic activity of the company, it can be concluded that it is functioning quite successfully, it has a strong financial performance, a good material and technical base. "Krafttrans" is consistently profitable and cost-effective operating company, which has the positive dynamics of development – revenue growth.

The company is proposed to expand the number of services provided to its customers for the further growth. This will provide the highest quality service to customers and attract new customers, as the market of 3-PL services is a new market for the company.

To go into the category of 3PL-provider company should focus on the most profitable function that is required to the customer, and for the remaining tasks it should work closely with other operators who provide the required service to the client by "chain".

The total number of customers and the number of main customers in the transport orders are presented in table 1. The results of consumer segmentation in the number of orders are presented in table 2. Potential services that can be provided by some key customers relating to the high-priority segment A1 are described in table 3.

Table 1 – Number of customers

Year	Total customer	The number of main customers (more than80 orders)
2013	460	96
2014	480	99
2015	528	102

Table 2 – Segments of customers on the number of orders and marginal income

Segments income	Segments on the number of orders		
	Key	Perspective	Others
High	A1	B1	C1
Average	A2	B2	C2
Low	A3	B3	C3

Table 3 – Potential services key customers

Customers	Type of product	Potential needs in 3-PL services
Customer 1	Building materials	Consolidation of the central warehouse in Moscow, delivery to regional warehouses and shops, cross-docking, sorting, labeling, stickering, attachment of annotations and instructions in Russian, preparation of goods for advertising and marketing actions.
Customer2	Food products	Posting excise stickering, preparation goods for advertising and marketing actions.
Customer3	Accessories for light-transparent structures	Warehouse in Moscow, sorting, labeling; product packaging custom size; shrink wrapping machines; stickering.
Customer4	Household products	Find manufacturers and suppliers, consolidation and storage of goods in a warehouse in Europe, stickering, preparing a complete set of documentation for customs procedures, repackaging.
Customer5	Food products	Accounting for the shelf life of products, increased demands on the sanitary condition of the warehouse. For animal products - a statement of veterinary certificates. For certain groups of goods - maintenance of temperature and commercial neighborhood. Organization of veterinary station on the territory of the warehouse.
Customer6	Gardening equipment, home and garden products	Non-standard packaging. Presale preparation, warranty cards investments. Working with the return of goods.
Customer7	Household appliances and electronics	Different types of product placement in the warehouse: racking, close-meshed. It is possible to select storage area of goods in the warehouse with video surveillance for the orders assembly process to minimize losses from theft. When accepting the goods a special stickering is carried out. It's necessary to put in warranty cards, create sets for promotions for delivery to retailers. There is a need to work with serial numbers to ensure the return of goods under warranty and scrapped.

Based on the analysis of potential customers requirements select services that a group of "Krafttrans" companies will presumably have as a 3PL-operator:

1) Warehousing:

– central warehouse with the WMS system of regional consolidation warehouses;

– consolidation, storage and cargo handling at intermediate European warehouses;

– sorting of goods, labeling and excise control marks, sticker parcels, weighing, measuring, packaging, quality control;

– formation and packaging of similar range of products in the kits;

– processing of production and sets of production for promotional offers;

– prototyping of labels and texts, label printing;

– putting in annotations and instructions;

– repackaging of goods;

– organization of the piece of processing;

– cross-docking;

2) Inventory management:

– accounting of stored goods with the warehouse management system WMS: order management, control batches, serial numbers, expiration dates, the full traceability of transactions;

3) Transportation and forwarding services:

– providing services on-line monitoring of the movement of rolling stock through the site of company;

– development of optimal route of delivery, cost calculation and timing of the arrival of goods at destination.

– "door to door" cargo traffic;

– preparation of transport documents.

4) Customs services:

– customs clearance, veterinary documents, including:

– electronic preliminary information (EPI);
– statistical declaration;
– registration certificates C-1, C-2.
– declaration of goods and products of any complexity, the application of customs procedures;
– consulting on customs law and foreign trade, the optimal choice of the customs procedure.

The set of measures to improve the organization of logistical activities and the costs associated with the company's transition to a 3PL-technology.

3 PL-operator is characterized by the following areas:
– infrastructure,
– information structure,
– organizational structure.

It is necessary to analyze the potential load of warehouses with the purpose to bring the infrastructure in accordance with customer needs. The group of companies "Krafttrans" currently has the opportunity to put in store in their own storage warehouse in Vilnius, located in the most sought after transit direction of transportation to / from EU countries to / from Russia, Ukraine, Belarus. This warehouse belongs to related companies "KrafttransVernalis". Also, the group of companies has the opportunity to use the services of consolidation warehouses in the Netherlands, Germany, Belgium and Poland. The seat of the central warehouse is advisable to choose Moscow as needed consolidation warehouses in Europe.

Analysis of the load of domestic warehouses showed that the construction of our own warehouses in the transition program of implementation to service at 3PL-provider level is inappropriate. Warehouses need to rent and to ensure compliance the required operations in a rented warehouse.

The estimated total area of a leased warehouse is 1,000 m^2. Costs for the purchase of warehouse equipment are 17956,94 rubles. Depreciation is 1795.69 rubles per year. Annual depreciation is calculated by straight-line method (standard service life of machinery and equipment - 10 years). Total costs for the purchase of equipment and construction of a warehouse amount to 66721.3 rubles.

Obligatory attribute of 3PL provider is the availability of logistics services. Figure 1 is a schematic diagram of the organization of the logistics enterprise "Krafttrans".

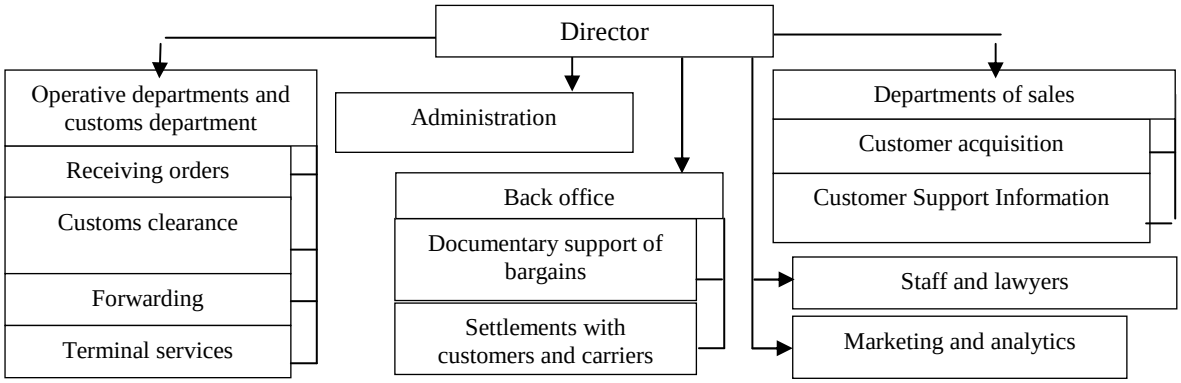

Fig. 1. Scheme of logistics in the company

Creating of a logistics department is very necessary for the company. It is advisable to include the department of five people: deputy director for logistics, financial manager, information technology manager, manager of customs and transport operations, manager of warehouse operations and inventory management. It requires the development of staffing schedule of the department and duties of its employees. The development cost of the logistics department include the resettlement costs of workplace and equal 3410.5 rubles.

A necessary condition for coordinated work of all parts of the supply chain is the availability of information systems that are able to tie together all the activities (transport, warehousing, distribution, etc.) and manage it.

Currently, corporate information system Terrasoft belonging to the class of Customer Relationship Management is used in the group of companies "Krafttrans". However, the transition to the new customer service technology may require the introduction of new solutions. Replacement of the existing system to ERP + WMS-system, which meets the increased requirements of the organization of information flows in the logistics system. The costs of implementing the new system are 55364.8 rubles.

Calculation of the economic efficiency of the proposed events

To assess the effectiveness of the transition to 3-PL it should be evaluated:
– investment required for the transition to 3-PL operator,

– customer needs for 3-PL operator service,
– costs associated with the transition to 3-PL operator,
– financial benefit from the event.

Investments in fixed capital include costs for new construction, expansion, reconstruction and modernization of existing enterprises, the acquisition of equipment, tools and equipment and other expenses of a capital nature. Investments in fixed assets including VAT = 150595.9 rubles. Investments in working capital are investments in the increase in inventories and a decrease in debts to suppliers. Revenue during the period of the investment will amount to 98557.8 rubles, and expenses – 8373,9 rubles. The sources of financing of the investment costs are own funds – 55000 rubles, and borrowed funds – 9559,9 rubles. Since the project is integrated into the operating enterprise, the discount rate is determined on the weighted average cost of capital.

$$WACC = r_b \cdot w_b + r_d \cdot w_d \cdot (1 - T),$$

where ω_e – share of equity; $\omega_e = 0,365$;

ω_d – share of debt capital; $\omega_d = 0,635$;

rd = 9,6%;

T = 18% – income tax rate.

$$WACC = 0,21296 \cdot 0,365 + 0,096 \cdot 0,635 \cdot (1 - 0,18) = 12,77\%.$$

The cash flows from the project assets (flows of investment in fixed and working capital) are determined for integrated projects. The estimated cash flow of the project's assets on transition to 3-PL service provider will be 15328,860 mln rubles. Net Present Value of the project is given at a rate of WACC value of net cash flow NCF.

$$NPV = \sum_{t=0}^{n} \frac{NCF_t}{(1+r)^t},$$

where r – discount rate;

t – period of time;

n – period of project activities.

NPV of the project will amount to 1945730 rubles. The project can be taken to implement, because NPV of the project is greater than zero. Expected return period of investments is two years. Internal rate of return IRR is found using IRR function MSExcel and it will be 134%.This indicates a high stock of the project strength.

The above calculations show the feasibility of the proposed variant of the company's development.

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STATE REGULATION OF SCIENTIFIC-TECHNICAL PROGRESS AS A CONDITION OF INNOVATIVE DEVELOPMENT OF ECONOMY

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The article described the fundamentals of investment activities state regulation in the state .It defined the peculiarities of state regulation in different countries including England, Germany, etc. It presented the features of the scientific -technical achievements of progress in European countries. It is developed and presented comparative analysis of approaches to stimulate innovation activity here.

Currently, an important aspect of state regulation is the formation of a system of methods of stimulation of scientific and technical progress. This is due to the fact that in conditions of instability and uncertainty without strong centralized measures sharp decline in the effectiveness of the NTP is possible. A more detailed consideration of problems of strengthening of the intensive nature of production on the basis of progressive forms of NTP leads to the conclusion that in the new management system of NTP, which is formed during the transition to market should be included the following components: development of overall strategy R & d; funding for major programs; the system of scientific and technical information, benefits and subsidies, stimulating innovation activity of enterprises and their departments, and several others [1].

In developed countries, the state largely controls and determines the development of new forms of NTP, and its functions are not confined to the microeconomic market regulation, although it is a very important sphere of activity, for precisely controlling functions of the Central authorities, for example, protection of the industry from excessive monopolization, thereby promoting more rapid deployment of NTP. Particularly large role of the state in supporting and encouraging the development of R & d, and in recent years it is primarily manifested in the formation of the state scientific and technical policy based on priority economic development goals. It includes specific activities such as direct funding of R & d, development of infrastructure for this sector, use of contract system for the large scientific projects and programs implementation. But it seems that NTP has especially large opportunities in the regulatory system in the tax and depreciation implementation policy.

For example, in Japan industrial companies are engaged in investment in advanced equipment used for research and development of new technologies. Tax legislation provides the right to deduct from the profit tax 7% of the value of such investments [2]. In the UK 50 years ago a tax credit on investment was introduced, which is available to companies in the first year of machinery and equipment operation. In Ireland, the number of rebates received by the companies in the first year of the equipment operation reaches 100%. It should be said that tax incentives for investment in new productive assets in one form or another are used in almost all developed countries. However, in countries such as the UK, France, Germany tax credits and depreciation policy do not play a crucial role in promoting investment in certain industries. In the UK, for example, many companies can write off the full cost of technically advanced equipment in the first year of its operation.

We present a number of facts confirming the importance and role of state regulation of STP in developed capitalist countries, however it sometimes encountered the opinion in the special literature that the high rate of NTP in the advanced countries is due only to the laws of market economy (although, of course, a strong market is a prerequisite for the acceleration of NTP, but much in this is the role of the state). In most leading countries, the state covers about half of all R & d expenditure, while adhering to certain political, economic and scientific-technical priorities. So, in the US, where in the last decade the role of the private sector has been dramatically increased, the government finances almost half of the spending on science, more than 50% of R & d expenditure is borne by the state of the UK and France, more than 40% in Germany.

The government actively promotes the integrated automation implementation. So, the development, production and implementation of robotics in almost all developed countries is carried out with the active assistance of the state government incentive. Such activities are carried out in Japan, Germany, France, the UK, Canada and other countries. The development of robotics is erected in a rank of national priorities. Largely the same can be said about the state stimulation of biotechnologies development, space exploration development the development of semiconductor technology, nuclear energy and other critical areas of STP. Sources of funding for NTP in the developed capitalist countries are state budgets, state special funds, own industrial companies funds, private non-profit organizations and universities as well as foreign capital.

Public promotion of STP in developed countries is carried out in two main forms: direct government funding , encouraged by establishing favorable conditions for both private and public organizations that expand research activities, introducing progressive techniques and technology [3]. The first form to a greater extent has influence on accelerating scientific and technical progress in the field of research and development of the modern industries, the second – on the General level of technology. In all developed capitalist countries they apply both of them, and the ratio between them in different countries and at different stages of development can vary very much. For example, in Japan government encouragement of NTP in addition to the direct budget financing is also carried out using indirect methods of tax incentives and accelerated depreciation, and first major stimulator is the policy of tax exemptions.

It plays a much bigger role than accelerated depreciation. In some other countries, the ratio of different state promoters types may be different (the contrast with the specialization in certain types of scientific and technological activities is visible when comparing the structure of total expenditure for this purpose in Japan and France. In this regard only in French and Japanese models stimulate NTP).

Forms and methods of state stimulation and regulation process of intensification in the transition period can be very diverse. In this connection, it is useful to use modern foreign experience. This includes the following forms of stimulus funding from the budget of different levels, from special funds – innovation, investment, research; accelerated depreciation of fixed assets; preferential allocation of costs associated with the strengthening of the intensive nature of production the cost of production; differentiated credit and taxation. Moreover it is important to take into account income sources and expenditure profit areas .It is important to differentiate pricing and targeted subsidies for scientific-technical products; customs and currency privileges for export and import transactions, facilitate further intensification; provision of Advisory, information and other services of public organizations, etc.

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ANALYSIS OF THE PERFORMANCE OF 3PL PROVIDERS IN THE REPUBLIC OF BELARUS AND THE COUNTRIES OF THE EUROPEAN UNION

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This article studies the performance indexes of 3PL providers in the Republic of Belarus and the countries of the European Union, including the logistics performance index, the proportion of logistics costs in GDP and types of logistics services provided by intermediaries.

The use of 3PL providers' services is one of the most effective ways to reduce logistics costs. In the Republic of Belarus, 3PL providers have emerged relatively recently, however, in the countries of the European Union third party logistics is actively used and well developed. Therefore, there is a need to analyze the performance of 3PL providers in the Republic of Belarus compared to the countries of the European Union.

One of the methods to evaluate the quality of logistics is the logistics performance index (LPI) calculated by the World Bank [3]. Table 1 presents the results of calculations of the LPI for the Republic of Belarus and the countries of the European Union.

Table 1 – LPI of the Republic of Belarus and the countries of the European Union

Country	LPI rank	LPI score						
		Total	On customs	On infrastructure	On international shipments	On logistics quality and competence	On tracking and tracing	On timeliness
Germany	1	4.23	4.12	4.44	3.86	4.28	4.27	4.45
Luxembourg	2	4.22	3.90	4.24	4.24	4.01	4.12	4.80
Sweden	3	4.20	3.92	4.27	4.00	4.25	4.38	4.45
Netherlands	4	4.19	4.12	4.29	3.94	4.22	4.17	4.41
Belgium	6	4.11	3.83	4.05	4.05	4.07	4.22	4.43
Austria	7	4.10	3.79	4.08	3.85	4.18	4.36	4.37
United Kingdom	8	4.07	3.98	4.21	3.77	4.05	4.13	4.33
Finland	15	3.92	4.01	4.01	3.51	3.88	4.04	4.14
France	16	3.90	3.71	4.01	3.64	3.82	4.02	4.25
Denmark	17	3.82	3.82	3.75	3.66	4.01	3.74	3.92
Ireland	18	3.79	3.47	3.77	3.83	3.79	3.98	3.94
Italy	21	3.76	3.45	3.79	3.65	3.77	3.86	4.03
Spain	23	3.73	3.48	3.72	3.63	3.73	3.82	4.00
Czech Republic	26	3.67	3.58	3.36	3.65	3.65	3.84	3.94
Lithuania	29	3.63	3.42	3.57	3.49	3.49	3.68	4.14
Hungary	31	3.43	3.02	3.48	3.44	3.35	3.40	3.88
Poland	33	3.43	3.27	3.17	3.44	3.39	3.46	3.80
Portugal	36	3.41	3.37	3.09	3.24	3.15	3.65	3.95
Estonia	38	3.36	3.41	3.18	3.07	3.18	3.25	4.08
Slovakia	41	3.34	3.28	3.24	3.41	3.12	3.12	3.81
Latvia	43	3.33	3.11	3.24	3.28	3.29	3.42	3.62
Greece	47	3.24	2.85	3.32	2.97	2.91	3.59	3.85
Slovenia	50	3.18	2.88	3.19	3.10	3.20	3.27	3.41
Croatia	51	3.16	3.07	2.99	3.12	3.21	3.16	3.39
Malta	56	3.07	2.78	2.94	3.09	2.85	3.12	3.61
Cyprus	59	3.00	3.11	3.00	2.80	2.72	2.54	3.79
Romania	60	2.99	3.00	2.88	3.06	2.82	2.95	3.22
Bulgaria	72	2.81	2.40	2.35	2.93	3.06	2.72	3.31
Belarus	120	2.40	2.06	2.10	2.62	2.32	2.16	3.04

Source: [3, p. 38–40].

Thus, the Republic of Belarus is 120th out of 160 places in the LPI ranking. A considerable gap between Belarus and its closest neighbors is noticeable, especially in the field of customs services, logistics infrastructure

and tracking the passage of goods. However, rather high levels of timeliness of provided logistic services were identified, with the Republic of Belarus approaching some of the countries of the European Union. In spite of this fact, Belarus has significantly lagged behind other analyzed countries.

It should be noted that the logistics performance index for the Republic of Belarus has dropped significantly compared to 2014 when Belarus ranked 99, although there was an improvement in the index of "international shipments".

Table 2 presents the levels of logistics costs in the Republic of Belarus and some of the countries of the European Union.

Table 2 – The levels of logistics costs in the Republic of Belarus and some of the countries of the European Union

Country	GDP, billion dollars	The proportion of logistics cost in GDP,%	Logistics costs, billion dollars
France	2423. 0	9.5	229.9
Germany	3371.0	8.8	297.1
Italy	1819.0	9.7	176.5
Netherlands	750.8	8.3	62.6
Spain	1221.0	9.7	118.2
United Kingdom	2865.0	8.8	251.1
Belarus	48.13	5.5	2.7

Source: own elaboration based on [1] and [4].

As shown in Table 2, Belarus is characterized by a relatively small proportion of logistics cost in total GDP compared to other European Union countries, which is around 5.5 %. The proportion of logistics costs in GDP in analyzed European Union countries did not fall below 8.3 %.

Most organizations in Belarus are 2PL, only 0.5 % is 3PL providers. 4PL services market does not exist. The share of outsourcing in Belarus is relatively small too – not more than 2% [2, p. 520].

Table 3 provides information on the types of services rendered by logistics intermediaries in the Republic of Belarus and in the world.

Table 3 – Logistics services provided by intermediaries

Types of services	Use of logistics services,%	
	In Belarus	In the world
Customs brokerage	74.5	53
Warehousing	43.6	67
Supply chain consultancy services provided by 3PLs	30.9	15
Product labeling, packaging, assembly, kitting	36.4	30
Transportation management and planning	29.1	25
Reverse logistics	-	36
Information technology (IT) services	-	14
Fleet management	-	13
4PL services	-	11
Sustainability/green supply chain-related services	-	3

Source: own elaboration based on [2, p. 519] and [5, p. 14].

The most common service provided by transportation and logistics organizations in Belarus, is customs brokerage (74.5 % of the analyzed organizations provide these services). This figure is significantly higher than the world's average one (53 %). The percentage of organizations providing information and consulting services (30.9 %), cargo labeling, packaging, assembly and kitting (36.4 %), transportation and cargo placement planning (29.1%) also exceeds world's average figures. However, there are no logistics intermediaries in Belarus providing services in the field of reverse logistics, information technology, fleet management, 4PL and sustainability.

Thus, the Republic of Belarus is 120th out of 160 places in the LPI ranking. There is a noticeable gap between Belarus and its closest neighbors in the field of customs services, logistics infrastructure and tracking the passage of goods, although Belarus is characterized by relatively high levels of timeliness of provided logistic services. The Republic of Belarus is also characterized by a relatively small proportion of logistics cost in total GDP compared to other European Union countries, which is around 5.5 %. The percentage of organizations in Belarus providing customs, information and consulting services, cargo labeling, packaging, assembly and kitting, transportation and cargo placement planning exceeds world averages. Despite this, there are no logistics intermediaries in Belarus providing services in the field of reverse logistics, information technology, fleet management, 4PL and sustainability.

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Economics

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CONCEPT, PRINCIPLES AND STAGES OF SUPPLY CHAIN MANAGEMENT

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The factors causing the emergence of the concept of supply chain management are described in the article. Principles that achieve the best level of satisfaction of the needs and demands of consumers, and management processes in the supply chain are revealed. The basic stages of the supply chain management are described.

As a result of the international economic integration a convergence of the countries based on the development of sustainable business linkages and inter-state division of labor takes place. Interaction of economies at different levels and in different forms is constantly evolving, that usually leads to political rapprochement. The integration process is implemented at the micro level - through the interaction of individual economic entities of the countries and at the international level - through the integration of the national economies of individual states that ultimately leads to an agreement of joint foreign policy and foreign economic activity. In this context, supply chain management is a tool to facilitate the process of integration activities as economic entities, and individual states, since it brings together producers and consumers that are in the same or different countries. In addition, supply chain management contributes to the close cooperation between business entities, acceleration of innovation processes and development of new markets to sell their products (services).

The economic efficiency of the supply chain, on the one hand is characterized by stability, which is understood as the immutability of its targets. On the other hand, for the business entities in the supply chain the problem of creating of a mechanism of restructuring, accompanied by a change in their basic parameters is very urgent. Its solution allows you to control and coordinate the execution of all logistics functions in the supply chain [1].

Modern understanding of the economic efficiency of the supply chain is their design so that they are characterized by a high level of profitability and sustainability. Currently, participants in the supply chain are aware of the need of both internal integration of flow processes and the coordination between all business units (suppliers, intermediaries, consumers, and others) in order to provide customer service to a higher level and at a lower cost.

The emergence of supply chain management concept at the end of the twentieth century was determined by a number of factors. First, after the energy crisis of the 1970s a sharp slowdown in the world economy required efforts from the specialists in the development of marketing, logistics and other management concepts and tools to meet the new conditions of a stagnating global economy. The changes affected the very nature of competition. The notion of "competitive strategy" considered as a zero-sum game appeared (expansion of the share of one company is thought as reducing the proportion of the other). Secondly, in the late 70's and early 80's in the XX century in companies the role of logistics as an effective tool to reduce transaction costs increased. Subsequently, the logistics became the ideological basis for the establishment of supply chain management concept, which, in fact, was originally viewed as a strategic inter-company logistics. On practical level before 1980 we used some ideas of integrated logistics and supply chain management. Third, advances in related disciplines are at a sufficient level of development; a clear concept of supply chain management was formed. Fourth, the technology in this period reached a level where on the one hand, it made possible to coordinate the complex processes efficiently, handle large data sets, and most importantly, it made an opportunity to almost instant and free communication (fax, electronic data interchange). On the other hand, the production of technologically sophisticated goods required the coordination of a growing number of independent companies specializing in the individual components [2–4].

In logistics it is usually said about four scientific areas that have had the greatest impact on supply chain management: systems theory, game theory, transaction cost theory, the theory of inter-organizational relationships and industrial networks [5, 6].

Systems theory appeared in physics and biology in 1950, but it was adapted very quickly in the field of management by researchers to explain the processes, the behavior of individual agents, firms and the economic system as a whole. Systems theory views the world through the prism of aggregate resources and processes that exist to perform certain "superchain". System approach is the key main distinguishing characteristic of supply chain management concept.

Game theory was developed by J. Von Neumann and O.Morgenstern. Its main goal is study and explanation of the optimization of economic decisions involving more than one person (for example, customer and supplier or multiple suppliers). Game theory has become a useful theoretical tool for analyzing and making

decisions about managing inventory, warehouse, and the choice of location of production, pricing, building strategic alliances and partnerships.

The emergence of the theory of transaction costs is associated with the classical work of Ronald Coase and putting the question of the nature of the company and the boundaries of firms in 1937. The theory of transaction costs, in the development of which O. Williamson made a significant contribution in the 70s of the XX century, makes it possible to understand the economic nature of the relationship between the companies represented in the supply chain.

A. Van de Ven and George Walker made the main contribution to the study of inter-organizational relations and the theory of industrial networks. Their research largely advanced the understanding of the nature of the relationship between the companies. For example, the authors offered the answer to the question about the causes of relationship: resource dependence in both the short and long-term makes the company to build relationships, minimizing, thus, transaction costs. Research of inter-organizational relations and the theory of industrial networks have become one of the dominant in logistics and marketing at the turn of the XXI century, which gave rise to the concept of supply chain management, relationship marketing and network marketing approach.

In logistics there are three main reasons relating to global markets, and technologies that have changed the views of companies on supply chain management problems:

1. The ever-increasing demands and requirements of consumers, caused by global competition and the affecting factors such as cost, quality of products (services), delivery to the consumer, the cycle time, used technology, etc .;
2. Formation and the wide recognition of the importance of inter-organizational relations of cooperation at a higher level;
3. The information revolution.

Each of these factors contributed to the formation of the approach known as values formation system; it is a set of interrelated organizations, resources and knowledge streams involved in creating and delivering value to end users. Values formation system combines the action undertaken in the supply chain, from the identification of customer needs, the development of specific products (services), manufacturing (operations), to the distribution, including providers of the first, second and third level.

The aim of the values formation system is such positioning of organizations in the supply chain that allows them to provide the highest levels of customer satisfaction and customer value with effective use of competencies of all organizations involved in the supply chain. Successful implementations of Supply Chain Management concept, in terms of economic growth, allow to allocate specific behaviour patterns.

To achieve the best level of satisfaction of needs and consumer wants and process management in the supply chain, the following principles should be considered:

– segmentation is realized taking into account the focus on customer needs for their maintenance, including specific groups of customers;

– adapting the chain of creation of material assets and goods – it takes into account the service requirements and profitability of all segments;

– requirements planning along the entire supply chain – is carried out in order to ensure optimum allocation of resources;

– product differentiation is made as we approach the customers;

– strategic management of supply sources – it pursues its goal of reducing the total cost of materials and services;

– development of strategies for implementing technology – is intended for the entire supply chain, providing a multi-stage decision-making with a clear vision of the flows of materials, goods, services and information;

– definition of variable indicators in the supply chain – is aimed at ensuring efficient and good service of end-users [7].

Supply Chain Management encompasses the entire raw material procurement cycle, production and distribution of finished products, and includes the following main stages: planning, procurement, manufacturing, delivery and returns.

As part of the planning phase the sources of supply are investigated, a synthesis and prioritization of consumer demand are made, inventories are planned, the requirements for the distribution system, as well as the volume of production, raw materials supplies / materials and finished products are defined.

At the stage of procurement key procurement controls are identified, evaluation and selection of suppliers, supply chain quality control, contracting with suppliers are carried out. It also includes the processes associated with obtaining materials and posting.

Production, implementation and management of the structural elements related to the control of technological change, management of production capacity, production cycle, product quality, compliance with

production shift schedules, etc are directly related to the production stage. Specific procedures for production, such as the proper production procedures and cycles, quality control, packaging, storage and output (intra-factory logistics) are also defined here.

Delivery Stage is related to the processes, mainly related to order management, inventory and transportation.

In the context of the stage of return the structural elements of the return of goods (defective, excessive, requiring repair), both on the production and on the delivery are determined. The definition of the product state, its location, the request for return authorization, drafting repayment schedule, aimed at the destruction and recycling are carried out. These processes also include aftersales service.

Thus, in summary it should be noted that the effectiveness of supply chain management is made up of the market and intra-effects, as well as benefits for the supplier. The market effect of supply chain management is that it allows achieving long-term competitive advantage arising from the ability of chain participants to concentrate on core activities and reducing market risks. The consistent focus on the processes of consumers and their desires will cause an opportunity to improve the quality of their services and meet their needs. Coordination of supply chain management will reduce order fulfillment and delivery time, increase the level of trust and loyalty of consumers. Intercompany effect is reflected in the fact that, thanks to optimized projected needs, supported by information and technical base, as well as the ongoing exchange of information about the powers and emerging bottlenecks, supply chain management system will create the transparency of information on the number of stocks, sales volumes, timing of orders, etc. This will allow to reduce inventory significantly, improve performance and infrastructure efficiency, optimize size batches deliveries, improve service, and finally flow control efficiency throughout the supply chain length. As part of supply chain management with focus on consumers and using information technology it will open up new markets, which will enable providers to expand the existing boundaries of the market and it will be profitable for them.

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THE ROLE OF INNOVATION IN THE DEVELOPMENT OF TOURISM

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In market economy the priority of any state development should be directed to an innovative way. Today, within the framework of globalization, global integration, and favorable geographical position, it is necessary to pay more attention to the service sector, namely tourism, in the Republic of Belarus.

After the first 9 months of 2016 in Belarus the growth rate of exports of travel services to Ukrainians and Russians has surpassed the figures dated from 2015. The number of visitors' in-moves from China, Turkey, Israel, India, has increased since the beginning of the year. There are more tourists who exercised their right to visa-free travel (to Bialowieza Forest and the Augustow Canal). Among all the regions in terms of growth of tourism services the leaders are following: Grodno (121%) and Vitebsk (101.8%) regions [1].

One of the factors that will greatly increase marketability of the areas is new forms, methods and proposals, i.e. innovation.

Tourism is one of the most important branches of service, and it requires advanced techniques and customer service mechanisms. However, not all the organizations apply innovations in practice. After all, any innovation is characterized by high level of uncertainty and risk, the complexity of predicting outcomes. Though, the correct approach to the creation and implementation of innovations could bring considerable revenue and benefits. Innovations in the tourism industry are mainly aimed at creating a new tourist product, new approaches to marketing activity, as well as to the application of new management methods with the use of IT-technologies. The process of adaptation of any innovations is able to improve the marketability of tourist organizations and the industry as a whole. Creation of new types and development of promising types of tourism increase growth of consumer interest at the tourism market [2].

Tourism is an interdisciplinary field of economy, covering not only accommodation facilities, but also transport, communications, power industry, entertainment and more. The value of tourism to the economies of various countries is primarily connected with the benefits that it brings due to successful development. First of all, this is a creation of new jobs in hotels and other accommodation facilities, food industry, transport and related service industries. The multiplicative effect of tourism is its impact on the development of related industries. In addition, tourism has an economic impact on the local (regional) economy, stimulating export of local products [3, P. 155].

The factors affected the development of the innovation in tourism, together with the factors that determine the degree of its development and trends in innovative development are presented in Table 1.1.

Thus, the table analysis shows that there are many factors that determine the innovative development in the field of tourism, and it is also necessary to note the variety of directions in this field.

The tourism industry contributes to the creation of conditions for sustainable economic growth, improving the quality of living of the population, guaranteeing balance of socio-economic development of regions and countries, human capital growth by both increasing available offers for new tourist products and services and growth of employment and incomes [5].

One of success attributes for the tourist organizations is the increase in market share. Studies show that neither advertising nor active products promoting could provide a steady market share growth and innovations in all areas of tourism activities. Innovative processes take place in international and national tourist management systems; new technologies development (e-commerce, the creation of virtual tourist firms); marketing forms, creating tourism products [2].

The above mentioned factors require capacity building on the basis of tourism innovation to the work of enterprises. It is therefore necessary to introduce such a concept as "an innovative tourism potential" and to formulate its definition.

Innovative tourism potential is a system of promising areas, the factors that build up the so-called tourist potential (infrastructure, technologies, new methods and forms, the use of which contributes to the expansion of the scope of consideration, an increase in competitiveness, development of services and commercialization).

In turn, the innovative component is part of the tourist potential. Factors that characterize the ability of the tourism industry to promote the development of national and regional economy are called the tourist potential.

At the same time the tourism potential is a part of the investment potential of any region and a country in general. Characteristics of tourism potential are presented in Figures 1.1, which define its essence thoroughly [6, p. 1].

Table 1. – Factors and directions in the innovations in tourism

Factors affecting the development of innovation in tourism	Factors determining the degree of innovation development of tourism	Destinations in the innovative development of tourism and recreation
– Economic and technological (the absence of the necessary means of financing; the weakness of the material base, outdated technology);	– Market conditions and market competition (on the domestic and foreign markets);	– Development of the hotel network and complex maintenance that would have an international standard of comfort and their individual characteristics depending on the region of their location;
– Political and legal (political situation, legal entity);	– Environment (the level of development of science and technology, improvement of the legislative and legal framework, political and economic stability);	– Implementation in the field of tourism services of modern technology and development of existing projects;
– Management (excessive centralization, coordination of interests of project participants);	– Personnel (scientists, professionals, entrepreneurs, managers, politicians, civil servants);	– The introduction into the sphere of tourism of new resources, improvement and improvement of management and marketing;
– Social and cultural (fear of the new, uncertain) [4, p 5].	– Resources (natural, industrial, financial, scientific, technical, technological, infrastructure). [2]	– Development of new advertising strategies, which would be attracted to recreation and tourism, and most of our foreign citizens [4, p 6].

Source: own design based on the study of literature.

Thus, the tourism potential is the assembly of:
– organizations that provide tourism services;
– administrative and legislative acts regulating tourism activities;
– geography (weather conditions);
– historical and cultural potential;
– the quality and variety of services;
– information potential;
– ecological situation;
– innovation (the level of innovation development, innovation activity of business entities);
– personnel;
– infrastructure [6 p. 1].

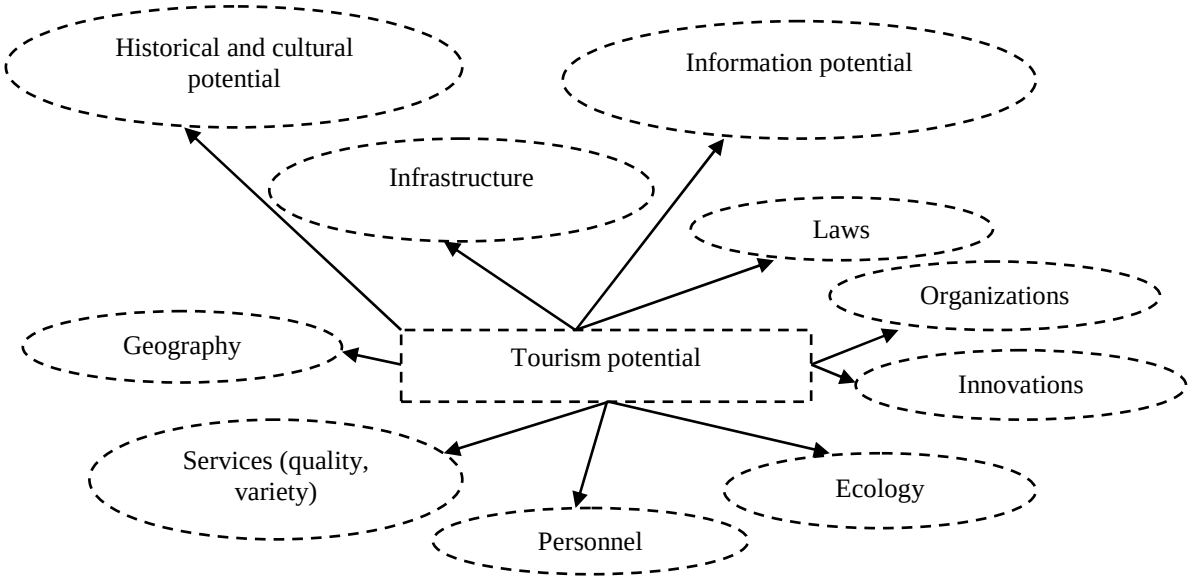

Fig. 1. Components of tourism potential

The tourism potential of the region is usually evaluated as a part of calculation of the overall rating of investment attractiveness of the region, using a variety of methods of expert estimates. Promising areas and directions of development might be identified on the basis of these factors. At the same time, we believe that tourism potential could not be developed without innovation. So, tourism potential must be harmoniously connected with the innovation strategy of its development at either regional or at national level in the whole.

It is required innovation management system that meets the requirements of industry and market for formation of innovative strategy and further implementation of innovative ideas in the field of tourism (automation, software development, development of new types of tourism and new tourist routes, the novelty of the services in the field of hospitality, etc.). The effectiveness of creating a new tourist product, the pace of its development are determined by innovative activity in the production of a new product that satisfies any need for a completely new one, or allows to expand the market for consumers. Innovative activity is manifested by means of the process of innovation and is essential for economic growth and improved quality of living. It depends on many factors of economic and scientific-technical potential, state innovation policy and resources, spiritual state of society. At the level of innovative activity of the tourism industry depends on the choice of strategy and quality of management of tourism enterprises, flexible manufacturing systems and technologies, degree of utilization of resources, both internal and external [7].

Thus, the development of tourism at the present stage is impossible without innovation. Innovation is the driving force of economic and social development. System of a number of factors, presented in Figures 1.1, form a tourist potential, development of each of the factors and potential as a whole will depend on the level of innovation activity of each of them, which will form an innovative tourism potential.

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THE INFLUENCE OF CROWDECONOMY ON A SMALL-SCALE BUSINESS OF BELARUS

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The article explains a small-scale business as a business carried on by the subjects of the market economy, in certain specified laws, government agencies or other representative organizations of the criteria.

It is defined here that small and medium enterprises, having a greater mobility than large businesses are able to respond more quickly to changing economic conditions and fluctuations in consumer demand.

The rapid development of crowdeconomy was a surprise to many analysts. Today many of the tools of traditional economics that seemed innovative yesterday, is rapidly becoming obsolete under the pressure of crowd economy. Despite the fact that the crowd economy in Belarus was spoken about not so long ago, in a short period of time she managed to gain popularity. Experts believe that in the future Belarus may become one of the leaders in the field of crowd economy.

The collaborative economy enables people to get efficiently what they need. Producers can achieve maximum efficiency, producing products at the direct request of consumers.

The growth of the crowdfunding market in 2014 amounted to $16.2 billion, an increase of 167% from $6.1 billion in 2013. In 2015, the industry reached the level of $34.4 billion, an increase of more than 2 times. According to World Bank estimation the capitalization of the industry in 2020 will reach $90 billion. If the doubling trend continues, we will be able to see these figures by 2017 [1].

According to the theoretical approach of the Director platform Ulej.by Irina Sidorova: "the growing popularity of crowdeconomy due to the fact that traditional economies are facing deadlock situations: the problems of overproduction, growing marketing budgets, wrong market strategy. All this can lead to the loss of huge financial resources. The crowdeconomy is a system that deprives us of incorrect expert decisions and helps build model that is the best bringing together the producer and the consumer. Intermediate analytics, that determine which goods and services to create, where and how much to build is the idea of the past for most economy sectors" [2].

An important property crowdeconomy is not only an alternative way to finance new products and technologies, but the ability to predict the emergence of new. Participating (through funding) in the creation of new products, as well as suggesting the companies direction for the development and improvement of current services, users create a pre-order for the creation of the next. The trend is relevant not only in commercial sphere but also in the social, urban life and other areas.

The market system is adaptive, but not to any product which the market is ready with, especially as innovative as the result of social entrepreneurship. It is advisable to test the products, no matter how great it seemed to the manufacturer, before presenting it to the General public.

Obviously, the format of relations of the seller and the buyer should be comfortable for both. Surely the Internet has become such a space. Great test tool, and simultaneously a marketing tool and PR is crowdfunding, the algorithm of which is not complicated: the online platform is the descriptive part of the project formulated its goal, define the problem, create the amount and the time frame in which you need to dial this threshold [3].

Today in Belarus the banks are primarily interested in the crowdeconomy. This interest is not accidental, as it is entirely consistent with the trends in the provision of financial services. According to many analysts, quite clearly there has been a shift from the "economy intermediaries", which are characterized by including the availability of traditional financial institutions (banks). For example, countries near and far abroad show that banks, stock exchanges and venture capital funds are gradually excluded from the process of financing, the investor cooperates directly with the beneficiary of the funds [4].

One of the main new Millennium features of the Bank is the integration in social networks. The Bank should use social network as a support channel. The new Millennium Bank is a Bank for the new generation so-called Millennials, have a different mentality, different habits and values. That is why there are several factors that should be considered in the new generation:

1. Mobility. Millennials are the first generation that most of their time at a computer or a smartphone, 90% of its members use the Internet go to mobile services for daily banking operations.

2. There are no receipts. The new generation is using P2P transfers, pay for services via the Internet and making interbank transfers.

3. No minimum balance account and without commissions. That is the condition for previsora Bank.

4. Indicator of customer loyalty. Millennials make sure that your Bank is not a Bank different from your competitor in the next building.

5. Fear of being in debt. They do not know how to distribute the money

6. The need for financial advice. For them it is important to service individual financial planning.

7. "Underbanked". 92% of them have Bank accounts, but 45% of the majority also use various non-banking products.

8. Effect Amazon. These people have grown up ordering most things online. On banks they also valued: free shipping and mobile services priority.

9. Openness. They are willing to post information and share it in social networks [5].

"I think that in terms crowd economy Belarus is moving in the right direction. The first resources using such devices, in our market appeared long ago. These are "old-timers" as "Talaka", Maesens, attracting grant funding for socially important projects. Recently"Ulej" and WikiBank have started to work recently. And speed of movement in the direction crowdeconomy, I think, will grow", – said the head of development of digital banking technologies the National Bank of Belarus AleksandrSotnikov [6].

Crowdfunding is the collective financing of projects and initiatives. In "crowdfunding" a large number of people are interested in support the project in small or large amounts in return for the results from the implementation of the financed project.

To apply the desire to attract funding to your project, you should be elaborated and prepared a draft. People must know what they invest. The more attractive you describe your idea the better.

Also you must be clear what amount you need. To do this, make a business plan, conduct a cost estimate of all expenses and claim on the crowdfunding website a specific figure of the necessary funds. Info about how much is collected and how much is left, should be free for all [7].

In Belarus the interest in the crowdeconomy just however, its innovative model has attracted the attention of big business. Her driving force in our country has become "Belgazprombank", rated crowdfunding, crowdsourcing, and crowdinvesting as global opportunities and to clients of the Bank and the country as a whole. Today Belgazprombank is the first Belarusian Bank, using crowdsourcing technology.

Crowdeconomy brings together the producer and the consumer, maximally eliminating the intermediate links, which represent tremendous value in the final product, – says the Chairman of the Board of OJSC "Belgazprombank".

In Belarus there is a national crowdfunding platform Ulej, which was launched in April 2015, but has already managed to collect about 500 million rubles. As a counterpart the organizers Ulej.by used the popular platform Kickstarter model is "All-or-Nothing".

The advantages of the project "All-or-nothing":

1. No risk – if the project is not gaining specified for its implementation, the amount of work not performed, and sponsors who supported the project, not lose money.

2. If the project does not resonate with the public and, therefore, not gaining a sufficient number of applications for funding, the authors can revise their ideas and are not required to continue work on the project.

3. This principle of financing motivates authors to work on a project, communication and finding sponsors interested in their ideas.[4]

Depending on the model of remuneration for the investor it is possible to distinguish several types of crowdfunding:

1. without compensation (donation or gift). Can anticipate from the investment of gratitude, a mention of the investor in the final product (as an example – already mentioned thankyou.ru);

2. with non-financial rewards (model Kickstarter'a);

3. financial reward (crowdinvesting):

– royalties (applied in case of creation of objects of intellectual property – each investor receives a percentage of the created works);

– traditional lending (loans peer-to-peer: from user to user, bypassing financial intermediaries, has much in common with the activities of microfinance institutions);

– joint crowdfunding (investor will receive a portion of the ownership of, shares of the company, dividends or the right to vote at General meetings of shareholders is difficult is being implemented around the world, as there is a separate legislation requiring the creation and registration of a legal entity) [8].

Most common crowd funding with non-financial rewards (model Kickstarter'a), when a virtually unlimited number of investors funding the contractor to provide specific goods or services (for example, the development of indie games, film production, innovative products...).

Crowd funding as crowdeconomy as a whole is an effective mechanism to raise funds not only for business start-UPS and small businesses, but also to assist victims of natural disasters, the development of free software and other socially useful purposes.

According to the theoretical approach Anna Cat society is quite able to take care of the parts are not only small, but quite important things that were traditionally considered to be the responsibility of the state. She notes

that the power structure, given the growing influence of crowdeconomy, are increasingly interested in its capabilities, gradually forming the necessary legislation and looking at new technologies [5].

Belarus has all the chances to break forth in the application crowd economy, as it is quite local and is developed technologically.

So the crowdeconomy should be developed in Belarus, including to become the basis for changes to the legislation as it happened with the OTC market "Forex", which was made a separate regulation.

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THE OPPORTUNITIES OF APPLYING REVERSE LOGISTICS AT BELARUSSIAN ENTERPRISES

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Reverse logistics has been gaining more and more attention in recent years but its importance and its profitability is often overlooked. Let us take as an example one of the largest Belarussian industrial enterprises JSC Belaruskali which shows positive and cost-effective results of applying reverse logistics.

The amount of returned goods going backwards along the supply chain till the end point (customers) is usually much larger than people normally think. As an example, the sheer volume of returns generated in many companies ranges from 3% to 50% of total shipments across all industries. Many other surveys indicate that the real costs of the returns take up to 3% – 5% of total revenue [1].

Reverse logistics stands for all operations related to the reuse of products and materials. It is "the process of planning, implementing, and controlling the efficient cost effective flow of raw materials in-process inventory, finished goods and related information from the point of consumption to the point of origin for the purpose of recapturing value or proper disposal. Remanufacturing and refurbishing activities also may be included in the definition of reverse logistics" [2]. The reverse logistics process includes the management and the sale of surplus as well as returned equipment and machines from the hardware leasing business. Normally, logistics deals with events that bring the product towards the customer. In the case of reverse logistics, the resource goes at least one step back in the supply chain. For instance, goods move from the customer to the distributor or to the manufacturer.

If the product is defective, the customer would return the product. The manufacturing firm would then have to organize shipping of the defective product, testing the product, dismantling, repairing, recycling or disposing the product. The product would travel in reverse through the supply chain network in order to retain any use from the defective product. The logistics for such matters is called reverse logistics.

The reverse logistics process can be broken into two general areas, depending on whether the reverse flow consists primarily of products, or primarily of packaging. For product returns, a high percentage is represented by customer returns. Overall customer returns are estimated to be approximately six percent across all retailers.

Reverse logistics covers a broad range of items and activities and can include:

– Movement of capital items and equipment to the next emergency response.
– Removal of containers and packaging from response area.
– Destruction of spoiled food commodities and out of date pharmaceuticals.
– Return of rejected goods to the suppliers.
– Movement of excess or over-supplied goods to other programs or organizations.

Although reverse logistics has been gaining more and more attention in recent years, a lot of companies have not fully realized its importance and what reverse logistics is. There have already been conducted many studies showing that reverse logistics has large potential to shippers' performance and customer relations, but unfortunately in reality the potential value of effective reverse logistics is often overlooked.

Effective reverse logistics is believed to result in direct benefits, including positive environmental impact by reducing amount of waste, including the improvement of customer satisfaction, decreased resource investment levels, and reductions in storage and distributional costs. Reverse logistics is becoming an area of competitive advantage.

Belarus like other countries of Independent States Commonwealth has still been unacquainted with the conception of reverse logistics. That is why it is so important to introduce scientific research in the field of reverse logistics where the waste of Belaruskali company is analyzed.

JSC Belaruskali is one of the world's biggest producers and exporters of potash fertilizers. The Company successfully exports its product to more than 90 countries.

Sylvite ores contain two kinds of salt – potassium chloride and sodium chloride. Industrial interest in potassium chloride is shown in the usage of it as a fertilizer, but its concentration in the ore is only 25–30%. The potash ores are the main raw materials used to produce potash and compound fertilizers and other chemicals. The potash ore generally consists of sylvite (KCl) halite (NaCl – the rock forming mineral) [3].

Potassium salt is removed by the concentrators, as a result, the remaining components of sylvinite become waste. While producing potassium chloride two types of waste are made: solid halite (salt), which is stored in the salt burrows, and the liquid sludge waste. Halite blade main component is sodium chloride. Most problematic aspect here is pickle, which is formed during storage of this waste: they can penetrate into the groundwater, and then come to the surface, thereby causing harm to the environment.

On average 1 ton of produced potash fertilizers contains 3-4 tons of waste. At full capacity production is about 20–25 mln tons of solid halite waste and 2.5 mln tons of liquid sludge accumulated during a year. The storage of the accumulated waste on the Earth's surface has led to the formation of salt dumps up to 100–120 m high and sludge storage tanks to accommodate the liquid clay-salt slurries. There are about 850 mln tons of waste including 112 mln tones of liquid sludge piled around Soligorsk with a total area of about 1,400 hectares. They are situated in the distance from 1 to 10 km from the city. As a result, the flat area has unique mountain landscapes and the brine lake. The growth of potash production at JSC "Belaruskali" contributes to the emergence of regional geo-ecological problems.

The main problem is that nothing can be made to recycle that huge dangerous waste. Thereby, there are few ways how to reduce the amount of industrial waste, how to recycle the existing piles of waste, how to gain profit and produce something for the society.

First of all, one needs to answer the questions:

1. What kind of products can one get from this waste?
2. Has one already had all the necessary facilities; or What kind of equipment does one need? How much will the expenses be?

When answering the first question, we can propose to use halite waste as de-icing means in road utilities or to lay halite waste in empty mines. For these activities we do not need any special equipment.

When speaking about liquid sludge – there are several ways to recycle it. For example, oil industry can use it as circulating fluid, wood products industry can apply it as an extender to decrease resin consumption. But undoubtedly the most perspective way is applying it in construction industry for producing foam blocks.

Supposing Belaruskali has already had one empty workshop. To make it the Company has to buy one automatic complex for producing foam blocks. The price for one facility is 30635 $ [4]. The price includes the automatic complex itself, the technology of production and staff training. The productive capacity of this complex is 80 cubic meters per shift. Shift duration is 10 hours. The Company should organize two-shifts working day. The workshop is to work 5 days a week (10 shifts). In accordance with the requirements there should work only 1 person – an operator whose job is to maintain the exact operation of the machine. The average operator's salary should be not less than 500 $.

To monitor progress according its reverse logistics plan, a company needs figures that measure the financial impact of waste on the firm. As a part of this process, the company should develop procedures for analyzing waste rates.

For a start, we determine the key parameters before making calculations (Table 1).

Table 1 – Main parameters of reverse logistics at JSC Belaruskali

Parameters	Units	Quantity
Total production	Mln t	10
The percentage of exports	%	92,5
Price per tone	$	315
Quantity of complexes	piece	1
Price per automatic complex	$	30 635
Life time	year	10
Productive capacity	cubic meters per shift	80
Shift duration	hour	10
Quantity of shifts per day	shift	2
Working days per week	day	5
Quantity of operators per shift	operator	1
Average salary of the operator	$	500

Having stated what the major expenditures and performance indicators of Belaruskali are, we learn of what 1 cubic meter of foam blocks consists (Table 2) [5].

Table 2 – Contents and costs of 1 cubic meter of foam blocks

Ingredient	Quantity	Price per unit	Cost per 1cub m
Cement	264 kg *	8 $ (per 100 kg)	21 $
Sand	210 kg **	-	-
Foamer	1 kg	2,5 $	2,5 $
Sludges	0,5 kg **	-	-

** Required quantity of cement is 310 kg. But the usage of liquid sludges allows to reduce the quantity of cement by 15 %.*

*** Belaruskali has already got stocks of sand and required waste – sludges.*

Then we count up the total year's expenses and revenues from organizing reverse logistics (Table 3).

Table 3 – Total year's expenses and revenues from organizing reverse logistics at JSC Belaruskali

Indicator	Contents	Calculation	Result
Expenses (reverse logistics costs)	Cost of automatic complex, cement, foamer; operators' salary	30 635 + (21+2,5)*80*2*5*48 + 500*2*12 = 30 635 + 914 400	945 035 $
Revenues	Selling price of foam blocks (on average 36,5 $)	80*2*5*48 * 36,5	1 401 600 $

Finally, we calculate quantitative assessment of implementing activities of reverse logistics (Table 4).

Table 4 – Calculation of quantitative assessment of reverse logistics at JSC Belaruskali

Indicator	Formula	Calculation	Result
Percentage of recycled material. Resources in waste	$\frac{TrCp}{CpC}$, *TrCp* – treatment capacity of material resources in physical terms; *CpC* – capacity of collected material resources.	$\frac{0,5 \cdot 80 \cdot 2 \cdot 5 \cdot 48}{2500500} = \frac{19200}{2500000}$	0,0077 = 0,77 %
Percentage of reverse logistics costs in total. Company's revenue	$\frac{RLC}{RevS}$, *RLC* – Company's reverse logistics costs; *RevS* – Company's revenues from production sales.	$\frac{945\ 035}{10\ mln * 0,925 * 315 + 1\ 401\ 600} = \frac{945\ 035}{2\ 915\ 151\ 600}$	0,0003 = 0,03%
Profit of reverse logistics costs (Effect)	*RevRL – yRLC*, *RevRL* – Company's revenues from reverse logistics; *yRLC* – Company's reverse logistics costs per year.	1401600 – (914 400 + 30 635/10) = = 1401600 – 917463,5	484 136,5 $
Profitability of reverse logistics costs (Efficiency)	$\frac{RLpt}{RLC} * 100$, *RLpt* – Company's profit of reverse logistics costs.	$\frac{484136,5}{945035} \cdot 100$	51 %
Payback period	$\frac{RLC}{RLpt}$	$\frac{945035}{484136,5}$	1,95 ≈ 2 years

In accordance with the calculations shown above, we can conclude that organizing reverse logistics at JSC Belaruskali is quite a cost-effective and profitable activity (profitability is 51 % and 2 years' payback period). Moreover, such an activity like reverse logistics can help to decrease the level of waste made every year (reduction by 19.2 tons per year). It is not a very significant result but this is the production result of only one automatic complex. Buying several machines can increase the amount of waste recycled.

In order to imagine visually the productive capacity of one automatic complex let's see how many houses (spaced 200 sqr m and required 80 cubic metres) might be built from Belaruskali's foam blocks: 80*2*5*48/80= 480 potential houses.

Such results can have positive impact on economics of our country. It concerns the government programme "Housing construction in 2016–2020" [6]. According to this Programme it will be provided no less than 40 % of individual houses.

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THE ANALYSIS OF ACTIVITY OF TRANSPORTATION AND LOGISTICS ORGANIZATIONS OF THE REPUBLIC OF BELARUS

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The article presents an overview of transport and logistics operations, reviews existing transport and logistics organizations, describes the volume of freight forwarding, transport and logistics services, reveals the problems of development of transport and logistics services in the Republic of Belarus and suggests solutions.

With the development of the logistics system, the problem of efficiency increasing of transport and logistics process requires new approaches to the organization of cargo transportation in the Republic of Belarus. The geopolitical position of the Republic of Belarus predetermines its role as a transit country. Being at the crossroads of major international transport routes connecting Western Europe with the East, the country's Black Sea coast to the Baltic Sea, Belarus not only can, but should become a key element in the implementation of development plans and strengthen the two trans-European transport corridors "East - West" and "North - South". It is real only if the country is able to take an advantage of its location, that is, to create an effective network of international transport and logistics services and to integrate into the European logistics system.

Transport plays an important role in the economic system of any country. This is one of the basic sectors of the national economy, which forms the infrastructure of the economy and provides the interconnection of all its elements. The level of development of transport and logistics system of the country is one of the most important features of its technological progress and civility. Transport and logistics complex of the Republic of Belarus is extremely important to the livelihood of its diversified economy and the implementation of social policy. Its sustainable and efficient functioning is a prerequisite for stabilization, raise and restructuring of the national economy, national security, for improvement of the environment and of living standards [1].

According to the program of development of the logistics system of the Republic of Belarus for the period until 2015, approved by the Council of Ministers of the Republic of Belarus on August 29, 2008 № 1249, one of the most important tasks for transport and logistics centers, is the development, organization and implementation of efficient schemes of movement of goods on the territory of the republic and other countries through the creation of a single technological and information process, which brings together the activities of suppliers and consumers of financial products, banks, customs and insurance companies using different modes of transport [2].

It should be noted that the transport complex of the republic holds a dominant position in foreign service trade and is one of the main sources of currency inflow into the country.

As a part of the development program of the logistics system of the Republic of Belarus for the period up to 2015 some necessary decisions concerning development of transport and logistics infrastructure have been made.

Volume of rendered logistics services in the Republic of Belarus in 2015 amounted to 1498 trillion rubles, including the services rendered by transport and logistics centers – 981.6 billion rubles, wholesale and logistics, trade and logistics centers -115.9 billion rubles. Income from logistics services of transit cargo handling on the territory of the Republic of Belarus amounted to 462 billion rubles. As a result of the program, 20 logistics centers operate in the Republic of Belarus [3].

In the activity of transport and logistics organizations in the Republic of Belarus there are some problems that prevent their effective development, namely:

– absence of modern logistics infrastructure. As a result of the global logistics studies conducted in 2016 by World Bank experts, system of Belarus in the list of 160 countries is on the 120 th place;

– the outdated transport park of vehicles requiring modernization, as well as the lack of economic mechanisms for this;

– the legal base problem. Many regulatory and legal acts need to be updated;

– insufficient development of logistics services infrastructure (temporary accommodation points, the number of petrol stations, service stations, restaurants and other points of public catering, etc.). This makes transportation and transit through Belarus less attractive especially for foreign carriers [4].

Referring to these and many other problems, by the Council of Ministers decision of July 18, 2016 № 560 the program of logistic system and transit potential development for 2016-2020 was approved, which takes into account the priorities of the Republic of Belarus social and economic development, including growth and diversification of goods and services export, providing foreign trade balance [5].

The objectives of the National program of logistic system and transit potential development for years 2016-2020 are: improvement of the environment of logistics activity, more efficient use of logistics infrastructure and transit potential of the Republic of Belarus.

To achieve the objectives of the National program it is necessary to solve the following problems:

– improve the quality and complexity of logistics services;

– provision of logistics infrastructure development and improving the efficiency of its use;

– improving the legal and economic conditions for the effective use of transit potential.

The National program foresees the achievement by 2020 in relation to 2015 under favorable conditions of the following target values:

– growth of logistics services by factor of 1.5;

– increase of the total warehouse area of logistics centers by factor of 1.64;

– increase of income from transit up to 1 525.1 billion US dollars.

The implementation of the National program is associated with risks of economic and geopolitical nature, which may negatively affect its realization and targets. The basis for the trade flows passing through the territory of the Republic of Belarus, is made up of foreign trade cargoes of the Asia-Pacific region and the European Union. The trend of recent years shows the redistribution of commodity flows from Central European destinations to South-European. For this reason, the level of demand in the European Union for the main raw materials (oil and oil products, mineral fertilizers, ferrous metals, wood and wood products, etc.) should be treated as an economic risk affecting the efficiency of the logistic potential during the processing of the commodity flow.

Certain economic risks are associated with the low competitiveness of the national logistics system, including unequal conditions for economic activities performance of the logistics businesses within the framework of the Eurasian Economic Union, as well as highly competitive logistics centers (operators) in the neighboring countries of the European Union and the complexity of technical regulations within the framework of the Eurasian economic Union.

The degree of geopolitical risks depends largely on the relations of the Republic of Belarus with the countries of the European Union and the Russian Federation, as well as of the Russian Federation with other states.

Identified risks will be minimized due to:

– making the appropriate changes in the legislation governing logistics, transport, freight forwarding and other activities;

– strengthening of international coordination and cooperation within the framework of integration (inter-state) projects and formations;

– geographic expansion and increasing of the number of distribution networks of national exporters;

– improving the quality of logistics services, including the expansion of the list of services and the increase in the complexity of logistics services;

– the development of infrastructure and information and communication technologies in the field of logistics;

– improving of the level of training for professionals in the field of logistics.

The most part of the transit traffic passing through the territory of the Republic of Belarus, make up foreign trade cargoes from the Russian Federation. For this reason, the level of demand in the European Union for such resources as oil and oil products, mineral fertilizers, ferrous metals and other commodities, which make up the bulk of the goods in transit can be considered as one of the macroeconomic risks, affecting the efficiency of transit potential of the Republic of Belarus. Worsening of conjuncture in these market segments can reduce the volume of transit and income from it. So here it is necessary to take due measures in order to increase Russian export of fuel and raw materials to the European Union and Russian import from the European Union.

In conclusion, it should be noted that transport is one of the key sectors of any country. Volume of transport and logistics services depends largely on the state of the economy. However, transport itself often stimulates the improvement of economic activity. It frees the potential of some underdeveloped regions of the country or the world, allows to expand the scale of production, to connect producers and consumers. Therefore it is necessary to take urgent measures for the development and improvement of the activity of transport and logistics organizations of the Republic of Belarus, to find own level in international logistics. Through the development of logistics infrastructure the transit potential will increase, competitiveness of the Belarusian participants of the market of transport and logistics services will rise, a significant increase in the country's export potential will be noted.

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THE FINANCING SYSTEM OF THE INNOVATIVE ACTIVITY IN THE REPUBLIC OF BELARUS: THE FEATURES OF THE ORGANIZATION

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The article analyzes the national innovation system of Belarus on the basis of the Global Innovation Index in order to identify the extent of its readiness for venture businesses, identifies the strengths and weaknesses. It offers the financial mechanism created by the venture business.

The relevance of the research topic arises due to the need of deep critical rethinking and refinement of the existing management tools of venture capital that will allow increasing the efficiency of cash flow in venture capital. For the first time a financial mechanism of the venture business in the Republic of Belarus is created, ensuring the formation of the effective and integrated National innovation system under the practical implementation of the provisions of the Program social-economic development of Belarus, the state Programme of the innovative development, the Strategy of the creation of modern industries and the National sustainable development strategy of the Republic of Belarus.

The lack of the development of the stock market of Belarus and normative legal restrictions on the participation of banking sector in the venture capital activities hinders the access of the innovative companies to high-risk capital. There is no comprehensive and systematic approach to the study of the formation of a streamlined financial mechanism of the investment business.

The article analyzes and gives the assessment of the state of the National innovation system and the development of the infrastructure for the use of the mechanisms of the venture business with regard to foreign approaches to its assessment. The main indicator used to assess the innovative level of state development supports the global innovation index (The Global Innovation Index), characterizing the innovation component of the State assessment of the commercial results of the innovative activities of the economic entities, the development of the educational system, the state's participation in the scientific and technological innovation activities [1–3].

Since 2007 when the rights were transferred to the Belarusian innovation Fund the financing of venture capital projects up to 2016, the venture capital has not even begun to form.

The earlier reports indicated the number of "zero" column, now "no data" is indicated. This fact could no longer confirm the absence of venture activities in Belarus.

As well as the weaknesses of the National innovation system of the Republic of Belarus you can specify the difficulty of the process of the commercialization of science and innovation, the problems in the state regulation of the innovative activity, the degree of the participation of the state in the development of investment and innovation activities.

These are the requirements for the venture project in accordance with the above guidelines [Methodical recommendations, 2012]:

– the high-tech products, produced under the venture project, shall be demanded on the domestic and (or) foreign markets;

– the presence of the protected intellectual property (high-tech products, production);

– the possibility of the implementation (commercialization) and the start of the production and sales (rendering services) in a relatively short time – not later than 3 years from the start of funding;

– the split of the venture financing of the project into stages, with the definition of the intervals in which the decisions are made about future funding;

– the ability to exit the venture project at any stage subject to return in full in the budget allocation for financing and paying interest for their use;

– the profitability of the venture project shall not be below 40% in the period of its implementation;

– the volume of the investments in the venture project shall not exceed 5 billion roubles (the size of the investment may rise on an annual basis for inflation);

– the presence of the organizational and manufacturing capabilities, experienced teams to implement venture projects.

However, as seen from the data presented in table 1, all indicators relating the level of education, training and sufficiency of the qualified personnel, science is the strengths of the National innovation system of the Republic of Belarus.

It is the high level and quality of education personnel, the level of human potential, quality of formation and reproduction of human capital allows workers of the Republic of Belarus to join the countries with high human potential, and to be one of the leading countries on this indicator in the post-Soviet space [4].

Thus, it is possible to allocate the main positive sides of the National innovation system of the Republic of Belarus:

• legislative consolidation of the possibility of registration of venture capital funds and organizations;

• preferential terms of taxation of business activity, in particular the availability of benefits for income tax at the exit of venture project;

• low levels of corruption;

• support from the state of innovative activity of economic entities;

• high knowledge intensity, the supply of necessary highly qualified personnel, a high level of human potential of the Republic of Belarus.

After a critical analysis of the existing work and the data in the field of venture business in the Republic of Belarus and abroad, it should be noted that:

1) in scientific works, there is no uniform approach to the definition of the category "venture capital", its essential characteristics and functions;

2) the empirical data are not systematic, therefore, do not allow to draw the objective conclusions about the state of venture entrepreneurship in Belarus, which hinders the possibility of predicting (planning) the development of the venture entrepreneurship in the innovation system;

3) there are no studies establishing the role of the venture business in the financial management system;

4) you have not defined the elements that form the governance mechanism of the venture capital, and the factors influencing its effectiveness.

Thus, today in the domestic practice there is no integrated approach to the management of venture capital, and to the methods of the venture capital business in the detail.

Consequently, the work on the creation of the effective system of venture entrepreneurship needs to be not only the creation of a system of the regulatory aspects of the venture activity, but also establish a favourable institutional environment for the development of the venture capital market in general and for the development of the financial market in order to use all the possible tools of venture financing.

It is necessary to create an effective financial mechanism of venture business in the Republic of Belarus in the context of the system, the functional and process approaches of the financial management, which is a set of tools and methods of formation, the use of venture capital to ensure the appropriate information management tools.

At the present stage of economic development, venture capital, placed at the disposal of subjects of small and average business the investor can act in two forms, namely: equity capital, if the investor invested through the participation in the formation of the authorized capital; the borrowed capital, if the investor, for example, financed the activities through the purchase of bonds. Because of the complexity of the structure and differences in the nature of the sources of venture capital, the duality of its nature is shown. In both cases, the owner of venture capital will be the investor.

The investor will be able to make a profit either at the time of the sale of its stake in the share capital (the cost of which will increase in case of successful implementation of an innovation project), or return obligations for borrowed resources (including investment income). The innovator makes a profit in the course of an innovation project. To reduce the riskiness of the venture investment in the first place it is necessary to pay attention to the legislative regulation of the investment activities, the state policy in the field of the support of the innovative activity, the transparency of the innovation market and the market of investment resources.

The composition of constituent entities of venture business quite right may be organizations that are not directly associated with investment decisions, however, indirectly play a significant role in increasing of the investment activity.

The main factors hindering the formation of a system of venture entrepreneurship in Belarus, according to many experts, are the lack of competent regulation of the venture activity and an underdeveloped securities market. However, in our view, this is not a key factor limiting the development of venture business.

In this case, the absence in the law of the detailed legal structure for the creation of the venture fund is the reason that the mechanism of the venture business is not functioning at once. In relation to the development of the securities market and the Belarusian stock exchange, this factor is not fully complicate the process of venture entrepreneurship in conditions of development of this type of market relations. In this case, to venture project held an IPO should go usually 5-7 years, and its market capitalization has extremely high. ie, for a truly successful venture capital projects focused on foreign markets, the domestic market is characterised by low levels [5].

Consequently, the investment of venture capital by buying the shares in the authorized fund is not optimal for the Republic of Belarus, and therefore further development should be aimed at the adaptation of the accepted methods of venture capital financing or developing a fundamentally new way.

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FINANCIAL INVESTMENTS IN SECURITIES: CONCEPT, ASSESSMENT, ACCOUNTING

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In the article the essence of financial investments in securities was investigated as the object of accounting in domestic and international practice. The definition of these financial instruments was proposed from the point of view of the investor and the Issuer. The order of the recognition and measurement of financial instruments was investigated. The approach to the classification of financial investments in securities in the Republic of Belarus for accounting purposes was developed taking into account the convergence with international practice.

At the present stage of development in the Republic of Belarus, the strengthening of market relations is been in the process of integration of the economy into the global market economy. In this regard, one of the forms of using available funds is financial investments that can be made in three main directions: investments in profitable types of financial instruments; investments in the authorized capital of other organizations and investments in securities. The government's measures aimed at strengthening the Belarusian market relations affect the interests of many organizations, medium and large businesses which worked with foreign banks and investors.

Such form as the investment of funds in securities, becomes the most common form of financial investments in the Republic of Belarus [1]. International standards are acquired a particular relevance for these purposes. International standards regulate the financial relationship between the organizations, which include the IFRS (IAS) 32 "Financial instruments: disclosure and presentation" and IFRS (IAS) 39 "Financial instruments – recognition and measurement". In national accounting practice to IFRS analogues can be attributed only the Instruction about the procedure for disclosure of information and provision of financial statements about financial instruments, as well as the Instruction on accounting of securities, approved by Decree of the Ministry of Finance of the Republic of Belarus of 22 December 2006 No. 164. Currently comparative characteristics of these regulations show that they have significant differences.

The rules and requirements for formation of financial statements contained in IAS 32 and IAS 39, are widely used concepts such as: a financial instrument, financial asset, financial liability, equity instrument. They also have the definition of derivative financial instruments that have identification signs, rules of recognition, measurement and disclosure. However, the definition of financial investments in securities as an economic category and as an object of accounting and financial reporting in this regulatory document is missing. It is important to note that in international practice, accounting concept financial investments is not used.

In international practice, the economic substance of financial instruments is considered as financial liabilities and financial assets, in other words, separately from the Issuer and the investor. So, in GAAP and International financial reporting standards (IAS 32), financial instruments are the contract in which simultaneously occur a financial asset of one organization and financial obligation or equity instrument of another [51].

The research of economic essence of financial investments in securities in scientific economic literature of domestic and foreign authors, as well as in the legal sources of the Republic of Belarus has allowed to formulate the definition of financial instruments as an object of accounting in terms of investors and issuers.

From the point of view of investors, financial investments in securities are short-term or long-term financial assets, certifying the monetary, commodity, debt, property or other rights that the organization intends to hold to maturity or resale on the secondary market.

From the point of view of the Issuer, financial investments in securities are short-term or long-term financial commitment, submitted in electronic or paper form, in the prescribed form and the relevant details. In the proposed definitions characteristics of securities as an object of accounting are allocated from the point of view of their reflection in the balance sheet of the investor and the issuer, including maturity. This will allow us to align the terminology used in the regulatory documents on accounting, and will also contribute to the formation of complete and reliable accounting information on financial instruments business entities close to the International financial reporting standards.

Thus, the proposed definition of "securities" reveals a mutual relationship in the types and rules of circulation of these financial instruments based on certain principles and must express these relations in the form of a logically constructed system of classification. However, in accordance with normative legal acts of the Republic of Belarus for accounting purposes, investor's and issuer's securities are classified into two categories [4]:

1. Securities available-for-sale,

2. Securities held to maturity.

In generally accepted principles (standards) of accounting (GAAP) and International accounting standards (IAS) securities are categorized depending on the acquisition and evaluation in the following order (Fig. 1).

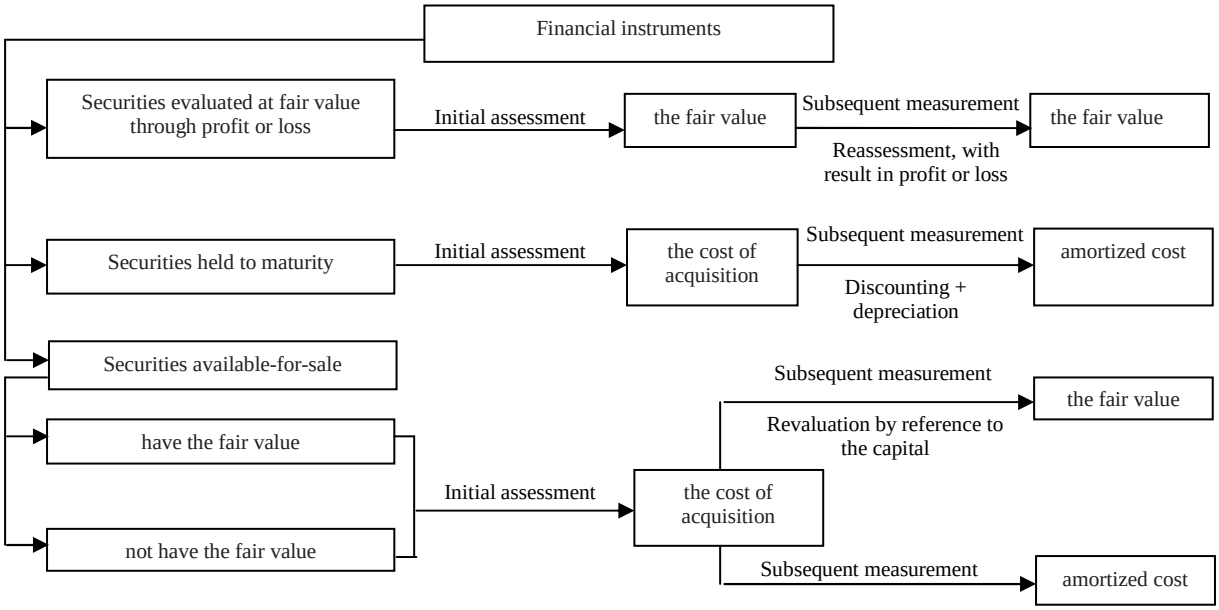

Fig. 1. Classification of financial instruments

It should be noted that the valuation at amortized cost used in simultaneous execution of two conditions:

1) the acquisition and ownership of the financial asset is made within the framework of the business model, aiming to receive cash flows under the contract;

2) agreement on the acquisition of a financial asset provides cash flow, including solely payments of principal and accrued on the remaining amount of interest.

In all other cases the measure at fair value is applied. Thus, we can conclude that the fair value measurement is the basis of the vast majority of financial instruments. The only exception is securities, held to maturity. In practice, however, the volume of investments in this category of securities is insignificant in the reason of weak development of markets for long-term resources and tools. From this follows that the accuracy of the accounting and reporting of financial instruments is based on the reliability determine the fair value.

However, it should be noted that in the special literature and normative documents of the Republic of Belarus there are various, often contradictory, definitions of the specified categories which, in turn, are not consistent with international practice, which leads to a distortion of the authentic value of financial investments in the account and violation of the principle of comparability of accounting information of various business entities. For the application of the legislation of the Republic of Belarus the concept of fair value should state the fact of the need to develop one universal model of its calculation, and applied in international practice methods of recognition and measurement of financial assets should be the basis for the development of Belarusian accounting standards, but adaptation to national characteristics. The introduction of a domestic standard would ensure the comparability generated in the financial statements of information with the foreign canons ensure its clarity and representativeness, and will contribute to attracting foreign investment in the real sector of economy of the Republic of Belarus.

Account 06 "Long-term financial investments" and 58 "Short-term financial investments" are designed by chart of accounts. To summarize the information about the presence and movement of investments in securities of other organizations, bonds of state and local loans, the statutory funds of other organizations, etc., and also provided to other organizations of loans, contributions of members of the agreement on joint activities in the common property of the simple association.

Based on the conducted research, it seems necessary in the Republic of Belarus to systematize financial instruments of the investor and the Issuer, taking into account their maturity and purpose for accounting purposes and reporting the following categories (classes, groups), presented in figure 2.

In the category of financial investments that are measured at fair value, with such changes in its profit or loss includes financial investments, the current for which fair value can be reliably determined including held-for-trading. This category includes financial investments acquired for sale to gain profit from price fluctuations in the short term. It is basically listed securities. All derivative securities are included in this category except when they are used for hedging.

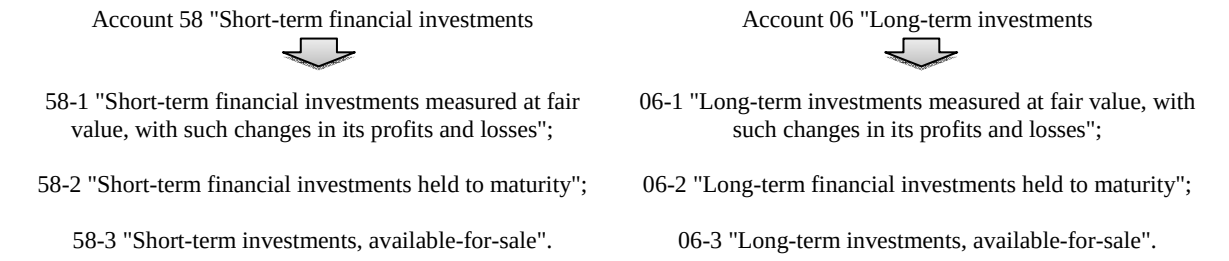

Fig. 2. Classification of financial instruments as objects of accounting

Financial investments available-for-sale, are designed to retain in the organization for an indefinite period and can be sold for the purpose of increasing the organization's liquidity, when a sudden change in interest rates, currency exchange rates or equity prices. These are securities which acquisition cannot be determined in any two categories we have discussed. They can either be sold when necessary, or be held an unlimited amount of time. This includes all equity securities, except those which belong to the first category (group). Any asset may initially be attributed to this group other than trading (group).

Financial investments held to maturity are non-derivative financial investments with fixed or determinable (deterministic) payments and fixed maturities that the organizations hold until their maturity.

If the organization sells or transfers them to an amount exceeding the "a negligible amount" (more than insignificant amount of assets), this category of securities is considered as "destroyed" and the organization is obliged to transfer all the remaining financial investments of this category to the category "available for sale". After that, organization is prohibited from classifying any financial investments (securities) as held to maturity during the following two annual periods will not recover until the credibility of the organization. Equity securities cannot be classified in this category, since for them there is no fixed date of repayment.

Thus, we can conclude that at the present time, there are not only necessity, but also the preconditions of perfection of normative regulation of financial accounting of securities and their reflection in the financial statements in the process of convergence with IFRS. Their implementation will allow to improve the quality of accounting for financial instruments and also will have a positive impact on improving the investment attractiveness of market economy of the Republic of Belarus. The proposed improvement of accounting of operations with securities will allow to organize analytical and synthetic accounting of economic operations at a higher level, and also to get uniform information to a wide range of users required for analysis of indicators of economic activity of enterprises and the relevant International financial reporting standards.

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Economics

UDC 336.77

PROSPECTS FOR THE DEVELOPMENT OF THE MORTGAGE LENDING IN BELARUS

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The article defines the concept of "mortgage lending", presents features of the mortgage lending and the prospects for its further development in the Republic of Belarus.

Nowadays the housing problem is very acute in the Republic of Belarus. Many people are in great need for better housing conditions. In many cities there are no loans to buy housing for construction dwellings. In this regard, many citizens of the Republic of Belarus are forced to take out loans for the dwelling constructions. One type of loan is a mortgage on real estate lending.

The mortgage lending (mortgages) is an issue of interest paid in cash for the purchase of the property on the security of the property.

Issued mortgage loan is from 5 to 20 years' period. The interest rate does not differ from a conventional loan on the property. Retirees cannot arrange a mortgage. The initial payment is at the discretion of the Bank from 10 to 30% of equity. A prerequisite is the insurance of housing and life of citizens in which a loan is made.

The Law of the Republic of Belarus dated June 20th, 2008 № 345-Z "On Mortgage", amended on January 4th 2010 has some drawbacks. In order to address them one should amend the Housing Code which came into force on 2nd of March 2013, which settles the eviction process of the borrower and his family members from the apartment deposit if their credit obligations have not been systematically repaid [1].

But in this respect there exists a new problem for the borrowers who are evicted. This problem is the lack of replacement housing market.

Pledger is obliged:

– to maintain the property which is mortgaged in a good condition and bear the costs of maintenance of the property until the end of the termination of the mortgage, unless otherwise is provided by the mortgage agreement;

– to repair and overhaul the property which is mortgaged in the terms established by the law, unless otherwise is provided by the mortgage agreement;

– to reclaim the property which is the subject of a mortgage from illegal possession;

– to take the necessary measures to ensure the safety of the property which is the subject of the mortgage, including its protection from encroachments and claims of third parties;

– to immediately notify the mortgagee of the origin of the threat of loss (destruction) or damage to the property which is the subject of the mortgage;

– to perform other duties in accordance with this Law, other legislative acts or the mortgage agreement [2].

The cost of housing in Belarus is very high in relation to salaries. In our country the cost per square meter is higher than the average salary in some foreign countries. It makes it very difficult to get loans. Therefore, banks are very carefully when checking the financial state and the solvency of the borrower and if the guarantors are reliable.

The mortgage loan is fixed and floats the interest rates. A fixed interest rate is stable and allows to make payments in equal installments. Floating interest rate changes (or remains constant) for the period from 6 to 24 months, but mostly once in every 12 months and has an additional risk for the lender and the borrower.

Pros for the mortgage loans:

– the relatively low percentage of the loan;

– long-term type of lending;

– the ability to attract the family income which significantly increases the maximum amount of the credit sending;

– well-proven properties.

Corns for the Mortgage loans:

– real estate is not owned by the borrower before the mortgage is paid out, making it impossible to sell real estate;

– large overpayment on the loan due to the long use;

– high requirements on the mortgage for borrowers, made by banks;

– the obligatory insurance of life and property;

– the additional spendings on real estate appraisal.

At this point in the Republic of Belarus there are a number of problems for the mortgage lending: the imperfect legislation, the high interest rate on loans, the economic instability, the low income, difficult

conditions for certain categories of citizens to obtain a mortgage, a high degree of risk for the banks, the instability of the labor market and work force.

But still in order to solve these problems with mortgage lending in the Republic of Belarus some measures are being taken. For example, the refinancing rate will be reduced up to 17% in 2017 and is still continuing to decline. According to the forecasts, the rate of inflation in 2020 will decrease, the inflation will be about 5%. This will give an opportunity to reduce interest rates on mortgage loans which will make it more attractive and more profitable for the majority of citizens of the republic.

One should also create a secondary mortgage markets, thereby reducing the risk for banks. At the same time there is a high probability of attracting foreign investments into the mortgage construction and the purchase of mortgages from banks, these investments would be beneficial for the economy as a whole.

Amendments to legislation will also affect the development of mortgage lending in the country. Considerations should be given to the introduction of "Mortgage Law" of various kinds of property for citizens, not related to real estate, making it possible to obtain the mortgage.

One of the main purposes of the mortgage credit is the affordability of housing for citizens. This can be achieved by lower interest rates; by increase in terms of mortgage issuance; revision of some positions in the contract on the mortgage, as well as those that are available. For example, if you start to issue mortgage loans to pensioners with obligatory introduction of an initial payment, as well as the presence of guarantors, at least on a long term, the issuance of mortgage loans will remarkably increased in volume.

Due to the increase in the number of combined mortgages, the number of new construction projects of real estate will increase too. In accordance with the Government's program to reduce the cost of premises, local building materials will be used for construction. This will help to increase the number of manufactured materials needed for the construction. And, accordingly, there will be the increase in profits, payments to the budget in the form of taxes, new working places. All this will affect the economy in the country.

The construction of private houses is gaining its popularity. The mortgage of land or other properties is permitted only if their usage is permitted by legislative acts [2].

For the development of agricultural mortgage, the number of private ownership of land should be increased that can be achieved with the help of the agricultural development.

Summing up, we come to the following conclusion:

1. The mortgage program in Belarus is not widely spread.

2. There are the following main problems of mortgage lending in our country: the imperfect legislature, high interest rates, low incomes, the instability of the labor market and the economy.

3. To solve these problems and to the develop the mortgage lending one should: lower interest rates, increase terms of credit use, make amendments to the legislation, remove some age restrictions for the registration of the mortgage, give more farms for mortgage lending in order to grow farm products.

For the development of mortgage lending in Belarus one should have a legislative framework and appropriate conditions that will help to solve the housing problems of the population.

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UDC 658.567.1:005(476)

THE IMPROVEMENT OF WASTE MANAGEMENT SYSTEM IN THE REPUBLIC OF BELARUS

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Today the consumption of goods is growing fast but as a result it is leading to disastrous increase of waste. Statistics says that average citizen produces more than 300 kg of waste per year. Annually more than 3 million tons of waste is gathered in Belarus, 90% of it is sent to the landfill. The strategy for integrated solid waste management in Minsk region for 2015-2029 has been worked out and has been prepared by IPO "Ecopartnership" in cooperation with foreign partners, later it was approved by the Minsk Region Council of Deputies.

Quality of water, nature protection, industrial pollution, soil degradation, residuals of the radioactive contamination from Chernobyl and waste management – these are the main topics of the following research and they are the main environmental problems facing the 21st century.

Waste management is one of the instruments of above mentioned solutions.

Extreme dependency of the national economy on industrial activities has resulted in environmental pollution. One of the examples of industrial activity is Minsk Wheel Tractor Plant, where the following research has taken place.

Waste formation is a quantity of materials or products that come to a waste stream before composting, incinerating, landfilling, or recycling. Waste formation varies as a function of affluence, however, regional and country variations can be significant as formation rates within the same city.The formation of waste in the Republic of Belarus was 49865 thousand tones in 2015 year. The amount has decreased since 2014, when it was 52529 thousand tones.

Table 1 – Waste formations of the Republic of Belarus from 2010 till 2015

	Waste formations					
	2010	2011	2012	2013	2014	2015
Waste formations (total amount),thous.tonnes	43 775	44 307	40 847	40 305	52 529	49 865
per inhabitant, kg	4 612	4 677	4 316	4 258	5 544	5 255
per unit of GDP, kg / BYR mln	266	149	77	63	68	57
per unit of GDP, kg / USD thous.	282	282	251	242	304	297

Although some of the waste problems of the past continue to exist in Belarus, waste management in Belarus has improved over the past years. There are many various classifications of solid waste. But mainly they are divided into the following: 1) Municipal Waste; 2) Domestic and Residential Waste.

Municipal waste includes waste resulting from municipal activities and services such as street waste, dead animals, market waste and abandoned vehicles. However, the term is commonly applied in a wider sense to incorporate domestic waste and commercial waste.

Domestic and Residential Waste is a category of waste comprises the solid waste that originates from single and multi-family house hold units. These wastes are generated as a consequence of house hold activities such as cooking, cleaning, repairing, hobbies, redecoration, empty container packaging, clothing, old books, paper and old furnishing.

Waste management is one of the most important environmental challenges and due to its correlation with the global economy, it has a global dimension. The quality of waste management services is a good indicator of the city governance. The way in which waste is produced and discarded is a key insight into how people live.

It is also important to emphasize the importance of sustainable development. Sustainable development is the development that meets needs of the present without compromising the ability of future generations to meet their own needs. There exist two key concepts: the concept of needs – the essential need of the world's poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organization on the environment ability to meet present and future needs.

Belarusian radioactive waste management strategy. Belarus has adopted a radioactive waste management strategy for its first nuclear power plant, under the construction near Ostrovets. The strategy is based on the principles of radioactive waste management recommended by the International Atomic Energy Agency (IAEA) and regulations on nuclear and radiation safety, approved by the Ministry of Emergency Situations in September 2010. It provides an acceptable level of protection from radiation exposure for plant personnel, the local population and environment and focuses on the prevention of accidents with radiological consequences. The strategy is to be implemented till 2080. However, Belarus has extended responsibility of manufacturers and importers which aims at funding disposal and recycling systems of secondary resources. The principle covers many groups of products, for example, household appliances (fridges, freezers, water heaters, TV sets, conditioners, kitchen ranges, mixers, dishwashing machines, washing and sewing machines, copy machines, monitors, projectors, calculators, electric shavers, printers, vacuum cleaners, irons, thermometers, batteries, automobile tires, etc).

Results, their discussion and perspectives

Belarus generates around 30 million tonnes of waste annually, out of which household waste makes up 3 million tonnes. Each year, the volume is growing by 20%. Existing waste recycling stations have the capacity to recycle only 12% of household waste, while in the EU the rate of waste recycled is around 60%. The rest is dumped into landfills and/or buried. Unfortunately, the existing landfills in Belarus often do not satisfy the basic standards.

The general objective in the waste management sector is to minimize the amount of waste and to improve treatment practices by, for example, lending support to sorting, recycling and re-using solid waste.

There exist the following challenges in the solid waste sector:

– toxic compounds leak into the soil, ground water and atmosphere from dumping grounds;

– uncontrolled waste incineration creates hazardous atmospheric emissions;

– non-recirculated waste consumes non-renewable resources.

Conclusion. With the establishment of modern waste handling systems, more waste can be transformed into resources and products instead of creating the above-mentioned problems. Recycling of paper, plastics, chemicals, metals and textiles, solvents and waste are a priority area.

Sustainable waste management is a goal: all societies must strive to maintain it. Currently nearly 80% of global wastes are sent to landfill, a significant amount of which is lacking proper design or containment. The increased attention to environmental impacts of human activities and the increasing demand for energy and materials have resulted in a new perspective on waste streams. The usage of waste streams for energy and materials recovery is becoming more prevalent. Although these efforts have a small impact on waste disposal, the usage of waste streams will increase as the society becomes more aware of the options available.

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UDC 331

JOB MOVEMENT TRENDS AT THE GLOBAL MARKET

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The article reviews basic job movement trends at the global market. The concepts of "job movement" and "job" are reviewed. Comparative analysis of job dynamics in the countries of Europe, the USA and Russia is made.

In the modern context of effective job creation and reduction of unemployment (according to the data [1] the dangerous level of unemployment is 7% and higher. It is exceeded in most of the countries [2]) the problem of job movement is especially acute. This problem has been attracting considerable attention over the last decade in the works devoted not only to developed and developing counties, but also to emerging countries. It is necessary to carry out a thorough and detailed economic analysis to define factors affecting job creation and elimination.

Within the framework of this article under the term of "job" we shall understand "some agreement in explicit or non-explicit form that is made between a concrete person and an institutional unit for carrying out of certain work for specific payment till the specified deadline or until further notification". [3, p. 5].

Job movement is a process that goes on permanently. It is connected on the one hand with creation of new companies that require staff, on the other hand with companies that discontinue their activities, which results in the elimination of jobs. In developed countries "annually there emerge around 10–15 % of new jobs (of the total number of the employed at all the companies) and disappear about the same number of "old" ones. [3, p. 3].

As the analysis shows, there is a certain disparity in job movement in different countries of the world. The table provides comparative dynamics of jobs at operating enterprises in Western Europe, the USA and Russia.

Table 1 – Creation and elimination of jobs at operating enterprises in Western Europe, the USA and Russia over the period from 1992 till 2002.

Country	*Creation*	*Elimination*	*Turnover*	*Change*
Austria	4,6	3,4	8,0	1,2
Belgium	5,2	3,8	9,0	1,4
Denmark	6,2	3,3	9,5	2,9
France	5,1	3,2	8,3	1,9
Germany	4,4	3,7	8,1	0,7
Italy	8,2	4,1	12,3	4,1
Portugal	4,9	3,5	8,4	1,4
Holland	6,5	4,3	10,8	2,2
Spain	8,6	3,4	12,1	5,2
Sweden	8,1	3,6	11,7	4,5
Great Britain	6,6	4,4	11,0	2,2
USA (1994–1999)	9,9	7,9	17,8	2,0
USA (2000–2010)	8,2	8,2	16,4	0,0
Russia, industry (1992–1999)	2,4	10,3	12,7	-7,9
Russia (2008–2010)	4,8	6,9	11,7	-2,1

Source: worked out by authors based on [3, p. 37].

However setting up or closing down of companies is not the basic factor of creation and elimination of jobs: many operating companies hire and reduce their staff. Significant factors influencing the number and structure of employees are changes of technological infrastructure, transition to production of more updated and quality goods. Also we should mention replacing of "old" employees for more qualified and high-performing ones, who in their turn are able to improve the quality and volume of output product.

Thus, movement of jobs in global economy is a process that depends on various economic and social processes.

There has been recorded a problem of absence of comfortable conditions for setting up and development of companies.

Indeed, Vishnevskaya N.T. thinks that for advantageous job movement it is necessary:

1) not only to simplify greatly the process of registration of companies, but also to create comfortable conditions for their development. Statistic shows that the peak of jobs creation refers not to the time of company's set up, but to the 3rd-5th year of its operation [4, p. 71];

2) to reduce taxation burden;

3) to enhance promotion of entrepreneurship.

The following tendency in job movement at the global employment market is also explained by the excess of labour turn-over over the number of jobs. This contributes to active job competition and company's right to choose the best candidate.

Vishnevskaya N.T. notes in her article about job movement that: "enterprises functioning in different branches will show absolutely different dynamics of labour turn-over" [4, p.68]. For example, the number of jobs in the sphere of construction will exceed the number of jobs in the sphere of education and medicine.

As a result, among the basic tendencies in the job movement in the global economy we may note:

– excess of labour turn-over over the number of jobs;

– permanent process of closing down of old and setting up of new companies;

– poor means of description of job movement at labour market;

– difference in labour turn-over and work force depending on working field;

– forwarding of employees from a less productive enterprise to a more productive one by means of closing down of the former enterprise.

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ECONOMIC ESSENCE, COMPOSITION AND CLASSIFICATION OF ECONOMIC SECURITY

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Economic entity, composition and classification of economic security have been analyzed and scientifically justified, having developed a unique author's classification of economic security. Results can be used in the activities of the organizations in the various spheres of business, as well as in research and educational process.

Introduction. Sustainable economic development is important to economic subjects at different levels. Economic security implies such an economy that maintains an adequate level of social development, invulnerability and independence of economic interests in relation to possible external and internal threats and impacts.

Economic security could be achieved if dependence on the dominant economy, as well as the degree of aggravation of the internal political, social and economic situation, the loss of national sovereignty, the significant weakening of military power, a significant reduction in the standard of living and quality of life of the population, or the collapse of the global strategic goals of the country does not exceed the admissible limit.

The essence of economic security. Economic security is a complex concept, making it almost impossible to include all of its constituent elements and relationships in one definition. That is why there are many interpretations, each of them neither disproves nor complements the others. Together they give a comprehensive understanding of the phenomenon.

There are three approaches to the definition of security.

The first one is based on the concepts of threats and protection from threats.

Second, avoiding the use of the notion of threat in the definition of security is based on managerial or economic concepts: efficiency, achieving the objectives, its functioning and development.

The third one combines both approaches.

The existing definitions of economic security were reviewed. The conclusion about the predominance of the component protection of the interests of the subject was drawn. A company or a country may be a subject of economic security analysis. Accordingly, in the Russian Federation the most common approach to economic security in the economic literature and regulation is the protection of the companies' interests.

In the Russian Federation the presidential decree dated 29.04.1996 N 608 "State strategy on the economic security of the Russian Federation (substantive provisions)" outlined the definition of economic security.

Economic security ensures the protection of civil rights of the population, improving the living standard guaranteeing social peace and tranquility; an effective solution to internal political, economic and social objectives, on the basis of national interests; active influence on the processes in the world that affect the national interests of Russia [1].

According to the national security concept of the Republic of Belarus, the UN goal of economic security will be the implementation of reforms in the economy, aimed at enhancing its effectiveness, ensuring the growth of GDP while increasing the quality of life of the population; maintaining the diversity of the national economy and the evolution of property relations; maintaining a sustainable balance between government regulation and freedom of economic relations; the expansion of freedoms for the subjects of economic relations of all forms of ownership; the development of competition in the domestic market; stimulation of domestic producers; increase of investment and innovation activity, attracting foreign partners on mutually beneficial terms.

For a more detailed study of the economic value of the security this research looks at different definitions.

For example, Rayzberg B., Lazouski H., Starodubtseva E. treat economic security as preventing leakage of confidential information from the firm, including the information on the trade agreements, and economic sabotage [2]. Dolgopolov Y. treats economic security as a component of corporate security, representing the state of the legal, financial and industrial relations, organizational relationships, material and intellectual resources, which are provided with production development and financial and commercial success [3].

Senchagov V. treats economic security as essential qualitative characteristic of the economic system, which determines its ability to maintain living standards of the population, sustainable resources for the development of the national economy, as well as consistent implementation of national interests [4].

Thus, the definition of economic security is comprised of the macroeconomic and microeconomic definitions of economic relations, various objects of economic security, different levels of economic security, as well as factors that affect economic security; defining the importance of economic security for the economic sustainability of various scales and its development.

On the basis of this analysis it can be concluded that the concept of "economic security" is relatively new for economic management bodies, and the range of approaches is extremely wide. This indicates the relevance of the problem, and secondly, the lack of a clearly developed understanding of the phenomenon of economic security, and thirdly, the shortcomings of the existing legislative framework in this area.

The absence of a generally accepted scientific definition of "economic security" creates uncertainty in the interpretation of the state security function and its failures in the shaping of socio-economic development programs.

Composition and classification of economic security. With the existence of different points of view on the essence of this notion, there is no consensus regarding the economic security. In general, there are two main approaches to their definition, namely, system resource, and functional.

So, supporters of the systemic approach consider the enterprise as an interrelated set of subsystems, which provides a number of components of economic security: technology; and resources that represent the material production of the main kinds of resources; financial; social, etc.

Functional approach is most common and it involves providing economic security on the levels such as: technical-technological – conformance level used in the enterprise technologies to modern world analogues; intellectual and human resources – conservation and development of the intellectual potential of the enterprise; information-effective informational and analytical support of the economic activities of a business entity; environmental-compliance with environmental standards, minimizing losses from pollution environment; financial is to achieve the most efficient use of corporate resources; legal support of activity of the enterprise, observance of the current legislation; power-ensuring the physical safety of employees (mainly manual) and the preservation of their property, etc.

It is necessary to remember that the importance of each component of economic security for enterprises of different industries differs significantly, therefore it is necessary to carefully and critically approach the process of identifying them [5].

Based on the above information and studying additional sources can be provided in the following classification (table 1):

Table 1 – Classification of economic security

Classification sign	Classification group
By components	1. Techno-industrial safety
	2. Technological security
	3. Energy security
	4. Environmental safety
	5. Financial credit security
	6. Mineral resources security
	7. Food security
	8. Information security
The forms of implementation	1. Economic patronage
	2. Economic cooperation
	3. Economic confrontation

Based on the information and studying of the additional sources can be presented on the following composition of economic security (table 2):

Table 2 – Composition of economic security

Classification sign	Composition indication
1	2
Level	1. Individual
	2. Macroeconomic
	3. The world economic system
The state	1. Normal
	2. Pre-crisis
	3. Crisis
Problems	1. Problems related to the conservation and maintenance of economic complex of the country;
	2. Problems relating to the maintenance of economic performance in emergency situations;
	3. Military-economic problems;
	4. The economic problems of interaction with the outside world.

The end of the table 2

1	2
Methods for determination of the level	1. Basic macroeconomic indicators and comparing them with thresholds
	2. Expert assessment Method for ranking territories according to the level of threats
	3. Assessment of economic growth on main macro-economic indicators and the dynamics of their change
	4. Methods of applied mathematics and, in particular, multivariate statistical analysis
Threat	1. External
	2. Internal
External factors	1. Macroeconomic
	2. Market
	3. Other
Internal factors	1. Financial
	2. Production
	3. Intellectual personnel
	4. Investment and technological
	5. Marketing
	6. Environmental
	7. Logistics

It can be argued that the notion of economic security has only two characteristic classifications, due to the homogeneity of the economic categories. On the other hand, economic security has a rich composition of classification, since this category has also subcategories. For example, security levels can be considered, as well as internal and external factors affecting it.

Conclusion. Economic security is difficult to analyse, the reason for this is the lack of scientific knowledge and diversity of views on the object of study.

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THE BASICS OF ACCOUNTING AND ANALYSIS OF ECONOMIC SECURITY

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Major indices of economic security were provided, theoretical basis of formation of accounting and analysis system capable of producing reliable information about internal and external enterprise environment, being one of the security factors in competition, was stated. Results can be used in the activities of the organizations and in research and educational process.

Introduction. The forefront in addressing the problems of ensuring the safe and stable operation of the business is taking useful business information formed on the basis of the accounting system. Therefore, for ensuring economic security, there is a need for the formation of a complete and accurate accounting and analytical information to optimize the use of corporate resources and to increase the competitive advantages of the enterprise.

Indicators of economic security. In the economic literature it has been already attempted to quantify the level of economic safety of the enterprise, resulting in several approaches to assessing the level of economic safety of the enterprise. The indicator approach, where the level of economic security is determined by the so-called indicators [1, p. 5]. Indicators are treated as thresholds of indicators characterizing activities of enterprises in the different functional areas that correspond to a specific level of economic security. Estimation of economic safety of the Enterprise shall be established according to the results of the comparison (absolute or relative).

According to the approach, a state of economic safety of the enterprise should be carried out based on the system of core indicators. They should reflect the sectoral specificities and conditions of activity of the enterprise. Their components are shown in table 1.

These indicators are used in economic security system and estimation of economic safety. Indications have their own normative indicators, based on which appropriate management decisions are made.

Table 1 – Indicators of economic security of enterprises

Main indicators	Constituent indicators
Production	Dynamics of production (growth, recession, stable state, rate of change)
	The actual level of capacity utilization
	R and D share in total volume of works
	The proportion of research work in total RESEARCH and DEVELOPMENT
	The pace of asset renewal (renovation)
	Stability of the production process (rhythm, the level of congestion for some time)
	Proportion of GDP production (particularly large enterprises-monopolists)
	Assessment of competitiveness of products
	Age structure and technical resource machinery and equipment park
Financial	Portfolio volume orders (total anticipated sales)
	Actual and necessary investments (for the maintenance and development of existing capacity)
	Level of innovative activity (investment in innovations)
	The level of profitability of production
	Yield on capital investment (capital intensity) production
	Overdue debts (accounts receivable and accounts payable)
	Percentage of availability of private sources of financing short-term assets: materials for the production of energy
Social	Level of remuneration in relation to the average for the industry or the economy as a whole
	The level of salary indebtedness
	The loss of working time

Source: [2].

Financial Analysis System. Economic security system of the organization, proposed in the framework of an integrated approach, is a tiered structure, the apex of which is complex estimation of a level of economic safety of the organization. The middle level system consists of objects based on commonality of prisoners in these external economic threats. The last level of economic security system organizations is the complex of measures ensuring the security of its installations and structures.

The proposed approach of ensuring economic security organization is based on the hypothesis that economic security strategy was adopted as an ideology of management of the organization and requires the establishment of a system of economic security, which will ensure protection of the economic interests of the organization against external and internal threats.

The most significant components of cost management system of the enterprise are operational, accounting, as well as financial and economic analysis. Components of the accounting and analytical system are shown in figure 1.

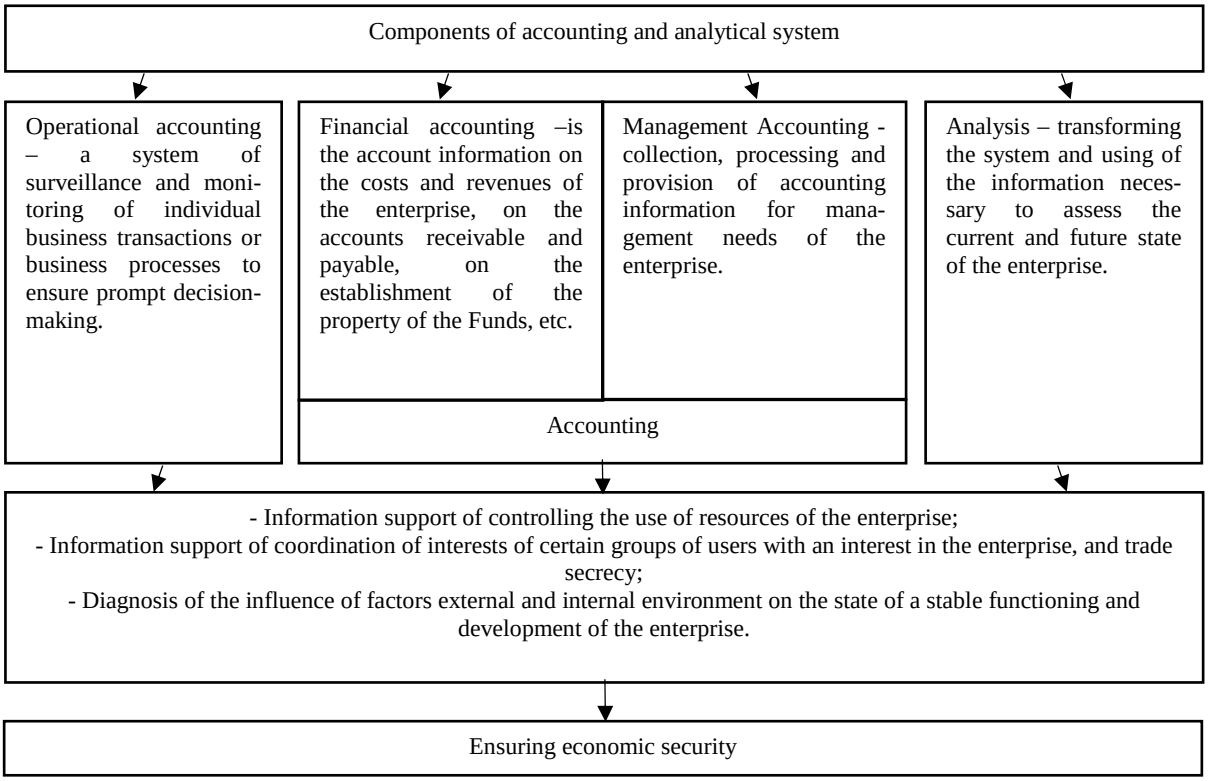

Fig. 1. The components of accounting and analysis system [3]

In this case, the system must perform a series of functions [4]:

1) analysis;
2) goal-setting;
3) legal services;
4) organizational and administrative;
5) scheduled;
6) accounting and control;
7) information.

The economic security is achieved through addressing the external and internal threats posed by risks, as well as through competent and effective management. Accounting as an economic security system of the organization is the primary stage in the processing, analysis and systematization of data facts of economic life.

To justify records management in the system of accounting and analytical economic security, the following properties are selected: a reflection of the economic operations directly in the course of their leakage that allows you to quickly identify negative trends, as well as to determine the internal reserves, capable to increase the competitive advantages of the enterprise; formation of information directly in your field it arises that allows you to define accounting objects that require greater attention to economic security [5, p. 45–46].

Exploring the problems of methodological substantiation of operational records, with a view to ensuring the economic security of enterprises, first of all, one should pay attention to the possibility of their use in day-to-day current enterprise management that makes records management information especially useful to monitor the effective use of resources, as well as the identification of internal reserves, and competitive advantages. However, these operational records do not distinguish themselves by high accuracy.

From the standpoint of ensuring economic security financial account reflects on past events that have affected the company's performance and led to changes in its financial and property status. This information may

be used by specialists in economic security when determining the level of economic credibility of external contractors, monitoring of the incarnation of the strategic objectives of the enterprise, preventive diagnosis of enterprise crisis and establish directions for managing identified risks of entrepreneurship.

Financial accounting provides continuous monitoring and recording of all facts of economic activities, both those that have taken place and those with high probability to take place in future, which makes financial reporting source identification of business risks. While the use of financial accounting data with the aim of ensuring economic security is limited.

In this regard, the information displayed in management accounting is useful to ensure economic security. The use of accounting data with the objective of providing management reporting, while ensuring economic security provides for determination of the forms and periodicity of the internal reporting on:

– assessment of the impact of risk on State Enterprise capital;

– consistency of key economic indicators, to serve as indicators of the level of economic security;

– calculation of the effective functioning of the economic security unit;

– estimation of the benefits from the number preceded by threats and dangers, etc.

Managerial accounting tasks are to provide management information to control the appropriateness of business operations, the use of material, human and financial resources in accordance with the approved regulations on the enterprise standards and estimates, to prevent the likelihood of negative results of economic activity of the enterprise; identification of internal reserves, and to ensure the financial sustainability of the enterprise.

Different objectives and methods of managerial and financial accounting does not exclude the need for communication between them and the costs and benefits of activity generated in their systems. This communication is to provide a unified approach to measurement and evaluation of costs and benefits in the past, as reflected in the accounting, and formed in the accounting system.

Stressing the benefits of management accounting information needs, while ensuring economic security professionals over other accounting subsystems, it should be noted that management accounting along with the functions of monitoring and evaluation data performs predictive function, not peculiar to financial accounting, while financial indicators also operate non-financial information [6].

The purpose of the analysis is to provide analytical data to stakeholders for their adoption of adequate decisions regarding the choice of the most effective strategy. The main feature of this analysis is its focus on the future, to identify internal strengths and weaknesses against threats of external environment and strategic tasks of the company.

Conclusion. These studies allow us to state that the accounting and analytical system serves as a trusted source of information support of processes to maintain the sustainability of the enterprise:

– firstly, the accounting serves as the most complete source of information about the internal and external environment of the enterprise environment;

– secondly, the accounting is one of the mechanisms to protect information and assets of the enterprise and has the control and analytical characteristics;

– thirdly, accounting and analysis have well-formed methodological tools of diagnosis both conditions, and business processes that can be adapted to the needs of economic security.

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PACKING OF GOODS AS A LOGISTICAL SYSTEM ELEMENT OF DAIRY INDUSTRY OF THE EAEU MEMBER-COUNTRIES

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The annotation: the article is devoted to the package as a logistical system element of dairy companies - the EAEU members and also to the developing of a complex of events for perfection of the package at a dairy factory. It has been shown that a package plays an important role in logistics and fulfills a number of functions: protection, storage, warehousing, transportation, manipulation, information and utilization. As a result of the analyses of the activity and packages of two dairy companies, recommendations for improvement of packages for JSC "Lepel dairy and cannery factory" based on the experience of JSC "Savushkin product" have been developed. "Lepel dairy and cannery factory" should use polyethylene terephthalate bottles, Tetra Brick Aseptic or Tetra Pack for packing milk, kefir, ryazhenka and drinkable yoghurt; they should use Multivak for packing cottage cheese.

A package can be a source or a complex of means, which must protect the goods and save them from losses during transportation, storage, warehousing, transshipment and other operations.

The main function of a package is protection of products. It must provide safety of a product during the whole way of transportation. Destruction or damage of goods can bring losses, which are not comparable to the cost of a package. Warehousing, transportation and manipulation functions determine the aptitude of packed goods for mechanization and automation processes, that is why packages must have a standard size, which makes it easier to warehouse and form cargo packages in the future. Correct information, placed on a package, makes it easy and helps to store the goods rightly, manipulate and manage merchandising. Utilization functions of packaging are also connected with logistical processes, because reuse and utilization of a used package is also applicable to the departments of logistics [1].

The degree of importance of each of the above mentioned functions depends on a particular product to a considerable degree. There are two main types of packages. Firstly, it is the inner or consumer's package, which is being developed for consumers and consists of the materials of a marketing and stimulating kind. The consumer's package must be comfortable to use, attractive, compact, have protective functions. Secondly, an outer or industrial package, which has been developed to protect products and its materials must be more comfortable for handling [2].

JSC "Lepel dairy and cannery factory", which is a representative of a Vitebsk concern "Meat and dairy products" and an active participant of economic integration processes of the EAEU, has been chosen as an object for analysis and perfection of the package of goods, which is an element of logistical system of the factories of dairy industry.

The dairy factory in the town of Lepel was founded in April of 1951. Now it consists of the following branches: JSC "Dokshitsy dairy factory", JSC "Beshenkovichi dairy factory", JSC "Tolochin butter and cheese dairy factory" and APB "Zaozerje" [3].

JSC "Lepel dairy and cannery factory" is one of the biggest producers of whole and non-fat dried milk and butter in Vitebsk region. Milk and dairy products of the factory are the winners of a lot of contests and professional exhibitions. The factory is a reliable partner and works with 14 countries of the world. The production is exported to Russia, The Ukraine and Moldova [4].

JSC "Lepel dairy and cannery factory" uses the following types of package for their dried dairy products: customer-size package which is a combined package (laminated plastic); for sold by weight products paper four-layer bags with a polyethylene insert are used. This type of package is provided by JSC Paper factory "Red star".

To pack milk, ryazhenka, kefir, sour cream, butter ant cottage cheese polyethylene cover is used, which is ordered by the dairy and cannery factory from JSC Borisov factory of polyethylene package "POLYMIZ" and JSC "NAFTAN". Besides polyethylene cover, pure-pack is used at a factory to pack milk, sour cream is packed into polystyrene and cottage cheese is packed into lean cover and polyethylene containers.

Butter of customer-size package is packed into aluminum backed foil at the factory. This type of package is provided to the factory by PRUPC "Heritage of Frantisk Skorina". Sold by weight products are packed into pasteboard boxes. To pack ice-cream into cups and cones polyethylene package is used, and for sold by weight ice-cream polyethylene packets are used. To pack cheese of JSC "Lepel dairy and cannery factory" flow-pack BDF 6050 FSW – (gas environment) is used.

For logistics a package is a complex of means providing harmonization of a standard series of consumer pack, industrial packaging of a module, freight units package and load-carrying ability of vehicles during

physical distribution. A food package is more effective and practical than a package for non-food items. It doesn't have so many advertising functions, but they impose on a food package much more requirements from the viewpoint of protection from the environmental agents. At the same time safety of products in logistical chain is provided by keeping special conditions of storage and transportation.

Dairy subcomplex is one of the most important elements of a production structure of agrarian-industrial complex of the Republic of Belarus. An important place of the dairy subcomplex is determined by high value of its final products in the food structure of the population of the Republic. Milk takes the first place among all cattle-breeding products because of its nutrition advantages.

The Republic of Belarus has an export potential of cattle-breeding products that is why besides the distribution of products inside the country a great part of the products is exported. As for JSC "Savushkin product", its production is exported to 20 countries. They are Azerbaijan, Uzbekistan, the UAE, Jordan, Singapore, South Korea, the countries of the EU. Last year the first supplies to China and Hong Kong were made. Russia and Kazakhstan, which are the EAEU member-countries, are also among them, which provides free transportation of products among the countries.

The biography of joint-stock company "Savushkin product" began in 1939, when Brest dairy plant was put into operation. Now the factory has 3 production branches. They are in Kamenets, Pinsk and Stolin [5].

JSC "Savushkin product" is a leader of dairy branch in Belarus. The factory produces more than 200 kinds of products. The company owns five dairy brends: "Savushkin", "Brest-Litovsk", "Optimal", "Laskovoe leto", "SuperKid" and one juice brand is "Nastojashij" [6].

JSC "Savushkin product" uses polyethylene terephthalate bottles to pack milk, kefir, ryazhenka, drinkable yoghurt, whey and cultured milk drinks. Moreover, milk is packed into Tetra Brick Aseptic and cultured milk is packed into Tetra Pack and Tetra Pack midi. For packing sour cream and yoghurt polypropylene boxes and cups are used at the factory. Two types of packages for cottage cheese are used at the factory: a polyethylene packet, Multivac, a polypropylene cup, a dual-chamber polypropylene cup and a pack of multi-layer plastic. Cheese is packed into polyethylene package and a pack of multi-layer plastic, but butter is packed into foil.

The main suppliers of the materials for JSC "Savushkin product" are:

– the suppliers of packages are "Polymiz", Borisov, " The World of Package", Minsk;

– the supplier of foil is "Flexogaf", Minsk;

– the supplier of labels is "Uniflex", Minsk.

Due to the fact, that the Republic of Belarus has not got producers of some packing material and food supplements, they are imported directly from manufacturers. The main manufacturers are CJSC "Tetra Pack", Russia; LLC "Agrana Frut Ukraine", package producing factory «Greiner» Sp.z.o.o., Poland, CJSC "Lisiplast", Lithuania.

The types of packages of analogous products of JSC "Lepel dairy and cannery factory" and JSC "Savushkin product" are presented in table 1.

Table 1 – Types of analogous products of JSC "Lepel dairy and cannery factory" and JSC "Savushkin product"

Name of the product	Type of package of JSC "Lepel dairy and cannery factory"	Type of package of JSC "Savushkin product"
Milk, kefir, ryazhenka, drinkable yoghurt	Pure-pack	Polyethylene terephthalate bottles
	Polyethylene package	Tetra Brick Aseptic
		Tetra Pack
Sour cream, yoghurt	Polystyrene cups	Polypropylene cups
Cottage cheese, curds	Lean Covers	polyethylene packet
	Polyethylene containers	Polypropylene cups
		A pack of multi-layer plastic
		Multivac
Butter	Aluminum backed foil	Aluminum backed foil
Cheese	Flow-pack	Polyethylene layer
		A pack of multi-layer plastic

Source: own development.

As follows from the analysis that have been made, JSC "Savushkin product" has better characteristics of products and packages and also is one of the main rivals of JSC "Lepel dairy and cannery factory". The package of JSC "Savushkin product" has better mechanical strength, aesthetic and ergonomic qualities and also increases the shelf life of the products.

"Lepelka" exports mainly dried milk and butter, as these products have the longest shelf life. As for the other dairy products, their shelf life lasts from a few days to a few weeks, but "Savushkin product" has much

longer shelf life. Such long shelf life is provided due to a high level of purification of the ingredients, following the technological processes and using high quality modern packages. "Lepelka" on the contrary chooses more economical types of packages, than "Savushkin product", as most of the products are sold inside the country.

If "Lepel dairy and cannery factory" plans to widen its export, the factory should change the package for the one, which will save the freshness of its products better and will be more convenient to transport, store and consume.

So, polyethylene terephthalate bottles will be the best variant for "Lepel dairy and cannery factory" to pack milk, kefir, ryazhenka and drinkable yoghurt. They can also use Tetra Brick Aseptic, which differs from Tetra Pack and Pure-pack by a more convenient lid, which provides better ergonomic qualities.

Curds are packed into polyethylene containers at the factory, which have good characteristics and don't need any improvement. As for the packages for cottage cheese, lean cover should be changed for a stronger, a more convenient and waterproof package, as for example multi-layer plastic or Multivak.

The other packages of JSC "Lepel dairy and cannery factory" have a similar position at the market to packages of JSC "Savushkin product".

To strengthen its positions at the market and increase competitiveness of its products, JSC "Lepel dairy and cannery factory" should practice bench marketing, which is a process of comparison of products, services or processes of one company with other companies, which will help to improve the work of the factory. In this case to improve the work of JSC "Lepel dairy and cannery factory" it is necessary:

– to pay more attention to the processing of the ingredients, choosing other methods of purification and also follow the technological processes, which will help to increase shelf life;

– to widen export: the factory should improve the package to save the products fresh and make it more convenient to transport, store and consume (polyethylene terephthalate bottles will be the best variant of package for milk, kefir, ryazhenka and drinkable yoghurt; they can also use Tetra Brick Aseptic and Tetra Pack, which is similar to Pure-pack, but have more convenient lids, which give them better ergonomic qualities);

– to import some packing materials as they are not produced in the Republic of Belarus;

Improvement of the package of JSC "Lepel dairy and cannery factory" will help the factory to attract more customers, widen the markets and also to find new partners within the EAEU member-countries.

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UDC 658

THE RATIO OF COSTS ASSOCIATED WITH WAREHOUSE EQUIPMENT AND THE COST OF CARGO HANDLING

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The article hypothesizes the existence of the dependency of the cost of cargo handling in a warehouse on the cost of storage equipment. The check of hypotheses on the example of vehicles in a warehouse is applied and groundlessness of the assumption is proved.

In the new economic conditions the important role belongs to the organization of products storage. Well-functioning warehousing, which purpose is loading, storage and shipment of goods, increases the effectiveness of the promotion of products in the supply chain from the point of speed, cost and reliability of the process. Cargo handling – the basis of a warehouse activity – is a circuit that is performed at different stages of the technological process in a warehouse. Therefore you can improve the efficiency of warehouse processes through the development of cargo handling. One way to achieve the desired result is the use of better equipment in a warehouse. However, before you make the right choice in favor of one of the loaders it is necessary not only to learn their functional properties, but also to identify the presence or absence of dependency of the cost of cargo handling on the costs of equipment for its implementation.

Thus, the aim of the research is to study the ratios of investment in equipment and the cost of cargo handling.

The object of the research is conveying equipment used in the process of loading and unloading.

When selecting storage equipment, you must consider their technical specifications to support almost all kinds of operating situations in the warehouse.

Modern warehouse must operate with a minimum use of physical force; ensure the reliability of the movement of goods, fast loading / unloading, maximum comfort and safety. The selection of high-quality machinery and equipment will improve the profitability of not only a warehouse, but also the entire supply chain in general.

Nowadays the choice of warehousing equipment for organizations, enterprises and logistics companies is a difficult decision. The difficulty is choosing between expensive high-tech equipment and cheaper but easier to use equipment.

To solve this problem we studied several types of lifting and handling equipment: reach trucks with electric lift, electric loaders, auto loaders, self-propelled stackers.

To calculate the cost of the equipment per mensem we have calculated the cost of cargo handling as the sum of depreciation, the average salary of the driver, the cost of fuel (diesel or electricity) (Table 1). Notice that all calculations are made in the prices of 1.01.2016 as well as the monetary unit of the old denomination.

Table 1 – Calculation of the cost of cargo handling carried out by various loaders

Loader name	Loader features	Calculation of cost of cargo handling
1	2	3
Reach truck with electric liftseries RSS15, 16+	– Equipment cost - 180 million rubles – Capacity 1.6 ton – Driving speed with a load of 8.5 km/h – Battery – 480Ah / 24V – Useful life – 10 years – The duration of the battery T = 28 hours	The cost of cargo handling: 272.5 + 308.7 + 199.1 = 780,3r 1) Depreciation and amortization DE = 180 * 10/55 = 32.7 million. rub.- annual depreciation DE = 32.7 / 12/10000 = 272.5 rubles per ton c. 2) The salary of the driver loader: – The path that loader passes for a month in the process of unloading 10,000 tons: P = 10,000 / 1.6 * 50 * 2 = 625 = 000m 625 km – The time required for the loader to unload 10,000 tons of c: T = 625 / 8.5 = 73,5h. – The cost of 1 hour of driver's truck: Wh = 7000 h = 000/168 RUR 0,042,000. for 1 hour – Salary of a truck driver (for the transportation of 1 ton c): S t = 73.5 * 0,042 / 10,000 = 308.7 rubles. ton c. 3) Fuel costs for truck (electricity) amount spent kW \ h = 73,5 \ 28 * 480 = 1260 Fuel costs = 1580.2 * 1260 = 1,991,052 rubles. C fuel = 1991052/10000 = 199.1 rubles per ton c.

The end of the table 1

1	2	3
Electric forklift JAC CPD 25	- Cost of equipment - 390 million. - Capacity - 2.5 tons - Driving speed with load: 10 km/h - Battery - 620Ah / 48V - Useful life - 5 years - The duration of the battery T = 28 hours	The cost of cargo handling: 1083.3 + 168 + 217.7 = 1469r 1) Depreciation DE = 390 * 5/15 = 130mln. rub.- annual depreciation DE = 130/12/10000 1083,3rub = 1 ton c. 2) The salary of a driver of a loader: - The path that the loader passes for a month in the process of unloading 10,000 tons: P = 10,000 / 2.5 * 50 * 2 = 400 = 400 km 000m - The time required for the loader to unload 10,000 tons of c: T = 400/10 = 40h. - The cost of 1 hour of driver's work : Wh = 7000 h = 000/168 RUR 0,042,000.. for 1 hour - The salary of a truck driver (for the transportation of 1 ton c): St = 40 * 0,042 / 10,000 = 168 rubles. per ton 3)The cost of fuel for a truck (electric) amount of kW / h =40\18*620= 1377,7 Energy costs= 1377,7*1580,2= 2177041,54 RUB. S El/En=2177041.54/10000=217,7 rubles per ton
Auto Forklift JAC CPCD 25+	- The cost of equipment RUB 300 million. - Capacity - 2.5 tons - Driving speed with load and 12 km/h - Useful life - 7 years - Engine type diesel/gasoline -Fuel tank capacity – 40 - fuel consumption per 100 km= 4.3	The cost of cargo handling: 625 + 139.9 + 19.1 = 784r 1) Depreciation DE = 300 * 7/28 = 75mln. rub.- annual depreciation DE = = 75/12/10000 625rub grams per ton. 2) The salary of a driver: - The path that the loader passes for a month in the process of unloading 10,000 tons: P = 10,000 / 2.5 * 50 * 2 = 400 = 400 km 000m - The time required for the loader to unload 10,000 tons of c: T = 400/12 = 33,3h. - The cost of 1 hour of driver's work: W h = 7000 h = 000/168 RUR 0,042,000.. for 1 hour - The salary of a truck driver (for the transportation of 1 ton c): St = 33.3 * 0,042 / 10,000 = 139.9 rubles. per ton 3) fuel costs = 4.3 * 4 * 11100 = 190920 rubles C fuel. = 190920/10000 = 19.1 rubles per ton
Stackers-self-propelled Series FX +	- Cost of equipment - 25 mln rubles. The carrying capacity is 1.2 tons - Driving speed with load 5.5 km/h - Battery - 180Ah / 24V - Useful life - 10 years - The duration of the battery is T = 10 hours	The cost of cargo handling: 375 + 635.9 + 430.6 = 1441,5r 1) Depreciation DE = 25 * 10/55 = 4,5mln. rub.- annual depreciation DE = 4.5 / 12/10000 = 375rub grams per ton. 2) The salary of a driver: - The path that the loader passes for a month in the process of unloading 10,000 tons: P = 10,000 / 1.2 * 50 * 2 = 833 km - The time required for a loader to unload 10,000 tons of c: T = 833 / 5.5 = 151,4h. - The cost of 1 hour of driver's work: W h = 7000 h = 000/168 RUR 0,042,000.. for 1 hour - The salary of a truck driver (for the transportation of 1 ton c): S = 151.4 tons * 0,042 / 10,000 = 635.9 rubles. per ton 3) fuel costs for a forklift amount spent kW \ h = 151.4 \ 10 * 315 = 2725.2 Fuel costs = 2725.2 * 1580.2 = 4,306,361 rubles. C el / en = 4306361/10000 = 430.6 rubles per ton

Source: own elaboration.

Table 2 summarizes the data on the cost of the purchase of each of the above types of equipment, as well as their operating costs per month (the cost of cargo handling).

Table 2 – The costs for the purchase of equipment and the cost of cargo handling

Name of the equipment	Purchase price, rubles	Cargo handling cost, rubles
Reach truck with electric lift RSS15, 16+	180 000 000	780,3
Electric JAC CPD 25	390 000 000	1469
Autoloader	300 000 000	784
JAC CPCD 25+	25 000 000	1441

Source: own elaboration.

Based on this study we can conclude that it is impossible to predict the cost of cargo handling on the basis of the cost of the loader (if the truck is more expensive, it does not mean that the cargo handling with its use will be cheaper).

Therefore it is necessary to focus on the technical characteristics of the truck to meet the requirements of the warehouse and then choose cheaper loaders from the list.

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THE STUDY OF THE IMAGE OF THE CITIES OF POLOTSK AND NOVOPOLOTSK ON THE BASIS OF THE COMPOSITION INFORMATION EVENTS AND POSITIONS IN THE RANKINGS

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The necessity of studying the image of the city with the aim of establishing its brand. The possibilities of the use of the method of analysis of the information there to analyze the image. The results of analysis of the information events in relation to the cities of Polotsk and Novopolotsk.

In modern culture the interest in the issues of forming the image of cities and regions is markedly increased. The present stage of civilized development of society is characterized by variations in the content and direction of scientific and technical progress, intensification of information and communicative interaction, the transformation of the socio-economic and political processes. The awareness of the importance of the study of the image of the territory comes to the need to compete with other cities and regions [1, p. 204].

We have considered various methods of analysis of the image of the region:

- method of analysis of the information events produced by the cities;
- survey method for the study of public opinion about the features, competitive advantages of the studied cities;
- method of analysis the positions of cities in the rankings;
- ranking method to identify the strengths and weaknesses of the studied cities.

This article presents the results of using the method of analysis of the information about it, "produced" city. This method is considered in relation to the two cities of Vitebsk region, Polotsk and Novopolotsk.

We proposed a different approach to the analysis of the information events. To this end, we have studied the publications in the media about the objects by selecting the following groups of news events: cultural, sports, economic, criminal.

Table 1 summarized the results of the analysis and allocated the total number of information events, allowing to identify in which region they mainly happen.

Table 1 – Number of identified news topics and their division in groups

Newsworthy	Novopolotsk	Polotsk
1. Cultural	10	18
2. Sports	16	9
3. Economic	9	2
4. Criminal	5	10

Source: own elaboration on the basis of a study of Internet resources.

The data presented in the table show that sports occasions in general, are dominated by cultural, informational reasons, and are widely represented. However, the ratio of these groups for the studied cities are different.

So, information occasions associated with different cultural events prevalent in the media in relation to the city of Polotsk and in relation to the city of Novopolotsk.

However, the mentioning of Polotsk in connection with the cultural events and activities is wider, which confirms the view that Polotsk is the cultural center of our Republic. Sports events are also significantly mentioned. The city of Novopolotsk is the leader in it, which positively characterizes this city. You can call Novopolotsk, the city of youth, which involves active development of sports. As for economic news events, they are definitely more in relation to Novopolotsk, which indirectly confirms its image as a major industrial centre. And finally, the most negative fact is the presence of criminal information, in this case, as it has been proved in Polotsk there were more such incidents. This, however, can be explained by the specificity of the studied sources of information (Internet resources), where such information occasions is very popular.

Next, we can evaluate the prevailing image of cities in terms of their places in some of the Belarusian rankings. So, we have studied rankings of cities in terms of their tourist attractiveness, financial wealth, level of pollution, quality of life and population. The results are presented in table 2.

Table 2 – Position of Novopolotsk and Polotsk in the rankings of cities in Belarus

The criterion for rating	The position of Polotsk	The position of Novopolotsk	The total number of positions in the ranking
Tourist attraction	2	–	5
Financial wealth	–	2	10
The level of contamination	–	1	10
Quality of life	24	19	134
Population	17	13	164

Source: compiled by the author based on the study of Internet resources.

So, the city of Polotsk is one of the most attractive tourist cities. Novopolotsk is the most polluted city in Belarus and it is almost the most financially secure. The quality of life in Novopolotsk became the second top ten cities with the highest standard of living whereas Polotsk is in the third. Population of Novopolotsk takes the thirteenth place in the ranking, and Polotsk is only the 17th of 164 cities of the Republic of Belarus.

World practice of cities branding allows us to highlight a number of reasons for designing a successful brand. So, quite successfully specific goods produced in the territory of a particular enterprise (organization) can be used. For example, in the city of Novopolotsk OJSC "Naftan" produces high-tech products (various oils, petrol, kerosene, solvents, bitumen, etc.) and distributes them across Belarus and abroad. In addition to the organizations that form the city brand OJSC Naftan plant Polymir, jvll "LLK-Naftan" LTD "Lyubava-Lux" etc.can be attributed. The brand can also be some historical events or names relating to a particular region. Thus, the history of the city of Polotsk is full of various events and dates, historical places, monuments, and names. For example, the whole world knows the name of Euphrosyne of Polotsk who is the first Belarusian enlightener, Princess of Polotsk, who became the first woman in Russia, who was canonized in the saints. In Polotsk, she founded the convent of St. Saviour (now PolotskSpaso-Efrosinyevsky monastery). Tourists will also want to visit the Sofia Cathedral, the Shaft of Ivan the terrible, the Museum and many other historical places. If to speak about modern trends, it should be mentioned that during the estimates of Belarusian scientists published the results of studies showing that the geographical center of Europe is situated in Polotsk. It gives bright features clearly distinguishes the city on the background of such Belarusian cities. Visitors of Polotsk can see the memorial sign "Polotsk – geographical centre of Europe".

For this reason we can conclude that among the major brands that can later become the basis for forming an integral image can be as well-known personalities, historical places, historical events are in Polotsk. Industry and large urban organizations (enterprises), institutions of education and sports are in Novopolotsk. This emphasizes the uniqueness of the city that should certainly be a positive basis for building an efficient brand of this city.

Thus, the development of the economy of the city has positive consequence in the form of higher incomes and living standards, as well as negative consequence is represented in the form of environmental pollution.

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THE EFFECTIVE IMPLEMENTATION OF OUTSOURSING OF TRANSPORT SERVICES IN LOGISTICS INDUSTIAL INTERPRISES

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The article considers the essence of the logistics concept of "outsourcing" as an economic category, identified the benefits of outsourcing enterprises, and also describes the stages insertion of certain business processes outsourcing.

The contents and operation of their own transportation in industrial plants require extremely high costs, this leads the user to realize the necessity of transmission of the transport sector relevant specialized organizations. Management of transport facilities has its own specific features, so passing it on outsourcing, when this direction is not relevant for the company, frees up their own resources for basic tasks.

Outsourcing (use external sources) is a process run by a third party of specific tasks, business functions or business processes, usually not part of the main activities of the company, but necessary for the proper functioning of the business [1].

Outsourcing is used to improve business processes and services by getting rid of non-core activities.

According to experts of the American Institute of outsourcing (Outsourcing Institute, USA), the outsourcing of business processes is a dynamically developing type of optimization of activity of the enterprises, with most of that growth in the field of finance and accounting. Statistics compiled in 1997 by the American management Association, showed that more than 20% of the 600 surveyed firms had outsourced at least some of the financial and accounting operations, and 80% of the administrative functions.

The advantages of outsourcing:

- Cost savings. The value of outsourcing is much lower than the cost of building its own structure. With salaries of own staff the company is obliged to deduct taxes and contributions to the relevant funds. The cost of the outsourcer is a cost of the enterprise and reduce the tax base;
- Saving the working space. Creation of the own structure requires additional office space, additional office equipment, stationery, reference and legal systems, licensed software, etc.;
- Constant no-failure operation. Own staff of the company is obliged to provide annual leave, sick leave and others, and the organization-outsourcer works on a regular basis;
- Time savings. Recruitment is a difficult task that requires a lot of time. The necessary infrastructure, technologies and experts, it's all should be in the organization-outsourcer;
- Guaranteed quality. The organization-outsourcer has in its staff highly qualified professionals and has extensive experience in similar projects [1].

For large industrial organizations of the Republic of Belarus today the actual issue is to turn to third parties of functions shipping. With its composition and transport department, in order to reduce costs, the company can use the method of transformation fixed costs into variables, highlighting the transport department in a subsidiary, or passing it to the function of transportation as a third party. In case of successful realization, the project of transformation the transport units in an affiliated undertaking – provider of transport services aims to provide the industrial enterprises the ability to use all advantages non-core activities to outsourcing, above all, lower costs, high efficiency of management of financial flows and the release of additional funds.

In taking this decision, the company should justify its economic efficiency by matching quantitative and qualitative indicators that make up the complex characteristics of the project and allows us to assess how profitable the enterprise is according to its practical implementation. In modern conditions the priority is given to the evaluation of quantitative indicators for the analysis method and cost comparisons. Besides we need to add up all the costs, variables, and constants that are associated with the operations and maintenance of its own car park and match them with the costs that will be borne by the organization, if we give all these functions to the outsourcing company (affiliated undertaking) – transport organization [2].

Outsourcing of transport is not a profitable business. For this service provider, it is beneficial only in the case of a long-term contract. At the same time for transmission to the client under external control such non-core assets as a transport department may be the only opportunity to increase its efficiency. Industrial enterprises are implementing modern management system, as a rule, on the primary production, at the same time rarely used in these systems to manage non-core assets, including transport departments. That's why business leaders do not have the full picture: what is the real market value of transport services, on the one hand, and what the costs necessary to maintain and develop their own transportation resources in the other hand. As a result, enterprises often spend considerable means for own transport, although today it is possible to save money [3].

There are stages that take certain business processes outsourcing, including:

1) the stage of technological, organizational and economic audit of the motor transportation economy of the enterprise, which allows to identify its current status, to determine the real costs of transport and so on;

2) the stage of tariff setting, which provides the cost of transport services not to car-hours, but to scope of work;

3) the stage of conditions for the establishment of outsourcing in the organization and signing of contracts;

4) the stage of direct work of the outsourcing organization, as well as addressing all legal and organizational issues related to the early provision of services on an outsourcing basis.

That is why, the transfer of certain business processes outsourcing not only allows to optimize expenses, to free up human and time resources, to avoid the necessity to solve problems related to the transport operation, but also to focus on improving the quality of manufactured products (performed works, rendered services), it is more efficient to organize the work of the main production units. This, of course, leads to significant economic effect.

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Economics

UDC 331

THE PECULARITIES OF LABOUR POTENTIAL DEVELOPMENT

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The category of "labour potential" is covered in this article from its qualitative and quantitative parties , the analysis of a ratio of categories "population" – "human resources" – "manpower" – "labour potential" is carried out, the structure of labour potential and its components according to B. M. Genkin is allocated. The directions of the analysis of labour potential concerning the components characterizing a state and development of this category at all levels of formation are also allocated.

Introduction. Today one of the main factors of the production demanding the greatest expenses is labour. Labour is always a decisive factor in production development everywhere. An indispensable condition of process of labour is the connection of a worker having set of physical and spiritual abilities to labour – manpower with all the means of production. Therefore, the main productive force of society is manpower. The complexity and versatility of the problems of the increase in the efficiency of using the manpower are caused by its organic interrelation with all phases of public reproduction that predetermines the need of their complex studying.

The main part. Everyone has made a recognition of a crucial role of the main productive strength of the person all around the world. "Human potential" gained recognition as the main capital of market economy. Labour potential is an integrated feature of quantity, quality and measure of cumulative ability to work by which possibilities of the certain person, various groups of workers and able-bodied population are generally determined by participation in socially useful activity.

Qualitative characteristics of labour potential could be described by means of a set of demographic, medico biological, vocational, social, psychological, ideological and political, moral, scientific and technical features.

The quantitative party of labour potential is defined by demographic factors (natural increase, state of health, mobility, etc.), the needs of production for labour and opportunities of satisfaction of need of able-bodied population for work. Labour potential is quantitatively characterized by able-bodied population at its active age, i.e. manpower which any economy has during each of this period [1].

The author's understanding of a ratio of such categories as "population" (P) – "human resources" (HR) – "manpower" (M) – "labour potential" (LP) according quantitative and qualitative aspects is presented in the table 1.

Table 1 – The ratio of such categories as "population" (P) – "human resources" (HR) - "manpower" (M) – "labour potential" (LP)

Categories been compared	Quantitative party	Qualitative party
"Population" – "Human resources"	P = HR	HR > P
"Human resources" – "Manpower"	HR > M	HR > M
"Labour potential" – "Manpower"	LP > M	LP > M

Source: own design, based on the study of literature.

The difference of the concept "labour potential" from the concepts "labour" and "manpower" lies in that labour potential is the personified labour considered in assembly of its qualitative characteristics. This concept, at first, allows to estimate the extent of the use of potential opportunities of both a separately taken worker, and their set, providing the practical activization of a human factor, and secondly, to provide qualitative (structural) balance in personal development and material factors of production.

The structure of labour capacity of society includes [2, P. 41]:

1. Labour potential of a personality.
2. Labour potential of staff of an enterprise, an organization, a firm.
3. Labour capacity of a branch or a region.

The formation of labour potential is its quantitative and quantitive rise. It does not finish by the end of the any exact stage. It is the continuous process continuing during functioning of any person's abilities, one's labour is not only consumed, but at the same time it is reproduced and has been developed since any improvement of professional, intellectual knowledge, acquisition of experience, skills, etc. takes place.

Various factors exert an impact on the formation of the labour potential.

At the macroregional level: economic and social policy; in modern conditions – a basic change of a control system and redistribution of functions between the center and regions, development of various forms of ownership and employment.

At the level of organization: features of labour organization and management of personnel, scientific and technical and cultural factors.

At the level of the worker: psychophysiological features and both social and demographic status, education, experience, personal characteristics, etc.

To reveal the directions of the analysis of labour potential and to estimate it, it is necessary to allocate a number of the components entering labor potential. The author suggests to use the classification of components by B. M. Genkin who carries [3]:

– health;
– morality and the ability to work in a team;
– creative potential;
– activity;
– organization and assertiveness (harmonious unification of personality traits);
– education;
– qualification;
– resources of working time.

The indicators characterizing labour potential at various levels of formation on the components given above are presented in the table 2.

Table 2 – The indicators characterizing the labour potential of a person (worker), an enterprise (organization), society for its components

Components	Person	Enterprise (Organization)	Society
Health	Working capacity, absence time at work because of diseases	Loss of working hours because of a disease and injuries, costs of ensuring health of personnel	Costs of health care, mortality on age
Morality and the ability to work in a team	Attitudetowardspeoplearound	Relationships between employees, losses from conflicts	Attitude towards disabled people, children and aged, crime, social tension
Creative potential	Creative abilities	-	-
Activity	Aspiration to realization of abilities, enterprising	The number of inventions, patents, improvement suggestions on one working	Income from author's rights, number of patents and international awards
Organization and assertiveness	Accuracy, discipline, thrift, obligation, decency	Lossesfrommisconduct, purity	Legislation, quality of roads, transport, observance of contracts
Education	Knowledge, the number of years during study at school and Higher Education Institution	Share of experts with the higher and secondary education in total number of employees, costs of professional development of personnel	The average number of years of training at school and Higher Education Institution, a share of expenses for education in state. budget
Qualification	Ability andskillslevel	Quality of products, loss from spoilage	Export earnings, losses from accidents
Resources of working time	Busy time within a year	The number of employees, number of working hours during a year of the first employee	Working ability of the population, quantity of the occupied, an unemployment level

Source: [4].

On the basis of the studied literature, the author suggests allocating the following directions of the analysis of labour potential concerning the components characterizing a state and development of this category at all levels of formation:

– Dynamics of mortality by age;
– Health care expenses;
– Subjective evaluation of health status;
– Dynamics of professional diseases;
– Dynamics of the number of registered crimes;
– Dynamics of specific weight of crimes connected with the special part of criminal code;

– Corruption level;
– Rate of inventive activity dynamics;
– Specific weight of shipped innovative products in total volume of shipped products;
– Specific weight of shipped innovative products which are new for the world market in total volume of shipped products;
– Effectiveness of the use of employed in knowledge-intensive activities;
– Level and dynamics of the domestic expenses on research and development (% of GDP);
– Structure of employed by level of education;
– Structure of unemployed by level of education;
– Expenses on education (% of GDP);
– Structure of labor resources by source of forming;
– Structure of the labor force by ways of use;
– Dynamics of labor force;
– Dynamics of the level ofeconomically active population;
– Structure of employed by age;
– Structure of unemployed by age.

Conclusion. The formation of the labour potential of any worker depends on his wishes and abilities to work, on degree of his initiative, activity and enterprising in work, on ability to create. Labor potential of a worker is the dynamic phenomenon as it changes as a result of accumulation of know-hows, skills, increases in education level and qualification. Decrease in labour potential of a worker is objectively caused by age parameters of health, that is aging of a human body.

The labour capacity of the organization represents the greatest possible use of working efficiency in production taking into account the psychophysiological features, level of professionalism, qualification, know-how, under optimum organizational specifications of workers. The interaction of the workers increases greatly their simple sum as it generates the effect of the collective work.

The labour capacity of a society embodies a potential possibility of the involvement and use of able-bodied population of the country in the national economy.

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UDC 657

THE ECONOMIC ESSENCE OF ACCOUNTING OBJECTS ON THE STAGES OF THE CONCESSION CONTRACT LIFE CYCLE

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In the last decade the economy has developed a special quality of interaction between the public and the private sector, called public-private partnership. Nowadays there are processes of structural change and the development of new businesses in the economy.

The concession is not a new form of management. It exists in various forms, perhaps, about the same as the state exists. This is due to the fact that the state has always delegated the management of its property or of the other economic entities, and the state itself has had the mandatory side of the concession contract. For example, in France the concession practice has already lasted for more than a century. Even in 1882, it was contracted by the municipal authorities to the Perret brothers for more than 15 years, who undertook it to supply Paris with water, still about 70% of the population in Paris have been provided with water concessions from private firms.

In our country there is a process of formation of the state innovation policy aimed at improving the quality and the standard of living, at overcoming the technological country lag, the transition to a qualitatively new level of resource conservation, the growth of labor productivity, the capital productivity, the reduction of material consumption, the energy consumption, the capital intensity of production, the achievement of its high competitiveness.

The development of these sectors of the economy is impossible without creating the appropriate infrastructural support. Russian infrastructural objects are characterized by a high degree of wear and the low degree of use and management efficiency. As shown from the international and historical experience, the most effective mechanism for innovation in the infrastructural sectors is a form of public-private partnership, such as the concession. However, there are still many questions about the methodology of public-private partnership as a whole and the concessional relations in particular, so they are treated differently in the paper-works of Belarusian, Russian and foreign researchers and the legislature. Today, there is still no single approach to the usage and the implementation of the state regulations of the concession mechanism even in the country's legislation, in order to successfully implement the various forms of public-private partnership.

In the existing educational and scientific literature there exists no universal approach to the definition of the concession and the stages of the concession contract life cycle. The Law of the Republic of Belarus "On concessions" is the only normative legal document that defines the essence of the concept of the concession. The Law of the Republic of Belarus "On Concessions" № 63-W came into force on the 12th of July, 2013. Chapter 1 defines the concession as "the right, based on the concession contract, to possess and to use the object of the concession or the right to exercise the activity". In accordance with Art. 1027 of the Civil Code the contract of franchise "is a contract in which the franchisor undertakes to provide the user of commercial organizations and (or) individual entrepreneurs with the exclusive right to use something in their entrepreneurial activity; the complex of exclusive rights are: the right to act on behalf of company's name, the right of the commercial designation of the holder, the right to protect commercial information, to use the trademark, the service mark, etc." [4]

Regarding the regulation of concession contracts in the IFRS, one can specify two basic standards: IFRIC (IFRIC) 12 "Service Concession Arrangements for the provision of services" and SIC (SIC) 29 "Disclosures, that means the concession agreements on the provision of services". However, these documents regulate only concession agreements in the field of public services related to the provision of infrastructure such as the development, the construction and future maintenance of roads, bridges, tunnels, prisons, hospitals, airports, water distribution facilities, energy supply systems and telecommunication networks [6]. Extractive industries do not apply to this area of activity that is why they can not be resolved by those provisions in the development of the accounting system under a concession agreement, thus the extractive industries should be guided by these analogies.

There are four main stages of objects under the concession:

1) the formation of objects under the concession in the Republic of Belarus and the concessional objects of administrative-territorial units, their adoption, publication in print media and their replacement in Internet lists, their identification on the concession contract and the identification of the selection method of the concessionaire;

2) the determination of the concession authority, the development, coordination and approval of concession proposals;

3) the organization and the conduction of the auction, the definition of the concessionaire;

4) the submission of the concession contract.

The Law of the Republic of Belarus "On concessions" dated July 12, 2013 has established the following three types of concession contract which may be conducted on the territory of the Republic of Belarus:

– the full concession contract;

– the concession contract on product sharing;

– the concession contract for the provision of services (works). [5]

The Standard Concession Agreement (full concession agreement) is generally similar to the lease contract: a private enterprise assumes all risks and costs on the design, construction, equipping and commissioning of the facility.

The Concession production sharing agreement. When signing the agreement, the contractor pays the state a bonus, often referred to as a subscription. Some treaties provide the payment of a relatively small signing bonus and give later a further payment. It is called the start or bonus for development [5, p. 48].

Despite the fact that the right to the object never goes to the contractor, the concession agreement on product sharing includes mostly provisions for expulsion royalty to the state of the host country. Typically, the royalty rate agreement varies from 0 up to 14–15%. Royalties are usually paid in cash [5, p. 51–52].

All product sharing agreements contain an article on cost recovery. This is a procedure that allows the contractor to compensate the part of the costs.

The agreement shall specify which costs are recoverable, the procedure for their repayment, limit cost recoveries and the ability to transfer non-refundable deferred costs. In most cases it is assumed that recoverable costs that are not offset during the current year may be paid out during the coming periods. In addition, in some contracts it is allowed to share some compensation costs which are somehow linked to the development stage.

In most contracts the procedure for cost recovery is especially important for the contractor since it sets the proportion of costs that can be compensated. The most common procedure for the reimbursement is as follows:

1) the operating expenses of the current year;

2) the unreimbursed expenses for preparation and development facilities;

3) the unreimbursed expenses for the construction and facility maintenance;

4) any investment loans [5, p. 58–59].

The concession contract of services is similar to the concession agreement of product sharing. For example, the contractor should pay the signing bonus and the state receives royalties. The difference lies in the fact that payments are made to the contractor in the form of remuneration for services rather than as a percentage from the profit after the product selling.

The majority of service contracts with risks have fixed expiry date. Often the contract for the provision of services related to activities is aimed at restoring the territories of the concession object [58, p. 73–74].

The concession contract for the provision of services often includes the fee which is calculated according to the actual costs of operating expenses and capital expenditures. The difference between them does not correspond to the usual accounting concepts adopted in daily practice. In each contract the definition of operating costs and capital expenditures should be given, establishing the category of expenses.

Operating expenses include the costs of:

1) labor, materials and services used in everyday product operations, storage, handling, transportation and processing of hydrocarbons, measurements and other activities, including maintenance of the equipment;

2) the general management and head office in the host country crafts, general services, including technical and other services, material supply, transportation, rent of special and heavy equipment, personnel, public relations and other expenses incurred abroad;

3) the equipment which has been operating at least for a year;

4) all the technical and arbitrary costs which are not included in the number of specially mentioned as a capital expenditures [5, p. 76–77].

The Instruction of income accounting and expenses №102 and IFRIC 12 "Service Concession Arrangements for the provision of services". The income and the expenses according to their nature, to their conditions and to the management of the organization are divided into:

– benefits and losses of operating activities;

– benefits and losses of investment activities;

– benefits and losses of financial operations [7].

The type of the concluded concession agreement in each country dependes to a greater extent on the owner's rights as well as on the legislature and on tax policies which govern the ownership and the usage of accounting entities. The state is usually the owner in the concession contract, but sometimes it can share its ownership and just be in partnership relations with someone else [5, p. 43].

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Economics

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EXCHANGE RISK HEDGING WHEN CARRYING OUT EXCHANGE OPERATIONS

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The article analyses the problems caused by the establishment of a floating market exchange rate regime in the Republic of Belarus. The liberalization of the currency market makes it necessary to use the strategies of risk hedging due to unfavorable changes in the exchange rate dynamics.

The transition of the National Bank to a more flexible FE (foreign exchange) mode as well as external shocks associated with significant fluctuations of prices for oil and world currency courses have brought up to date the issues of improving FE risk management system.

Since the beginning of 2015 the National Bank has pursued the policy of a flexible exchange rate of the Belarusian ruble.

The exchange rate is determined by the market, which is economically positive. At the same time, the volatility of the exchange rate has increased, which determines the need for currency risk insurance.

This necessitates the use of security policies and risk hedging of losses due to unfavorable changes in the exchange rate dynamics.

The goal of risk management is not to eliminate it but to achieve the optimal risk structure and to transform it into acceptable forms.

The result of the effective FE risk management is the reduction of losses from changes in world currency rates, the reduction of the uncertainty of future cash flows, providing a more efficient financial management and the reduction of income fluctuations.

The greatest stability of the currency market is provided by theparticipants who don't seek additional revenue from exchange rate fluctuations.

First of all these are importers and exporters who use currency trading for goals that do not depend on short-term fluctuations of exchange rate differences.

One of the most common and effective ways of risk management in the field of currency market trading is the application of the approaches of technical and fundamental analysis of the dynamics of FE rates and the use of derivative financial instruments for currency risk hedging.

Hedging transactions (hedging) are forward sales or purchases of a foreign currency (or the execution of an option strategy) to reduce an exchange risk exposure connected with the assets or liabilities (or forecasted transactions) denominated in a foreign currency. They are not held for speculative purposes, butare carried outmainly to minimize the risk.

The main purpose of hedging is the achievement of the optimal risk structure, that is, of a balance between hedging benefits and its cost.

The main constituents of the hedge are the following main derivative financial instruments (hereinafter - the DFIs):

- Forward: Actual exchange of currencies where settlement takes place more than two days after the trade at a fixed rate. The forward price is comprised of the spot rate plus the forward points.

- Currency futures: A transferable futures contract that specifies the price at which a currency can be bought or sold at a future date. Currency futures contracts are legally binding and counterparties that are still holding the contracts on the expiration date must trade the currency pair at a specified price on the specified delivery date.

- FX option: A contract that grants the buyer the right, but not the obligation, to buy or sell a specified currency at a specified exchange rate on or before a specified date. For this right, a premium is paid to the seller, the amount of which varies depending on the number of contracts if the option is bought on an exchange, or on the nominal amount of the option if it is done on the over-the-counter market.

- FX swap: Spot foreign exchange transaction simultaneously reversed by a forward contract. The difference in rates reflects interest rate differentials between the two currencies.

The world practice shows that the hedge is one of the main and the most popular ways of risk management and control.

According to experts FE market entities of the Republic of Belarus has gone out in a limb because of the current situation.

"Due to the fact that many companies in Belarus carry out export and import operations, are obliged to sell 30% of its currency revenue and have costs and revenues in different currencies, this kind of exchange rate fluctuations have a negative impact on them, increasing risk of potential losses due to unexpected leaps in

exchange rate" – experts of the Research Center of the Research, Forecast and Monitoring and of the German Economic Team in Belarus believe.

Experts consider that such a situation poses Belarusian companies "the question of how to deal with this kind of currency riskand to protect their revenues from the volatility of the Belarusian ruble.

Economists estimated that a growing number of companies in the world hedge these risks. The authors of the research give data showing that Western companies prefer to hedge about 40% of FE risks.

It should be noted that in Belarus there are currency risk hedging instruments, however, they are not widespread yet because of the complexity of accounting of these transactions as well as some other problems.

Currently, in the Republic of Belarus derivatives market is immature both in terms of the Belarusian Currency and Stock Exchange andOTC market.

Regulatory barriers: for transactions with derivative financial instruments (including the concepts of "derivative financial instrument" and "derivative security"), as a result there are problems with identifying and recording these types of instruments.

Accounting methodology: Insufficient methodology andpractice of accounting of transactions with derivatives market instruments and, in particular, instruments of currency risk hedging.

As the chairman of the Belarusian Currency and Stock Exchange stated in 2015 the volume of futures transactions which make it possible to hedge currency risks amounted to only 16.6billion rubles in Belarus. "At present currency futures in Belarus are not widespread due to poor awareness of customers as well as unresolved taxation and accounting issues of these transactions", - the Chairman of the Exchange claimed.

Studies of economic features of financial instruments used in the world and now in the Republic of Belarus too, revealed significant differences in the essential characteristics of financial instruments, as well as in their quantitative parameters in various segments of the global monetary and financial market.

The use of futures transactions of the financial market is a tool of insurance of one of the currency risks - the danger of loss of conversionof foreign money into the nationalone or vice versa.

Financial instruments should be used both for immobilization of idle cash for the needs of the national economy, control of inflation and for effective hedging of all risk groups aiming at minimizing the results of their impact on assets in place.

Multivariance of risks when conducting transactions in the open market naturally requires both on the part of the central bank and on the part of other participants of the FE market using different combinations of ways to hedge risks.

The National Bank as a future single regulator should pay special attention to the development of this market.

Thus, in order to minimize exchange risks implementing currency transactions it is necessary to develop the uniform concepts and rules of practice for the application of all exchange risk security tools taking into account both world experience and the peculiarities of the national monetary and financial market functioning.

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Economics

UDC 338.1

EFFECT OF BELARUS OIL REFINING PROBLEMS ON INDEX NUMBER OF INDUSTRIAL PRODUCTION AND GROSS DOMESTIC PRODUCT

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The article deals with the influence of refinery utilization rate on the index of the gross domestic product and the balance of foreign trade. The study period is the last 3-5 years. Possibilities of oil supply diversification and prospects of use are determined.

Nowadays, according to the concept of socio-economic development of the Republic of Belarus for 2016-2020, the main purpose of country's development is to improve the quality of life due to the growth of economic competitiveness, attraction of foreign investments and innovation development. For effective development of economic sectors, innovative growth and an increase in the rate of the development of high-tech industries is necessary.

Oil refining and petroleum chemistry are strategically important sectors for the Republic of Belarus. Oil refining market of the Republic of Belarus is represented by the two largest companies – OJSC "Naftan" and JSC "Mozyr Oil Refinery ". To diversify their product ranges and improve product competitiveness in domestic and global markets the companies have large-scale modernization, aimed at increasing of oil refining output. The volume of crude oil output is about 1.65 million tons, so the main supplier of raw materials for oil refineries is Russia – about 22 million tons of oil per year.

According to the types of economic activity the production of coke, oil products and nuclear materials, as well as the chemical industry in the structure of the manufacturing industry occupy 31.5% of Belarusian products. According to the National Statistical Committee of the Republic of Belarus (Belstat), the volume of industrial production according to economic activities (OKED) in 2014-2016 for the period January-December is presented in Table 1.

Table 1 – The volume of industrial production of the Republic of Belarus

Economic activity	2014г.		2015г.		2016г.	
	Million. rub.	%	Million. rub.	%	Million.rub..	%
Industry total	673 850135	100	738 381164	100	79 414,8	100
Manufacturing industry, including	605038 645	89,79	650 499 452	88,1	68 809,3	86,64
Manufacture of coke and refined petroleum products	109 575 417	18,11	120 686 346	18,55	10 484,1	13,2
Production of chemical products	66 522 623	9,87	84 107 803	12,93	6 648,6	8,38
Other economic activities	68 811 490	10,21	87 881 172	11,9	10605,5	13,36

Thus, on the whole in the industry the volume of production of coke, refined petroleum products and chemical products was 27.98% in 2014, 31.48% in 2015 and 21.58% in 2016 of the total output of manufacturing industry. Decline in the share of oil refinery and petrochemical production in 2016 is directly related to the decrease in oil supply of raw materials from Russia in the 4th quarter of 2016.

Figure 1 shows the dynamics of the production of motor gasoline, diesel fuel, oil fuel during 2016. As it can be seen from the chart, by the end of the year the production of gasoline has sharply reduced by 32%, of diesel fuel by 42.4%, of liquid fuels by 59.3% in reference to production volume in January 2016.

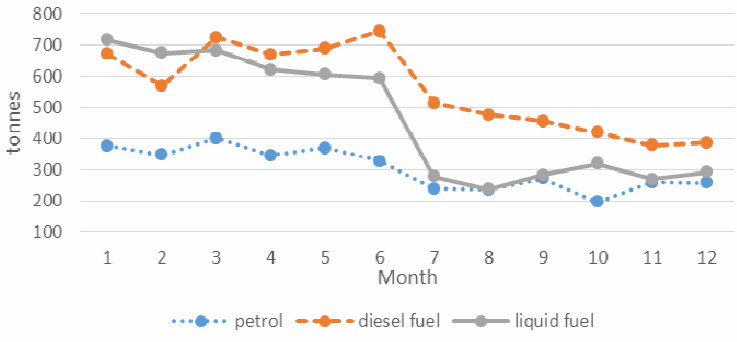

Fig. 1. Dynamics of production of petroleum products monthly in 2016

If to make an analysis of indicators of gross domestic product (GDP) in US dollar terms over the past few years, we can see that the same sharp decline as in 2016 was in 2009, during the global financial crisis (Figure 2).

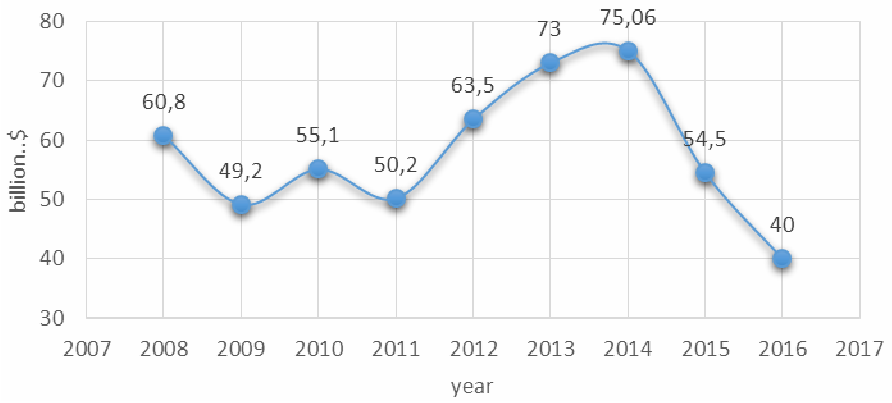

Fig. 2. Dynamics of GDP during the period 2008–2016

Performed analysis of the dependence of oil supplies from Russia to Belarus for refineries and the industrial production index according to the types of economic activity is presented in Table 2.

Table 2 – Indices of industrial production during the period 2010–2015

Year	2010	2012	2013	2014	2015
Oil received for processing, mln. tons	16,5	21,7	21,2	22,3	23,0
Industrial production index according to economic activity (in percentage to the previous year) for the manufacturing industry – Production of coke, oil products and nuclear materials	88,7	109,0	79,1	108,6	100,5

The data from the table show the interconnection and influence of the amount of refined oil on the index of industrial production. Low index of industrial production in 2010 is due to the effects of the global crisis, as Belarus is very sensitive to changes in Russian economy, and in 2013 there was a sharp rise in the dollar, which is reflected in the index is not for the best.

Thus, the loading of oil refineries with raw materials by 100% and sales of products of oil refining and petrochemical industries ensures positive dynamic and positive growth of rates in the industry and it has a significant impact on industrial production and gross domestic product.

Reduction of oil supplies by the end of 2016 has dramatically reduced the index of industrial production in oil refining, which led to a drop in industrial indicators as a whole (Fig. 3), and will have a negative impact in the future on other sectors of the economy. By the end of 2016 the most important indicators of socio-economic development of the country have not been fullfilled: GDP – 97.4% compared to the previous year, the export capacity – only 88.6%.

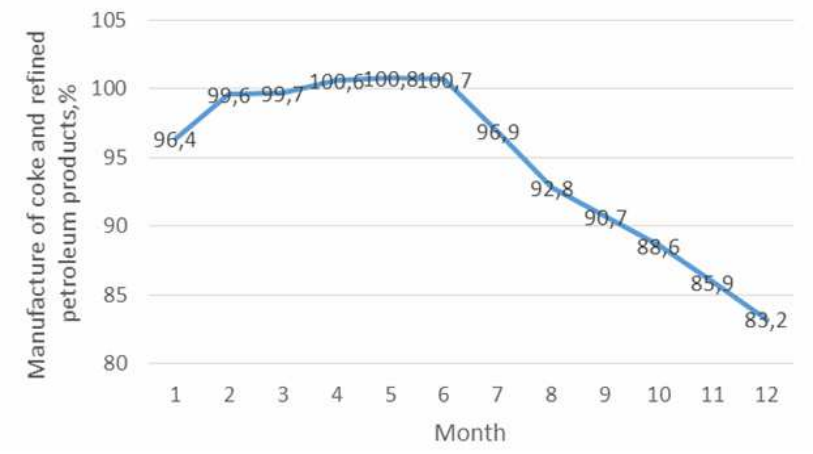

Fig. 3. Industrial production index monthly in 2016

The oil refining industry of Belarus depends on imports of raw materials from Russia, and failure to make supply fully is reflected in terms of oil exports, the value of the profits of enterprises and the reduction of tax revenues. Table 3 shows the import and export of goods for raw materials and products of oil refining enterprises for 2015–2016.

Table 3 – The balance of foreign trade in petroleum products

Name of product	January-November 2015		Name of product	January-November 2015	
	Imports, thousand USD	Exports, thousand USD		Imports, thousand USD	Exports, thousand USD
Crude oil, including gas condensate	5296147,2	545116,9	Crude oil, including gas condensate	3685835,8	421958,8
Petroleum products	457429,3	6220579,6	Petroleum products	499811,4	3779466,2
Light distillates and products	183683,3	1381045,6	Light distillates and products	110992,5	1089101,7
Other distillates and products	272735,7	4839533	Other distillates and products	388801,2	2690364,5
Petroleum gases and other gaseous hydrocarbons	2551297,7	180920,5	Petroleum gases and other gaseous hydrocarbons	2355170,2	115471,2
Totals	8761293,20	13167195,6	Totals	7040611,1	8096362,4
Balance	4 405 902,40		Balance	1 055 751.30	

Thus, the foreign trade balance for 2016 for oil products and other products of refining industry compared with similar data for 2015 has decreased by almost 4 times, which is a negative factor for the development of the national economy.

According to various experts, the current political and economic situation in the relations with Russia, strongly affect the volume of wholesale trade in industrial production, and, consequently, reduction in the rate of GDP can become one of the worst in recent years.

The Government of Belarus is considering various options alternative solutions. However, due to the fact that in recent years Belarus has refused from the purchase of raw materials from other regions, except for Russia, our Republic came into direct dependence on oil supplies.

The search for alternative supply of energy recourses to the country is high priority task today. It is currently considering options for the purchase of Venezuelan and Iranian oil. In 2011 according to the swap contract between the Belarusian Oil Company, the Venezuelan PDVSA and the State Company of Azerbaijan (SOCAR) Belarus imported crude oil Azeri light on the trunk pipeline system. But, despite the fact that Belarus has a very favorable geographical position, the Republic does not have an outlet to the sea and is not directly linked to highways with any country potential exporter. Possible construction of various "bridges" or a new pipeline significantly increases the cost of pumping oil. Therefore, it is necessary to improve the logistics of Railway Transport of the Baltic States and Belarus; consider ways to deliver Arabic, Libyan oil; use in the reverse direction the pipeline Surgut - Unecha - Polotsk - Ventspils.

Changing of the conditions of supply of raw materials, in the case of Russian zeroing of crude export duties on oil and petroleum products will lead the Belarusian oil refineries to the need to buy oil almost at world prices, which will lead to the loss of processing and unprofitable enterprises. Therefore, it will be rather difficult to ensure the efficient production of oil products and raw materials for the petrochemical complex for the performance of basic indicators of socio-economic development, one of which is the gross domestic product and increasing the country's export potential.

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ADDITIONAL INCOME OF COMMERCIAL ORGANIZATIONS AS AN OBJECT OF CONTROL

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In this article the essence of notions "financial independence" and "additional income" is dealt with. Different sources of additional income are considered and the classification model of additional income of commercial organizations for its financial independence has been developed. The blocks "analytic procedures" and "auditing procedures" have been developed. Also the method of auditing of additional income for financial independence is considered. When developing the method of analysis, the complex system of indicators for informational support of financial independence of commercial independence is offered.

A significant number of organizations incur serious losses, which subsequently leads to bankruptcy in modern conditions of economic instability. The main task for any organization is the possibility of the subsequent existence and development. Additional income provision for the purpose of financial independence is one of the ways to stabilize financial condition. The Decree of the Ministry of Finance of the Republic of Belarus №102 dated 30.09.2011 set The Instruction on accounting of income and expenses. According to this instruction income and expenses depending on their nature, conditions and directions of organization activities are divided into:

• income and expenses from operating activity – are reflected in account 90 "Incomes and Expenses from operating activity";

• income and losses from investment activity – are reflected in account 91 "Other Incomes and Expenses";

• income and losses from financial activity – are reflected in account 91 "Other Incomes and Expenses".

However, it should be noted that an organization can generate additional income in order to strengthen its financial independence which is understood as the ability of an organization in a risky environment to develop a plan package, which guarantees constant solvency, opportunity to cover any expenses of commercial organization in accounting period, which in its turn determines stability of commercial organization and the degree of protection of creditors' interest [1, p. 288]. The interest represents the formation of additional income in order to strengthen the financial independence. Additional income is an income of commercial organizations, gained from additional investments in long-term values, cash equivalents, venture capital funds and others with a view to the financial independence of commercial organizations [2]. As tough standards and regulations for the development of sources of additional income do not exist, each organization is free to choose the sources of additional income. Therefore, taking into account national features, economic opportunities of an organization and using the principle of diversification we can offer the following classification of additional income for financial independence for accounting purposes by the following features, which are represented as a classification model in figure 1.

In the current economic conditions there is a need to efficiently control the ongoing economic processes, to efficiently manage assets and liabilities, to prevent negative phenomena and to increase revenues. One of the types of control, namely audit, is used to get this information, as well as confirmation of the reliability of financial statements, control of accounting objectivity and financial discipline.

According to the National rules of auditor activity the audit objective is to increase confidence of the intended users in the accounting (financial) statements, which is achieved by: obtaining by an audit organization reasonable assurance that accounting (financial) statements as a whole are free of material misstatement resulting from error, and (or) fraud, that provides an audit organization with the grounds for the opinion of whether accounting (financial) statements are in all respects corresponds to the basis for the preparation and submission of accounting (financial) reporting; the auditor's report on accounting (financial) statements in accordance with the requirements of the national rules of audit activities [3].

Audit procedures of additional income will vary depending on audit objectives. In the benefit of this study two directions of procedures, performed by an auditor during audit of additional income, were developed. These two blocks are presented in figure 2.

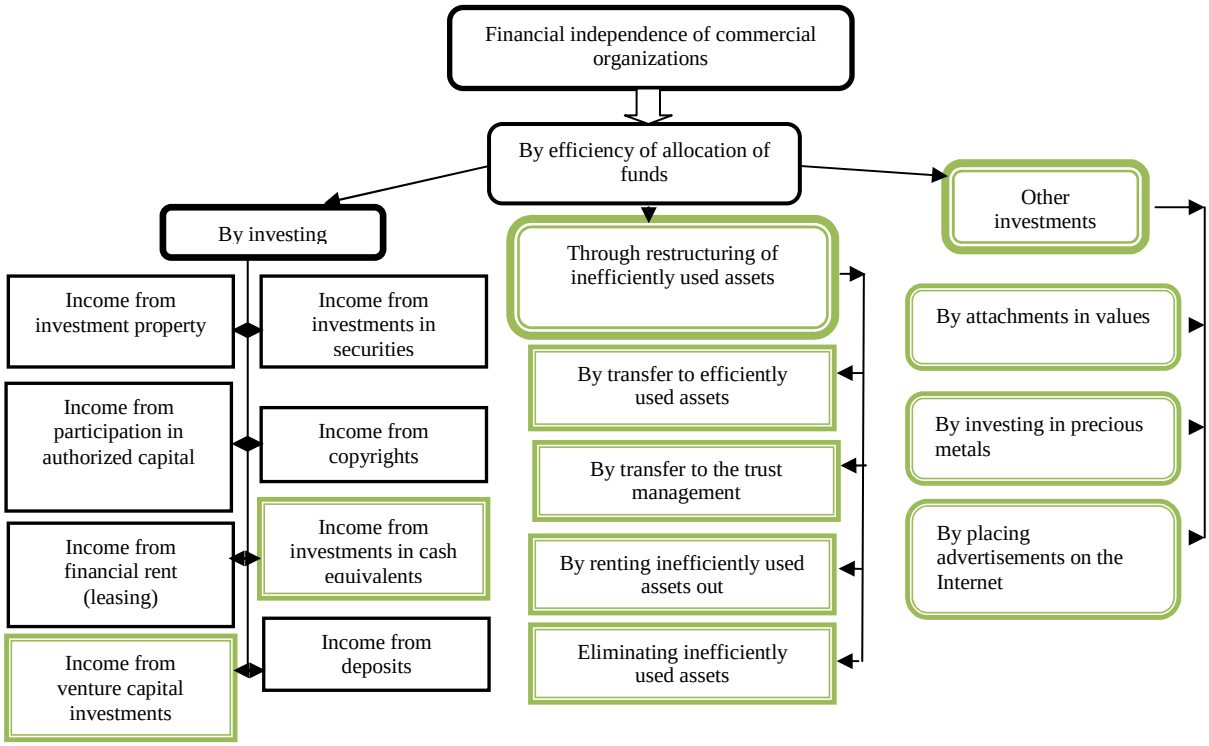

Fig. 1. The proposed classification of additional income
of commercial organizations with a view to their financial independence

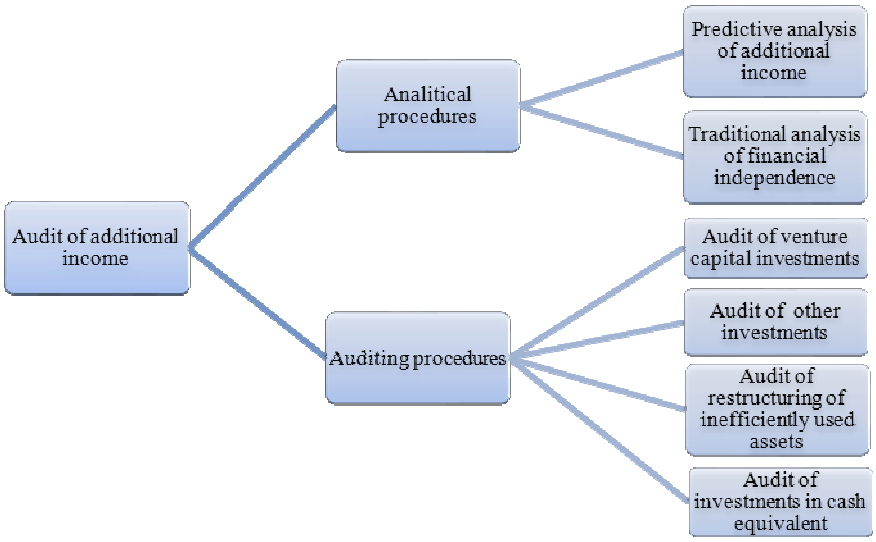

Fig. 2. The blocks of procedures during the audit of additional income of commercial organizations
with a view to their financial independence

Let us briefly consider each block separately. Thus, two directions represent the unit «analytical procedures»: predictive analysis of additional income and traditional analysis of financial independence. If an auditor is involved not only in verifying the authenticity of financial statements, but also as an expert, a predictive analysis of additional income seems to be appropriate.

The elements of predictive analysis are showed below:

- the evaluation of risks;
- the evaluation of attractiveness of an investment project;
- the evaluation of payback period;
- the evaluation of additional income;
- the evaluation of estimated profitability of investments [4, p.292].

This predictive analysis lets us evaluate risks, the level of possible future cash flow.

Among the elements of traditional analysis of financial independence of commercial organization, there are the following:

- the evaluation of provision of financial and material resources;
- the evaluation of solvency in relation to counterparties;
- the evaluation of dynamics of financial results from investment and financial activity;
- calculation of the main indicators of profitability of a commercial organization;
- the evaluation of financial independence of a commercial organization.

The proposed methodology of traditional analysis can serve as a source of information for management decisions. This analysis will not only evaluate the provision of financial and material resources, the level of solvency in relation to counterparties, calculate the indicators of profitability, but also assess financial independence in general.

Offering the block «Audit procedures», we can single out the following procedures: audit of venture capital investments, audit of investments in cash equivalents, audit of restructuring of ineffectively used assets, audit of other investments. The role of an information support plays the documents and records of quantitative and accrual accounting registers. The sources of information for monitoring transactions under the account of additional income for the purpose of financial independence are presented below (Table 1):

Table 1 – Information support of auditing additional income for the purpose of financial independence

Groups of informational sources					
1. Statements of commercial organizations			2. Discount register	3. Accounting records	4. Accounting policies
Accounting statement	Statistic statement	Tax statement	Main book; ledgers № 10, 13 and 10/1 and analytical accounting statements, operational records, automated account data sheets (account card, account analysis, turnover balance sheets, statements of current accounts 01, 02, 06, 08, 58, 83 , 84, 86, 91, 99	Administrative, executive, of accounting processing, combined, reference;	Regulation on the accounting policy; Working chart of accounts; Forms of primary documents for fixed assets accounting; Schedule for document flow;
Form 1 "Balance sheet", Form 2 "Profit and Loss", Form 3 "Statement of changes in equity sources", Form 4 "Statement of Cash Flows", Form 6 " Statement on the use of targeted funding";	Form 12-F (profit) "Report on financial results", Form 12-F (calculations) "Report on the status of settlements", Form 4-F (invest) " Report on investments in the Republic of Belarus from abroad and investments of the Republic of Belarus abroad", Form 1-F (RPP) "Report on the individual financial performance", Form1-F (leasing) "Report on leasing" Form 1-UN (advertising), "Report on the organization of promotional activities";	Declaration on the calculation of value added tax and income tax;			

Proposed audit algorithm is shown in Figure 3 [5].

Further, during the audit, an auditor develops an audit strategy, conducts significant estimates of the plan and documents the plan of the auditor's expected work for each algorithm of the proposed audit procedures.

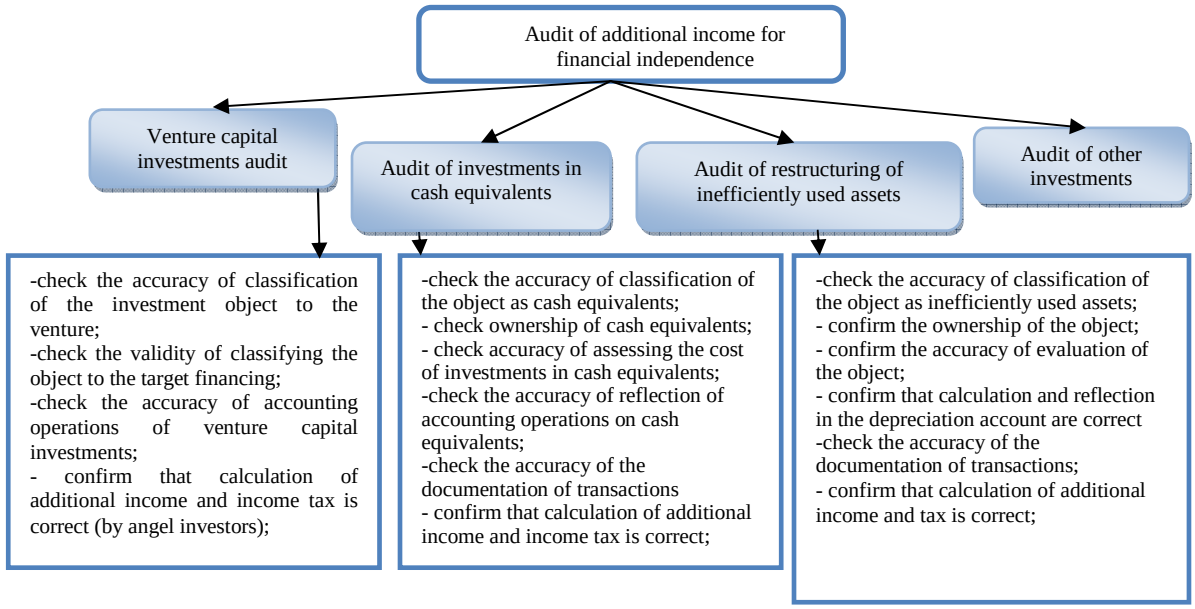

Fig. 3. Algorithm of audit procedures of additional income accounting

Thus, the study of financial independence, in accordance with the proposed algorithm has allowed:

• to justify the usefulness of the use of concepts "financial independence" and "additional income" in science;

• to develop a classification model of the additional income, including items such as income from venture capital investments, income from investments in securities, income from investments in cash equivalents, other investments;

• to develop a method of prediction analyses of additional income of commercial organizations and of traditional analysis of financial independence for carrying out an auditor's expert evaluation;

• to develop analytical and audit procedures for the purposes of the audit of additional income.

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UDC 336.77

THE MECHANISM OF STATE REGULATION OF INNOVATIVE ACTIVITY IN THE REPUBLIC OF BELARUS

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The peculiarities of innovative activity in the Republic of Belarus and the peculiarities of financing innovation are presented in the article. The methods of direct financing and indirect financing methods of innovation are defined. The ways to improve the innovation activity are suggested.

One of the key areas of recovery of the national economy and achieving high rates of development of the Republic of Belarus is the state direct participation in the innovation sphere and the formation of favorable conditions for the development of innovation by providing tax incentives. In modern conditions the state regulates innovation activities by direct and indirect methods [1].

Under the methods of financing of innovative projects we understand such methods of financing innovations that reflect the use of specific sources of funding in conjunction with the economic situation of the company, plans its current activities and development [2].

1. Bank loan. The firm develops business plans and investment projects. The Bank checks the calculations and draws conclusions. When deciding on a loan, the Bank enters into a loan agreement with a firm (the sum of issued loans, the procedure of their use, terms and order of repayment, interest rates, credit, forms of security obligations). There can be two kinds of such funding:

a) investment lending (line of credit on non-earmarked credit). The source of the refund is the whole economic activity of the borrower, including income of the project;

b) project financing (line of credit for the trust loan). The source of repayment of the loan is the project itself. Project Finance is riskier.

2. Innovative credit. Innovative banks that are interested in implementing profitable inventions and innovation funds that provide financial support to innovative firms through funding of venture (high risk) projects specialize in the issue of innovation credits.

3. The issue of securities. Equity financing helps to raise funds for a big investment in innovative firms. To attract additional funds innovative firm may place on the market different types of securities: stocks, bonds, bills, derivatives (options, warrants, futures contracts, vouchers). The issue can be done through various channels: by direct communication, on the stock exchange, through an investment dealer companies, banks and brokerage firms.

4. Raising funds for the establishment of venture enterprises. The challenge of venture capital financing is aiding the growth of the particular business by providing a certain amount of money in exchange for a share in the share capital of the company or the stake. Venture capital is long term risk capital invested in stock of new and growing companies with the aim of obtaining high profits after the registration of these companies on the stock exchange.

5. Self-financing. It can be done in two ways: from the profit distributed for development, and from the sinking Fund.

6. Proceeds of short-term projects for funding long-term ones (bundling of projects). This type of financing is also called bundling of long-term innovation project with short-term commercial with the goal of maintaining large-scale innovative project profit from the implementation of targeted projects.

7. The implementation of unnecessary and renting (leasing) temporarily disposable assets. The implementation of redundant assets with the investment of funds received in the implementation of the project increases the capital of the company. This method as it moves forward is transformed in self-financing. Often this is a forced step, which is typical for small innovative firms that are not able to mobilize borrowed funds.

8. The pledge of property. Document defining the relationship between the debtor and the creditor is a mortgage. It is a security, a debt obligation whereby the lender in the event of non-debt borrower gets a particular property (land, buildings). In the field of innovation mortgage is issued when the borrower is granted a loan, the provision of which is secured. One of the forms of collateral is a mortgage, in which land and buildings serve as collateral with the aim of obtaining loans. Of all these methods, the pledge of property is the most inefficient and risky, because it is difficult to ensure the successful completion of an innovation project.

9. Proceeds from the sale of know-how. There are two reasons for licensing. The first is that some leading firms are so confident and so quickly create an innovative product that they immediately sell licenses after the development of new technology. While competitors start producing products, they will create a new technology

and once again will be out of competition. The second reason is that the firm does not have sufficient resources for independent development of the final product, and they are forced to sell licenses.

10. Forfaiting. Forfaiting is applied in the case when the innovation company has no funds to purchase any of the products (materials, components) required for domestic production. The buyer is looking for seller of goods that he needs, and having a preliminary agreement with a commercial Bank (the third party of the transaction), negotiates supply on forfeiting terms.

11. Factoring. It is a complex of financial services provided by the Bank to the client in exchange for assignment of receivables. For innovative firms, these services may include the financing of supplies of goods, insurance of credit risks, given state of receivables and provide regular relevant reports to client, monitoring the timeliness of payment and work with debtors. Funding for supplies when factoring provides that immediately after delivery the seller pays to the Bank a significant portion of the amount of supplies as advance payment. In different countries, the long-term size of the payment is from 50 to 90% of the amount of supply. Balance (total supply minus the amount of long-term payment and deduction of Bank Commission) is paid to the seller on the day of receipt of payment from the debtor. In the course of factoring services delivery for any, even the most insignificant amount can be financed. Since factoring is a long-term program of working capital financing, factoring contract is concluded for an indefinite period and will be valid indefinitely, until both parties are satisfied with the mutual cooperation [3].

The indirect methods are the ones, the essence of which is to provide innovative projects with the necessary material and technical, human and information resources. Those methods include:

- hire-purchase or obtaining lease (rent) required for the project equipment;
- acquisition of a license (for technology used in the project) with paying the latter in the form of royalties (percentage of sales of the final product, special for this license);
- placement of securities with payment in the form of supplies or obtaining a lease of required resources;
- attracting the required workforce and attracting deposits for the project in the form of knowledge, skills and "know-how" [2].

1. Credit purchase and rental of logistical means, any tangible property and other proprietary rights for the term, linked to the implementation period of the innovative project and making a profit, due to which trade credit will be serviced and repaid;

2. Buying of tangible property and other property rights in installments at the same timing with the expected income from the project (obtaining rights to use them without property rights that will pass to buyer upon final payment of installment and interest; in the case of non-payment of regular installment amounts and interest the owner withdraws the property from the buyer, deprives of his rights to use);

3. You can purchase a license for the technology behind the innovative project with a full set of services and supplies upon payment of the license solely in the form of "royalties" (in this case percentage of sales of products, services, mastered by the license is very high);

4. Placement of shares and other securities paid in the form of supplies or rental of required logistical (including area, land, etc.) and information (patents, know-how) resources equal to their market;

5. The same when raising contributions in kind from partners in the statutory funds of the private or target joint ventures, joint projects or consortia;

6. Attraction of labor resources, employment of workers with the payment of the securities of the company issued under innovative project (almost with paying future dividends out of profits on the investment project).

The essence of these methods of financing is obvious and boils down to the fact that the provision of innovative projects is carried out directly required for their implementation with material and technical, labor and information resources - bypassing the stage of raising money and spending it to acquire these resources [2].

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UDC 331

MODERN TECHNOLOGY IN THE LOGISTIC MARKET

T.YU YARMOSH, MALEI ALENA

The article reveals the peculiarities of the Belarusian logistic market. The activities of service providers in the logistic market of the Republic of Belarus are examined and the rating in terms of development of logistics is defined.

Among the main driving forces in the international logistic market we can single out the globalization of the world economy, outsourcing, mergers and acquisitions, optimization of logistics costs at all levels of logistic systems and innovations in logistic activities due to technical and technological progress.

The analysis of the global logistic market trends indicates that the logistical structure has outgrown the framework of national economies, and nowadays the formation of the global logistics infrastructure is ongoing. For example, in the European Union the national logistics system is restructuring, they gradually merge into common European logistics system. A similar restructuring of the logistics systems of the countries of the Customs Union must take place in the near future. The first step of combining logistics systems has passed successfully – customs tariffs are unified, the function of customs control is transferred to the external border of the Customs Union. But much remains to be done to create a Eurasian logistics system.

Current trends in the global market for the production of goods and services are so that companies direct their efforts and capital on core activities, allowing outsourcing companies or, less often, specially created subsidiaries to implement minor functions. In full, this trend is observed in the logistics sector too.

Due to the current course of development of the world business, the number of logistics providers (intermediaries), delivering comprehensive logistics services, has significantly increased. Logistics services are a wide range of operations related to the procurement, storage and movement of goods [4]. It is worth noting that, according to Western classification of logistics activities 5 levels of logistics service (Party Logistics – PL), which differ in the range of services, and at the technological level are currently singled out:

1 PL (First Party Logistic) - Independent Logistics

This service is also called logistics insourcing and is characterized by the fact that freight owners perform all logistics operations themselves. This technology goes back to 70-80s of the last century.

2 PL (Second Party Logistic) - Traditional Logistics

The second name of this technology is "second party logistics" or partial outsourcing of logistics. With this service, the company performs just part of the logistics functions (planning, warehousing, supply chain formation), however, it outsources transport company (contractor), as it does not have their own transport. In this case, usually, contractors usually have a constrained functional and transport area and use their own transport fleet (tangible assets).

3 PL (Third Party Logistics) - comprehensive logistics outsourcing

A 3 PL provider is a specialized company which is outsourced to perform all or most of the logistics operations, that is, a freight owner is not engaged in outbound logistics. Providers of this type provide a wide range of services and have a highly qualified staff. A 3 PL – provider doesn't take part in the entire supply chain planning of the company and is not involved in client's economic activity. A contractor provides a range of services which include: transportation of goods, warehousing, cross docking, inventory management, packaging and freight forwarding.

4 PL (Fourth Party Logistic) - integrated logistics outsourcing

A service, in which a freight owner attracts a third-party logistics company, and confers it the right to provide services not only in comprehensive transport logistics, but also in planning and designing supply chains, as well as transfers responsibilities for logistics business processes management at the enterprise.

It should be noted that if a client company uses the services of a 3 PL – operator, 4 PL will manage them as well. Today, a large number of fairly large companies, for example, TOSHIBA, SONY, FORD and many others use 4 PL – provider's services. By implementing modern technologies in their businesses, companies increase their competitiveness and expand their presence in the global market.

5 PL (Firth Party Logistic) - «virtual» Logistics

When a 4 PL - provider begins to provide network business services, it becomes a 5 PL – operator. A striking example is online shops such as ebay.com, aliexpress.com, amazon.com, etc. Many experts believe that 5 PL 5 – providers do not exist nowadays and they are just a theory. They believe that, in fact, it is just the improvement of a 4 PL - system: the automation and optimization of the work on finding logistics solutions [1].

Thus, all the providers listed above are logistics outsourcers which, using global information technology space, are able to provide a full range of services.

Long-term growth of logistics services in Europe is estimated at 4-8%, which is significantly higher than the GDP growth. At the same time by 2020, experts of McKinsey consulting firm predict a fourfold increase in world trade, which will cause a manifold increase in the demand for logistics services. More than half of the industry is concentrated in three countries such as Germany, Britain and France.

According to experts, the Russian market of logistics services is estimated at 55-60 billion USD, and the share of transport sector and freight forwarding by all modes of transport is 55%, the sector of warehouse services is 13% and the service sector for the supply chain integration and management is 32%. The volume of the Russian market of logistics services by 2015 is expected to more than double and amount to about 115 billion USD.

In Belarus the volume of logistic market is much more modest, and according to experts it is 4 billion USD a year, logistic services generate 7-8% of GDP. Analyzing the logistic market of the Republic of Belarus, it should be noted that the country has about three thousand companies and individual entrepreneurs, providing logistics services. However, the logistic market is 99.5% formed by 2PL-providers. In the 2PL-services market small companies providing certain types of logistics services dominate. And the most developed sector is freight forwarding.

The volume of 3PL market in Belarus is negligible and amounts to less than 0.5%. These are mainly logistics companies that have their own logistics centers, warehouses and provide a wide range of logistics services (transportation, warehousing, inventory management, distribution, customs clearance, etc.). Consequently, in Belarus there is an acute shortage of 3PL providers working with modern logistics technologies. Moreover, world-class 3PL-providers are poorly represented in the Belarusian market [2].

Thus, the increase in the volume of logistic services in the Republic of Belarus will encourage the growth of investments in logistics infrastructure.

There can be a long debate on the definition and functionality of each of the five PL - providers, as it's still far to a common approach and a consensus on the definition. At the same time, the needs of modern business set new goals including hiring PL-providers. And if a company is thinking of engaging one of them, they should weigh all the pros and cons, understand what they will lose (e.g. jurisdiction), and what will get (e.g., high level of service and high price of their products), and only then make a decision.

Do you need to contract a 4PL, which will coordinate the work of a 3PL, which in its turn will coordinate the work of 2PL and so on, as in a well-known fairy tale, or it doesn't worth to multiply mediators that make goods more expensive [3].

Thus, on the basis of the above-stated trends, it can be concluded that the logistics market, and, in particular, logistics outsourcing has a strong potential for its development in Belarus. The processes of globalization, integration and cooperation, as well as growing demands of customers encourage companies, that want to be competitive in the market, to apply logistic approach to building their business, and use a tool such as logistics outsourcing in their activities.

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UDC 339.7=111

LIBERALIZATION OF FOREIGN ECONOMIC ACTIVITY OF THE REPUBLIC OF BELARUS

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The main forms of the liberalization of the foreign economic activity of the Republic of Belarus are introduced. The statistics for export and import of foreign trade of the country is analyzed. The main ways of the development of the foreign economic activity of the Republic of Belarus are described.

The liberalization of foreign economic activity implies the necessary logical consequence of the liberalization of internal economic relations. The foreign economic liberalization policy must ensure the accelerated development of internal market relations and their involvement in the world economy; prevent the damage to the development of national production.

The main forms of the liberalization are the following:

- broadening access to foreign investment;
- export liberalization (abolition of customs, quotas, licences and breaks);
- ensuring convertibility of national currency;
- removal of protectionist restrictions for import.

The Republic of Belarus belongs to the number of smaller industrial countries with restricted national resources and open economy that directly determines the specific character of its foreign economic activity.

Over the past few years the dynamics of international trade of the Republic of Belarus is characterized by high rates of economic growth, increase of scientific, technical and transit potential; the participation in integration processes within CIS and also the development of trade and economic relation with other countries.

The total world output of final consumption output (the total GDP of all countries) for Belarus is approximately 0,04%. Belarus takes just 0,1% in the total volume of world trade.

According to the National Bank of the Republic of Belarus the foreign trade turnover of goods and services in January-August 2016 equals 87.3% in comparison with the same period in 2015 [1].

Analyzing the foreign trade turnover of goods and services in the same period is also characterized by the dynamics of services import and decrease of goods import, 101,7% and 87,2%.

The most important export positions in foreign trade for goods are oil and oil products, potash and nitrogen fertilizers, cargo trucks, tractors, sugar, milk and meat products, chemical fiber, metal production. At the same time the import base includes mainly energy supply, raw materials, manufacturing equipment.

The main trade partner of the Republic of Belarus in the sphere of goods is the Russian Federation. (40% of export, 50–60% of import). The European Union takes the second place (30% of export, 20% of import).

The Republic of Belarus also has developed trade and economic relations with the United Kingdom, the Netherlands, Germany, Lithuania, Italy, Belgium, Poland, Latvia.

Among CIS countries the central trade partner is still the Russian Federation, the second one is Ukraine, the third – Kazakhstan.

The dynamic development of relations is typical for partners in Asian region – China, India, Indonesia, and also in Latin America – Brazil, Venezuela, Ecuador.

Within the external trade of services the export includes mainly transport, computer and construction services. The European Union is one of the main trade partners in foreign trade of services (50% of export). The Russian Federation has only 25%.

The development of relations with EU is possible due to the effective involvement of Belarusian economy into European international economic, scientific, financial structures, active participation in a complex political and economic dialogue within many international and regional organizations.

According to the data it is possible to make a conclusion that further liberalization of foreign economic activity of the Republic of Belarus in the field of foreign trade depends on import and export parts of the provided goods and services. That is why the following factors can lead to the successful foreign trade ensuring:

1. research and technical potential;
2. tourism;
3. increase of cargo traffic through the Republic of Belarus due to the beneficial geographical position;
4. infrastructure development;
5. conditions ensuring export increase;
6. collaboration broadening in cultural, social and ecological spheres.

The entry of the Republic of Belarus into World Trade Organization (WTO) is also one of the possible perspectives. It will provide not only the development of foreign trade with other countries, but also ensure the additional opportunities for export and import, attraction of capital investment, reduction in the cost of borrowing.

The widening of internal market boarders is one of the principle aims of foreign economic activity. Cheap, but highly skilled labor force, beneficial geographic position, scientific and technical potential can become competitive advantages of the Republic of Belarus on the world market.

The attraction of foreign investment is one of the most important tendencies of Belarusian economy development. Direct investments are the most optimal for the Republic of Belarus. They will not influence the balance of payment and lead to the increase of debt instrument.

During the first half of 2016 the real sector of the Republic of Belarus (excepting banks) received 4.7 billion US dollars of gross foreign investments: direct – 3,9 billion USD, portfolio – 0,0008 billion USD, others – 0,8 billion USD. Among the major investors of the Republic of Belarus in the first half of 2016 are the following:

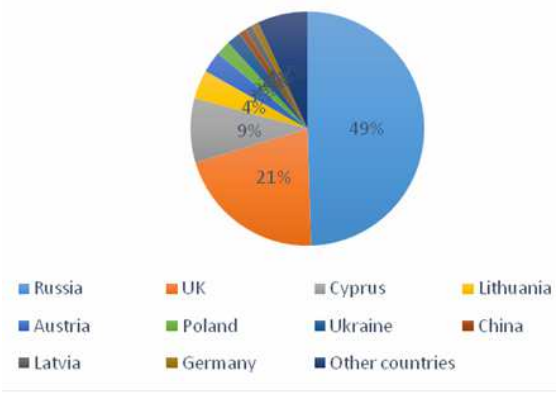

Fig. 1. Main investors of the Republic of Belarus in the first half of 2016

Note: The private development.

Nowadays foreign capital is mainly invested in light industry (catering, trade, transport services). Such a placement of foreign investment is not very effective. Taking into account the rich skilled, scientific and technical potential of our country, there is a need to use own scientific development, the creation of unique technologies, attraction of foreign capital in high-tech fields – electronics, information technology, scientific developments.

One more factor, which leads to the broadening of foreign economic activity of the Republic of Belarus, is the formation of financial, industrial groups and the transnational corporations that can ensure the implementation of social, economic and environmental developments.

It is also necessary to point out the creation and further development of free economic areas as one of the directions of stable development of the Republic of Belarus.

Free economic areas are aimed at the creation and development of manufactures, which are based on new technologies, increase of working places, export growth and import replacement, attraction of foreign investment. According to statistics on September 1, 2016 there are 419 resident companies (over 124 thousand people) that operate in free economic areas.

The main advantages of free economic areas in the Republic of Belarus are:

• Exemption from land tax;

• Exemption from property tax on buildings and facilities;

• Financing costs for the creation of engineering and transport infrastructure [2].

Thus, the competent realization of goals and objectives will create all necessary conditions for the liberalization of foreign economic activities of the Republic of Belarus. It will result in improving of the population welfare and ensuring of competitiveness in the global market.

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ECOLOGIZATION OF THE ECONOMY: FOREIGN ASPECT

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The article considers the experience of developed countries in the field of ecologization the economy and specific actions aimed at protecting the environment, the results of a successful environmental policy pursued by the European Union in recent years, the influence of environmental taxation to stimulate work with alternative energy sources.

Today widespread processes of globalization and international integration have made the EU the most powerful mechanism of influence on global environmental policy. The European Union has made its own measures in the field of environmental protection in the past 50 years.Large-scale environmental activities were held, a strong legal base for the regulation and coordination of environmental activities of the Member States was created, and new approaches to the protection and improvement of the environment were developed and used.

Economically significant success has been achieved in a number of countries for the implementation of alternative energy sources. In the 1990s the mass construction of wind power plants began in France and Spain. Already hundreds of small and medium-sized cities in these countries are illuminated by "wind". Energy saving technologiesare introduced actively.

The European Commission estimates by 2020 the EU will be able to create in the renewable energy industry 2,8 million workplaces. The share of the industry will account for 1.1% of GDP [1]. The share of alternative energy sources in the gross consumption is presented in Figure 1.

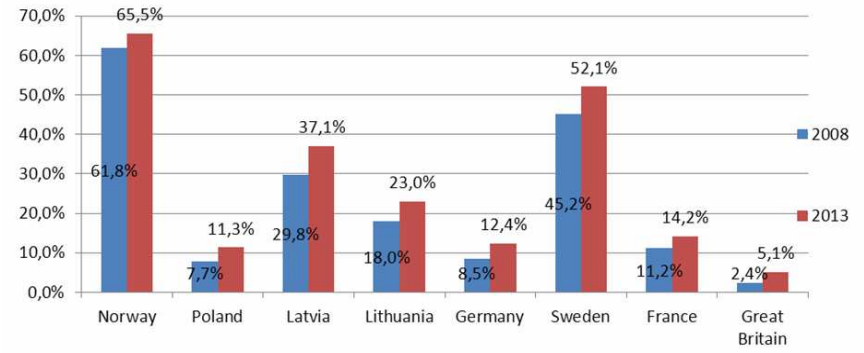

Fig. 1. The share of renewable energy sources in gross final consumption

Source:own development based on [2].

It is worth noting the high rate of renewable energy in final consumption in countries such as Lithuania and Latvia. Our neighbors have achieved truly outstanding results in the field of "green energy".Taking into account such successes of the Baltic States, the massive investment in this area of the economy is extremely attractive, and most importantly, profitable. The experience of Latvia and Lithuania can be very useful for the Republic of Belarus.

Consider the weight of the share of electricity produced from renewable energy sources.

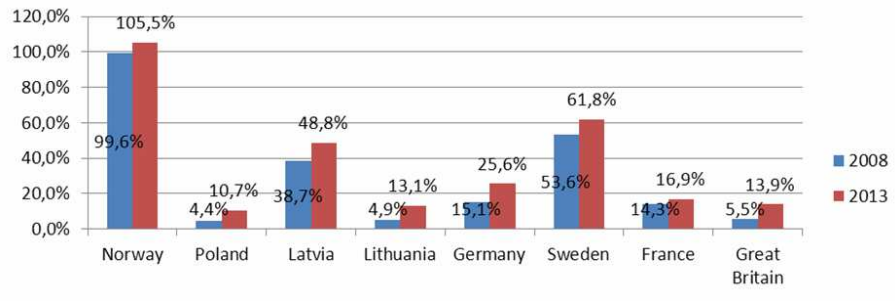

Fig. 2. Electricity from renewable sources

Source:own development based on [2].

Norway for several years is a country that fully meets the needs of the country's electricity through renewable energy sources.In the production of electricity per capita Norway ranks first place in the world. At the same time, despite the presence of large hydrocarbon reserves, 99% of electricity is generated by hydropower plants, due to the presence of significant water resources. A third of the produced electricity is consumed in Norway by metallurgical industry. Nuclear power in the country is absent. Also note again the results of Latvia. In 2013 the country is sufficient in electricity by nearly 50% and all this thanks to regenerative energy.

The growing "environmental demand" causes supply.Environmental market appeared. Among the new productions, rapidly developing in the last decade, occupies a worthy place the environmental industry: the production of water treatment plants, filter plants for disposal and recycling of industrial and domestic waste and etc. In Germany a powerful industry of environmental equipment, which are successfully operating several thousand enterprises. The turnover of the environmental business in the 1990s was estimated in billions of DM per year. The market of environmental technologies, consulting, audit and other services is rapidly growing. Every year in Germany, France, Spain and other European countries the World Fair of environmental technologies and the equipment is conducted on which the transactions are carried out on hundred millions of dollars. Systematically the network of protected areas is growing. Thanks to government programs in Denmark, a special environmental regime has a third of the territory, in Germany and Austria has a quarter. Agriculture in the developed countries has entered a new stage: the steadily declining arable land and other agricultural land; the replacement of the mechanization and the chemicalization in agricultural production it comes to ecologization. Increasing demand for organic food stimulates the development of agricultural production without the use of pesticides, fungicides and fertilizers. The most active this process is progressing in Switzerland and France, where the implementation the program of ecologization agricultural production is directed to a third of investments intended to the agricultural sector. In The UK sold a quarter of food – the so-called ecological products are grown "old-fashioned" methods. Due to the high level of ecologization the economy, beyond recognition changed once the most environmentally dirty region of Germany – the Ruhr, which is now instead of place of coal waste heaps is situated man-made forest-park zone.

In recent years environmental policy has become one of the most important direction of activity of the European Union. In this area, designed and formed, as shown, a successful system of environmental legislation, the provisions of which are implemented in practice. It should be recognized that the EU is on the right holds a leading position in the environmental policy, successfully solving many environmental problems of the continent and world as a whole. It can be noted that in developed countries considerable experience management and financing in the environmental field have been accumulated and tested on the basis of environmental taxation systems.

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