РЕСПУБЛИКА САЛАЛАРЫ МЕН АЙМАҚТАРЫНЫҢ ЭКОНОМИКАЛЫҚ ДАМУЫ ЖӘНЕ ОЛАРДЫҢ ӘЛЕМНІҢ БӘСЕКЕҚАБІЛЕТТІ 30 ЕЛДЕР ҚАТАРЫНА ҚОСЫЛУ МӘСЕЛЕЛЕРІ

ПРОБЛЕМЫ ЭКОНОМИЧЕСКОГО РАЗВИТИЯ РЕГИОНОВ И ОТРАСЛЕЙ В СВЕТЕ ВХОЖДЕНИЯ РЕСПУБЛИКИ В ЧИСЛО 30-ТИ КОНКУРЕНТОСПОСОБНЫХ СТРАН МИРА

PROBLEMS OF ECONOMIC DEVELOPMENT OF THE REGIONS AND SECTORS IN THE VIEW OF ENTERING THE REPUBLIC INTO 30 COMPETITIVE COUNTRIES

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Models of human capital development in single-industry towns of East Kazakhstan

The development of single-industry towns is one of the most actual problems of Kazakhstan nowadays, the solution of which can give a good impetus to the recovery of the economy not only in some regions, but also in the country as a whole. Analysis of human capital is the most important factor in the development of modern innovative economy, ensuring the development of the economy and society, including human resources, their knowledge, tools of intellectual and managerial labor, habitat and labor activity, ensuring the effective and rational functioning of human capital as a productive factor of development. In this context, issues related to the maintenance and development of human capital have priority, the potential of which should be fully utilized in the framework of industrial-innovative and integration development of individual regions and the country as a whole. The article presents the results of assessing the prospects of human capital of single-industry towns of East Kazakhstan region in the conditions of industrial-innovative and integration development of Kazakhstan. Within the framework of the selected models of development of single-industry towns, general directions of development and support of private initiative and small business in the territory of a single-industry municipality are proposed.

Keywords: monotown, human capital, human potential, social policy, comprehensive development plan, investment.

The success of socio-economic development of single-industry town is largely determined by the quality of strategic management, which is a systematic process by which local authorities determine the pattern of their future and ways of achieving it in the conditions of limited resources of the city.

For the development of modern small single-industry towns of Kazakhstan government adopted the Program of development of monotowns for 2012–2020, approved by Government decision in 2012. The aim of the Programme was the modernization of the system of regional development based on modern principles. The program gave one of the mechanisms for the implementation of the Forecast scheme of territorial-spatial development of the country till 2020 [1].

Subsequently, the public bodies responsible for socio-economic development of the country, was conducted the critical analysis of existing policy documents in the field of regional development. This analysis

revealed that under the current Programmes institutional and administrative resources on the practice were insufficiently coordinated and often duplicative. Existing industry program was revised, and in June 2014 made a decision to systematize them. An earlier decision of the Government of the Republic of Kazakhstan from May 25, 2012 № 683 on approval of the Program of development of monotowns for 2012–2020 repealed by decree of the Government of the Republic of Kazakhstan from June 28, 2014 № 728.

From January 1, 2015 the Program of regional development up to 2020 (2) was approved. The program was developed on the basis of combining the following five previously existing programmes: «Regional development», «Program of development of monotowns for 2012–2020», «Modernization of housing and communal services for 2011–2020», «AK Bulak for 2011–2020», «Affordable housing 2020». The program provides along with the development of large cities and agglomerations, urban development «third level», it is small and single-industry towns.

Revised criteria for the classification of cities of Kazakhstan to small and single-industry towns, counting on public support, their classification by geographical, transport location. This Program includes 41 small town, with a population of as of 1 January 2016 is 947,2 thousand people.

The restructuring program of state support of monocities significantly complicates the process of conducting research and pushing to find new ways to resolve the problems of single-industry towns of Kazakhstan.

Human capital development has social, socio-economic and economic results. The social result of the development of human capital leads to changes in the system of social stratification of the population on indicators of social capital, and also reflected in the development of a culture of individual employees, labor groups and the organization as a whole. Socio-economic outcome of the development of human capital is the improvement of the social structure of society through the transformation of professional differentiation of society, which leads to increase of professionalism of workers, to reduce unemployment. The economic result of the development of human capital is to increase the efficiency of workers, increase their income, increase the income of the organizations, where each employee is a member, and also due to the increase of income taxes increase of income of the region and society as a whole.

The main risks of single-industry towns is the likely sharp increase in unemployment and decline in living standards of the population, with the production decline of the main enterprise or group of enterprises dominating industry, which significantly affects the reduction of human capital of single-industry towns.

The main reasons for migration outflow of population from mono — high unemployment and self-employment, and low incomes of the population, the desire for education.

Another problem of out-migration of the working age population of single-industry towns has become a trend of an aging population. In some cities, the proportion of the population above working age exceeds 18 % (the lowest population of Ridder and others).

In the labor market of single-industry towns remains a mismatch of supply and demand.

On the supply side in the labor market at present are mainly former villagers who moved from the nearby rural areas. Qualification of relocated rural residents is often very low and does not meet the requirements of the labor market.

As a result, there is a need for action on the reproduction of personnel potential on a qualitatively new basis, based on the perspectives and priorities of development of economy of monocities.

Thus, for most single-industry towns of Kazakhstan proposed the strategy of diversification non-diversified economy. The inhabitants of these cities were especially hard felt recession of the economy and living standards, large enterprises, most of which are city-forming, very much influenced by the global decline in production and consumption, which inevitably leads to lower human capital of these towns.

Diversification of the city's economy is the reduction of risks, characteristic of single-product economy, increasing diversity of support industries and increase employment. For further human capital development of monocities it is necessary to consider the direction of diversification.

Thus, processes affecting the diversification of Kazakhstani economy, to have a scientific approach and to rely on research scientists in this field. Company towns with their own specialty, made long before gaining the independence of Kazakhstan, have the necessary capacity, including human capital for economic growth with some support from the state.

The development of single-industry towns is one of the most actual problems of Kazakhstan nowadays, the solution of which can give a good boost to the economic recovery not only in separate regions but also in the whole country. In this way priority to have the issues related to the maintenance and development of hu-

man capital, whose potential should be fully used in the framework of industrial-innovative development and integration of individual regions and the country as a whole.

For effective implementation of the program of urban development until 2020 priority activities should be the activities in the framework of the program of development of small and medium-sized businesses (SMEs), training to maintain optimal employment and development of infrastructure projects.

Implementation of programs of single-industry towns will provide the growth of competitiveness, diversification of the economic structure, development of entrepreneurship and business, social and engineering infrastructure, improving the quality of life and overall future sustainable development of cities in the long term, which ultimately will affect the improvement of their human capital.

The development of small businesses in single-industry towns is constrained by a number of factors. We present them in order of [2]:

– minimum entrepreneurial activity of the population, due to the influence of generations focused on wage labor in the city-forming enterprise;

– lack of qualified personnel, formed their aging, on the one hand, the migration of young people in economically developed cities and regions, on another hand and associated with limited opportunities for training and qualification required small business specialists;

– generally low accessibility and poor roads in settlements limits the availability of resources and access to the consumer.

In this regard, of particular interest is the State program of industrial-innovative development of Kazakhstan for 2015–2019 years (PIID-2) in the innovative sector is a key sector, development of which is largely determined by the results of scientific research and development, including: the industry of mobile and multimedia technologies, nano- and space technologies, robotics, genetic engineering and other high-tech products related to 5 and 6 technological structure (TL5 and TL6). Focus on product development TL5 and TL6 in the new program of the SP IID-2 is of strategic importance because it creates the basis for the formation of «knowledge economy» adequate to the new technological level of production.

For the organization of production TL5 and TL6 in the structure of the internal potential of the regions must prevail «human capital»: (80 % — TL5 and about 97 % — TL6). The proportion of «natural capital» is significantly reduced (up to 20 % at TL5 and 3 % in TL6) [3].

Thus, in these technological structures requirements to the quality of human capital increase even more significantly. In such industries it is impossible to use not only a person with a high school education, but often with secondary special education. People should be involved in the highest level of scientific knowledge, whose number in this period is vastly increased. Therefore, for production of TL5 and TL6 it is required to have high scientific potential, characterized by high levels of human capital have a good base of training specialists of higher qualification.

But does this mean that in regions with low development of science and human capital the prerequisites for the formation of production TL5 and TL6 do not exist? The answer may be one: this may not indicate that in this region there is no possibility for the formation of the industrial complex of the 5-th and 6-th technological industries. For example, South Korea in 1963 produced a GDP per capita of $100 in the substantial absence of industry, in 2009 GDP per capita grew by 278 times and made 27800 U.S. dollars. It is a part of a group of world leaders on manufacture of consumer electronics, cars (5,4 % of the world market), courts (59 % of the world market) and integrated circuits (14 % of the world market). Malaysia in 1969 produced a GDP per capita of $80, the industry is virtually nonexistent. In 2009 GDP per capita totaled 14081 United States dollars. Growth was 176 times. This is among the world leaders in the production of chips (the first in the world) and home appliances.

The formation of production TL5 and TL6 extends the challenges of improving the welfare and quality of life, protection of the environment. Forward-development of basic technologies of new technological structures gives a chance to the backward countries in the post-crisis period to qualify for a better position in global competitiveness. These countries to a lesser degree burdened by excess capacity of obsolete structures, so they open the possibility of advancing economic growth.

The use of technology of the 6th technological cycle makes evident the following conclusions:

– because a person may not, directly, to manipulate the nanoparticles of the substance, he will have objectively come from processing of the substance and of the process of making machines able to manipulate the nanoparticles, and fully automating these processes and creating support of the machine;

– completely artificial become not only the means but the objects of labor: before you handle the substance at the nanoscale, it is necessary to create it first because in the natural world-such matter is not;

– for the production of «nanomaterial», «nanoproduct» and «nanomachines» will require an extremely small amount of matter and energy, is not measured in tons, kilograms and grams, and the number of molecules and atoms (tens, hundreds and thousands);

– production of mass will be transformed in individualized, focused on the individual needs of the person.

Now in prototypes there is the system «nanocomputer-nanomanipulator» that allows you to organize automated assembly systems, able to collect any individual macroscopic objects according to a pre-filmed or developed a three-dimensional grid arrangement of atoms in unlimited quantities.

However, in addition to remarkable clarity, such technology is exclusively informative in terms of studying the influence of the characteristics of the manufactured product on the socio-economic environment.

It is easy to notice that such a technology (the manufacture of «here and now») does not require a complex system of suppliers and sellers of semi-finished products.

To estimate the magnitude for this fact socio-economic transformation, remember that the main reasons for the creation of modern economic structures (globalization, dividing the world into «developed» and «developing» countries, the emergence of transnational corporations and global markets, the world Bank, IMF and WTO), were the dominant features at that time technologies — technologies of the 3rd and 4th technological modes (TL3 and TL4). One of the key (from the economic point of view) characteristics of these technologies is massive production as a necessary condition to ensure their profitability. This was the basis for the formation of «consumer society» in the context of the capitalist economy and the «work warehouse» in the conditions of the planned Soviet economy.

Technology TL6 — this technology is not a mass and individual production, «for a specific customer»; there are already prototypes of the technology for precise delivery of medicines in the amount of several molecules to specific diseased cells, etc., which makes in principle unnecessary mass production of medicines that target «disease» and not «patient» [4].

In addition, fundamental, key, pivotal feature of the TL6 technology is the basic principle from the manufacture of the final product, and often directly for final consumption. The basic principle of the previous technologies was processing that assumed a significantly higher number of stages; finding and delivery of raw materials to processing, production from raw materials semi-finished products, completion of semi-finished products to the required quality parameters, the Assembly of the processed semi-finished products, storing finished products, transfer it to supply and marketing organizations and finally bring to the consumer. Such complex, long and expensive treatment system was a forced measure, designed gradually, step by step to give the original substance of those qualities, and the configuration that they originally possessed.

Technology TL6, due to the manipulation of individual atoms and molecules, allow us initially to give the required quality and properties of materials and forming them directly into the final configuration specified accuracy and complexity. In this case, the stages do not need — qualities and properties present in the product originally, since its creation.

It fundamentally changes the entire production process and ensure that the entire process of socio-economic environment, which is clearly seen in the rapid «clustering» of the economy where it begins the practical production TL6.

Most often, the clusters are organized for the production of products in accordance with micron- and nano- level material nature: microelectronics, electronic equipment, medical equipment, biotechnology, information technology etc. Such clusters include vertical integration: education, science, production.

As numerous studies, and most importantly, their practical experience, the TL6 application of technologies for the production of goods will lead to the following changes: to minimize the consumption of materials and energy resources; reducing the duration and cost of the manufacturing process; increase productivity and reduce overhead costs; increase the quality and diversity of products; saving of labor costs; a favorable influence on the environment; the transition from large to «small» production of most goods.

In fact, features technology TL6 — neomaterialist, energomasch, small objects, instruments and products of labor — allow us to speak about small businesses as the basic production unit of the new technological order.

According to several sources in the U.S., TL3 accounts for 15 % TL4 — 20 %, TL5 — 60 %, TU6 — 5 %. In the countries of the Customs Union: the Russian economy submitted by: TL3 — 40 %, TL4 — 50 %, TL5 — 10 %. In Belarus, TL3 and TL4 are 79 %, TL5 — 5.2 %. In the economy of Kazakhstan the share of TL3 is about 65 %, TL4 — about 35 %, TL5 — about 1 %. The main line of development is increasing TL4.

So, in recent years, investment in this way of the industry reaching almost 60 %, and TL5 — less than 1 % [5].

Possible main directions of development of TL5 Kazakhstan in the production of: semiconductor materials, components, electronics, optoelectronics, communications, computing, information-measuring devices: scientific instruments, laser technology, high-purity substances, materials with predetermined properties, biotechnology.

An important line of development is the creation of conditions for rapid establishment of production of TL6. This has the necessary logistic prerequisites: advanced communications, biotechnology, space technology, nanotechnology, science, education, including higher technical.

The development of industries of high technological structures need not to be frontal. The most preferred «points of growth». For example, East-Kazakhstan oblast is a large industrial region with well-developed structure, reflecting TL3 and TL4 industries with high material and energy intensity, including the development of Zaysan oil field. The development of the region, relying only on the established industrial structure will not contribute to the formation of the prerequisites for the implementation of production, TL5 and TL6.

In the future, possible reorientation or change of direction of development of production of some enterprises to the creation of products TL5. For example, in mechanical engineering and instrument making — the creation of robots for the mining and metallurgical industry; in the construction industry: the use (or creation) of new materials, including nanomaterials; energy — renewable energy, etc.

Promising is the creation in the region of the enterprises for manufacture of electronic products as the basis for TL5. It can be: the production of consumer goods (appliances) electronics: audio and video devices, digital televisions, video and photographic equipment; manufacture of electronic products for the needs of housing and communal services (metering and measuring devices, monitoring, etc.); manufacture of electronic products used in agriculture (modules of measurement and control, sensors and analyzers of food products and modes of their storage modules to the local communication and information-management modules, automation systems and laboratory and electronic equipment and the rapid analysis, etc.); adjoining the manufacture of electronic products developed application, used for automation of production processes, creation of flexible production systems and equipment.

Engineering-staffing of the functioning of these industries is possible through the use of graduates of the East Kazakhstan State Technical University, D. Serikbayev in the field of: electronics, electronics and communication, information systems, automation and control, computer hardware and software, mathematical computer modeling, instrumentation.

In the book of N. Nazarbayev «The strategy of radical renewal of global community and partnership of civilizations» (Astana, 2009, 264 p.) argues that Kazakhstan has to date formed the core of the TL6, and that priority should be investment in technology, as well as projects on training for innovative breakthrough.

In these circumstances, important conceptual and methodological approach to innovative development of higher education through the training of innovation-oriented specialists, especially in technical areas.

The basis for the development of educational models for technical specialists who are able to realize themselves in various types of professional activity in the conditions of industrial-innovative economy formation it is advisable to put the life cycle of artificial systems in the form of high-tech products, i.e. products that is created on the basis of innovative scientific and technical ideas and marketable as a commodity. This can be a scientific idea, scientific methods, techniques, and software «know-how», formulation, design, technology and even disposal of the removed with the operation of the product.

Results at the various stages of the life cycle of high-tech products can take the form of goods and transformed into the product life cycle, if they come on the market and be the subject of sale. The complete life cycle of high-tech products, as a rule, higher product life cycle, not only through physical existence after the end of the product life cycle (e.g., as scrap metal or another scrap), but also through the preceding stages of its life cycle (the period of creation of consumer properties of goods).

It should be emphasized that at all stages of the life cycle of high-tech products is the transformation of knowledge (information) as a product and means of labor, which has more specific materialized form. The effective conversion requires appropriate organizations of social labor, which lead to the formation of appropriate organizational and technological basis of social production.

Type replacement of other high-tech products, developed on a more advanced scientific basis means essentially the replacement of the entire cycle of basic and applied research, production and operation that objectively should lead to the change in the model of the social organization of labor (e.g., the transition from industrial development to the knowledge economy).

This, in turn, leads to the necessity of timely and qualitative changes in the system of meaningful training for professionals. It is especially important that there is a direct relationship between the life cycle of educational services provided by the graduate school and the lifecycle of high-tech products in the technical training. The timing of the aging life cycle of educational services of higher school depends on the time of aging the life cycle of the types of high-tech products. Significant delays in the initial stages (stages) the materialization of scientific knowledge caused by using outdated graduates prepared by the graduate school, can not only significantly slow down the timing of development of new production, but also increase the timing of the creation of new types of high-tech products.

An integral part of the program in the preparation of technical specialists should be marketing as a system of views when solving problems of the development, production, sales and after-sales service of commercial products.

This will facilitate the transition from the era of mass production to the era of marketing, which is characterized by rapid product differentiation orienting production to the search of the individual consumer, the formation of market niches through the marketing system.

Each new cycle of such reproduction is accompanied by the introduction of scientific and technical innovations that enhance efficiency level, i.e. each new cycle of reproduction starts with the production, passed to a higher stage in its development. This ensures then the higher level of the evolving needs of society. The traditional phases of reproduction — production, distribution, exchange and consumption — are supplemented by the production phase — the phase of scientific preparation of production, based, as a rule, on the results of marketing research. Methodological orientation in the training of specialists on marketing as a belief system when solving problems of the development, production and after-sales service of commercial products are caused by the fact that the duration of the product life cycle as a product associated with the degree of stability of its scientific and technical level.

Scientific and technical level of the product is due to the novelty of the scientific principle underlying the creation, the technological level of design solutions, manufacturing techniques, materials used. Over time any product, even the most perfect, with excellent consumer properties, must give way to a new generation of products created by more advanced principles and therefore satisfy higher needs. This exchange of goods is largely determined by the change of its scientific and technical level. Moreover, the decline of the scientific and technical level of the product is largely connected with the appearance on the market of a competitive product with higher consumer properties, which leads to moral obsolescence of the old product. This point is crucial to change outdated products (goods), the cessation of its production and replace it with new products to meet the requirements of the consumer market. Each subsequent product has a higher technological level providing higher level of consumer properties, a shorter life cycle and greater volume of its implementation.

Knowledge of technical specialists, patterns of change scientific and technical level of production as a commodity, allows to scientifically predict the timely modernization of production, development of new competitive products, increase production capacity, develop channels of distribution and sales. As a result, the knowledge, skills and competences acquired technical specialists at the higher school must be systematic, professional focus on the implementation of the concept of commodity production, based on an objective reflection of the life cycle of high technology products as a commodity.

The conceptual approach to meaningful professional component technical training allows the graduate as a specialist to implement their professional knowledge in various organizations, enterprises engaged in any of the stages of the product life cycle, a systemic approach of the unity of the process of scientific research, development, design, production and sales of products at any stage of its formation, clearly identifying the value and importance of a particular stage out of organizational-administrative context of place and kind of work. The use of this approach allows to provide the necessary mobility and competitiveness of the specialist on the labor market, which is based on the ability to find a job, keep it, or change is a necessary quality specialist employed in the labour market.

High school in the preparation of technical experts is focused to work primarily as wage labor on large and medium-sized enterprises. However, the number of jobs at these enterprises is rather limited. This is one of the reasons of unemployment among University graduates.

In Kazakhstan there is no system of special training for small businesses. However, a good basis for this are the technical specialists for the basis of entrepreneurship is aimed at creating small enterprises for the production, as a rule, is strictly a certain product that fills an opening niche commodity market, caused by the conjuncture fluctuations and because of the small volume of sales of goods not of interest to large enterpris-

es. The small business is characterized by high market volatility. If a large enterprise may specialize in the implementation of several of the stages of the product life cycle, small businesses are almost all stages of the life cycle of the product (simple product — products — craft), or, on the contrary, there is specialization in the implementation of one of the stages of the life cycle of products. In a small firm (business) the owner of the company acts as the organizer of production and its implementation, and as the leader of the labour collective. Therefore, training of such a specialist should be versatile enough. The entrepreneur small business especially need systematic knowledge in a concentrated form of the totality of the stages of the product life cycle — product. On this basis the model of training of specialists of technical specialties must include knowledge of the fundamentals of business [6].

Life cycle analysis of high-tech products, including product life cycle in the unity of its stages, gives reason to differentiate technical training for the three professional activities: innovation, which is based on the research, development, design and technology work, organization of pilot production (elite training, including the training of masters); industrial engineering and management, which provides for the organization of industrial production, including manufacturing and operation of products, repair and decommissioning of production or substitution by equivalent, higher scientific and technical level; business (service) activities, focused on engineering, marketing, studying consumer demand to expand sales of products, organization of product quality control, compliance with its standards and specifications, focused on meeting the growing needs of consumers. However, the main component in this kind of professional education should be aimed at the formation of the middle class, which is based on entrepreneurs working in small and medium business, small and medium enterprises.

Differentiation of the types of professional activities may be determined by the University on the basis of marketing research of the labor market and employment. Specialization in these areas fits into the framework component of the University, or outside by increasing the training period for which there is a legal basis.

Analysis of the classifier of specialties of a bachelor degree — magistracy of the RK in the direction of «engineering and technology» shows that in the basis of their development on predominantly industry-specific. For example, «metallurgy», «power», «print», «construction». In addition, based on the principle of a homogeneous set of objects and tools, technologies and means of production. For example, «transport, transport equipment and technology», «technological machines and equipment (by branches)», «technology of woodworking», etc.

However, a deeper structural analysis of professions allows to allocate a number of signs, which can determine in the future the degree of adaptation of graduates of higher school in the context of rapidly changing requirements for labor caused by the acceleration of development of innovative economy.

The first can be attributed to the principle subject of the formation of disciplines, focused on objects and tools and production technology. They can, for example, include «heat power engineering», «chemical technology of inorganic substances» «chemical technology of organic substances». The second symptom can be attributed to the functional principle, which is based on implementation by experts of certain features (technological, production). These include, for example, include «mathematical and computer modelling», «computing and software», «automation and control».

Subject to the principle of meaningful organization of specialties focused on existing objects and instruments of labor and technologies to the greatest extent meets the needs of the economy. Organized specialty in the content-based stable for the entire period of the product life cycle, including the product life cycle. However, in terms of the quality upgrade of material-technical base of production of the contents of training courses that needs to be updated.

Since the change of generations of equipment, which is the basis of the objects and instruments of labor and technologies, is approaching the duration of the study requires continuous updating of the content of training. Knowledge, abilities and skills of graduates in the workplace also require periodic updates. The subject of the professions has a significant drawback in the current labor environment — it limits the possibility of changing labor and creates a real need for repeated retraining during the period of active employment. Noted the principle of the specialties during the organizational integration of design and production narrows the width of the profile of training and the possibility of adapting them, especially when diversification of production, which is at the intersection of different scientific and technical areas.

The functional principle of the formation of professions is much wider and more dynamic. Training of specialists in it more adequate to the conditions of constantly updated material-technical base of production and functions of specialists remain relatively constant, although in some way changes the specific piece of work.

Almost disappeared the training of specialists, capable to solve problems at the interface of areas, such as technical-organizational and economic, outstanding representatives of which were engineering and economics, demand for which is currently increasing. Therefore, the technical specialists usually get a second economic speciality.

Along with this, virtually no profession, formed for the training of professionals able to investigate problems, identify ways of their optimal solutions. The contents of training-problems you should be more broad and fundamental, particularly in the area of natural science disciplines forming the theoretical basis of modern industrial production and the integration of theoretical knowledge at the interface of research and practice, ensuring the creation of future technologies.

The formation of functional specialties, and especially on the problematic principle is the most adequate to the ongoing changes and requirements to the specialists of methodological culture as a major as a professional capacity. In turn, this requires strengthening the methodological and informational aspects of learning in higher education. However, today one can prepare for mastering the methods of education for current professionals in the form of problem — based learning process that includes the analysis and synthesis of multidimensional information, posing problems and challenges, search of optimal ways of their solution. The organization of learning in higher education needs to be reoriented with the educational process at the educational-scientific-innovative and educational. This requires the transformation of the teacher's activities from the technology of knowledge transfer to information-based methodology, which instills the skills of independent knowledge acquisition through the organization of educational, cognitive and scientific-professional activities of students from the early stages of their education. This requires the transformation of the teacher from the technology transfer of knowledge to the methodological instil skills of independent acquisition of knowledge through the organization of educational and scientific-professional activity of a student from the early stages of his training. This will contribute to the formation of methodological culture as the foundation of the creative potential of a specialist. One of the forms of realization of such technology may be trained on the individual and flexible curriculum of the scientific school professors, developed with the participation of the students themselves focused on individual style received higher education in order to shape the professional profile of the expert taking into account his aptitudes and personal qualities. In this case, developing educational cooperation and partnership of teacher and student, united by a common interest — the desire to know the truth. Shift activities of teaching, training and education at the training-scientific — innovative, educational and individual training professionals allows you to navigate to the «each» training of specialists in accordance with the socio-economic order (employers).

In the first phase of implementation of this technology can be training of elite specialists in the field, generated by the «problem» principle. The transition to individual plans of preparation of specialists allows to give technical education a maximum of flexibility, allowing quick response to changing requirements of employers, competitiveness of graduates on the labor market and ensuring the competitiveness of the university on the educational services market of higher education through deeper differentiation of services.

Individualization of training provides a transition from the unified education system to a diversified, based on the quality of preparation of specialists taking into account requirements of the labor market based on more flexible, dynamic educational standards, did not inhibit the initiative of universities, enabling it to perform «the maneuver» on the basis of studying and forecasting the development of economy and society.

A substantial part of educational research and innovation of the educational process should be aimed at strengthening the fundamental, humanitarian and informational component based on the future professional activity. Thus, one of the modern requirements will be realized: enhancing professional training. The mechanism for this may be to achieve ongoing professional training for all cycles of academic disciplines and curriculum subjects. The current situation where academic discipline is local and not related to the professional activity of specialists, especially social-humanitarian and natural-science cycles are, in fact, led to the decline of professionalism are not able to adapt when changing jobs. The creative processes of creating knowledge-based product and its implementation should proceed in parallel, interacting and correcting each other, forming a modern technical specialist, adapted to the new economic conditions. At the same time it is necessary to form a specialist's socio-management skills, culture in the field of industrial production and the social organization of work adequate to new emerging relationship. In the process of training the student should be included in the actual creative process for creating new competitive development and providing conditions for its implementation. Therefore, educational research and innovation of the educational program shall include the disciplines of management and marketing of scientific and technical products and basics of busi-

ness and entrepreneurship. A form of implementation of this requirement may also be plans directed economic and managerial training [7].

Given the risks of global catastrophes of anthropogenic origin, as well as the adverse effects of technical systems and production technologies to health and human life, on the environment will need to strengthen the environmental training of specialists in terms of ensuring the security of the system «man — machine — environment». This can be achieved by continuous implementation of plans for environmental training, including the introduction of disciplines such as «aesthetics of technology», «engineering psychology».

Further development of technical and scientific training in its new stage and new tasks can not only rely on one of higher potential. Need a new integration of form, uniting the potential scientific, educational and industrial structures. Most suitable for this can be regions where concentrated industry, high-tech industry, research institutions academic and industrial segments and educational institutions of a technical profile. One of these forms can be «vertical» clusters.

It should be recognized that the mass of well-established management system currently is the scheme the management of the university as a predominantly closed system, which is typical for the era of mass production, typical of 30-th years of XX century the condition of market economy, i.e. stability, stability of systems over many years produce homogeneous products.

However, the necessary transition to management of universities as open systems capable of self-development, i.e. change management. Because only in this case will be able to achieve the objectives of the higher school promotes innovative development of economy through innovation-oriented specialists.

In these conditions the role of the Ministry of education and science of RK and other super generics structures of the higher education system, as they will create institutional conditions (rules) facilitate and ensure the functioning of universities as open system, and the creation of economic conditions of interest major consumer products (specialists) consumers (especially employers) in shaping appropriate to new requirements of professionals.

The path of innovative development is possible for cities with a network of research institutes, laboratories, universities and modern industries, i.e. having a high innovation potential. This could be recommended for the development of the city Kurchatov. This allows you to actively create innovation clusters of fundamentally new high-tech industries.

In the development and testing of innovative technologies, creation of new products or the organization of import-substituting industries, the leading role belongs to small innovative companies. A significant impact on their development provides a range of business-incubators, techno parks, centers of re-engineering and other infrastructure objects of the state support (Gusev and Amelkin, 2016), which will create in mono.

Adaptation to external environment the old industrial single-industry towns, in the East Kazakhstani city of Ridder and Zyryanovsk. The development in this case is realized through the search for large investors to «key» industries, and creating around them a group of small enterprises engaged in the conversion of redundant production capacity and outsourcing. In this case, both directions — an innovative way and adapt to the external environment — are supported by active development of sphere of services designed to ensure the modernization of municipal services, improvement of the urban environment, improving the quality of life that is impossible without the participation of small business.

For the city Serebryansk priority may be the creation of tourism-recreation zones for the development of the tourism industry, hospitality and entertainment. This direction involves the preservation of materials in the development of specialization (food, production of Souvenirs, etc.). The mechanism of creation and functioning of tourist-recreational zones is provided by the small business sector.

In the framework of the selected models can be proposed the following general directions for the development and support of private initiative and small business in the territory of single-industry municipalities:

1. Support individual entrepreneurial initiative. In our opinion, the improvement of the prestige of entrepreneurship, showcasing the successful life strategies of entrepreneurs need to be long lasting, systemic and in single-industry towns focused primarily on the younger generation, not having long experience in recruitment and selecting opportunities for self-realization in his hometown.

Opportunities in small business should be formed by local administrations and the public (register the city needs to open a business, specific terms of vacant territories or space in business incubators, contests of young businessmen, etc.) and supported by:

− sequential system youth grants and scholarships, a prerequisite of which is the creation and successful development of own business in mono;

− centralized system for remote seminars, business classes that enable you to receive relevant knowledge and information to conservation and development (restructuring, expansion of markets), the youth business, for example, seminars on participation in procurement for state and municipal needs, new franchises, etc.

2. Preserving and increasing human capital. The authorities in the towns and regions of their placement should realize that the most scarce, vital to the development site resource, is human. In this regard, the strategic goal of the development programs of single-industry municipal entities must become to create the most prosperous environment in which to live and work older and middle generation, the most favorable conditions for self-development, self-realization of youth and the conduct of its business.

3. The development of interaction between executive public authorities and businesses to implement individual projects, aimed at solution of tasks of socio-economic development of regions or creation (expansion) markets. In this cooperation, the state should take responsibility for the creation of large infrastructure projects. For example, improving transport accessibility through the construction of government roads or wharves on water bodies will create the necessary conditions for the organization of a small business road service and passenger traffic to ensure the successful development of tourist-recreational zones.

4. The increase in credit availability can be achieved through the following:

− loan products for small businesses (especially small innovative companies) operating in areas with single-industry specialization, should be developed taking into account the balance of resources and needs of small enterprises at all stages of life;

−cycle and assume a grace period to return the loan amount at the stage of emergence and development of the business;

− adaptation of programs to stimulate lending, «six and a half» for small businesses in single-industry towns based on the extension of the list of priority sectors and the inclusion of investment projects in the field of ecology, land reclamation, processing of industrial and domestic waste, high-tech services to the population (including health), creation of objects of recreation and entertainment, as well as the lengthening of terms of crediting.

5. In order to assess the effectiveness and optimize programs to support small businesses to make plans for statistical work indicators of activity small business.

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Шығыс Қазақстан моноқалаларында адами капиталды дамыту модельдері

Моноқалаларды дамыту — бүгінгі Қазақстанның ең өзекті проблемаларының бірі, сондықтан ондағы қалыптасқан мәселелерді шешу тек жекелеген кейбір өңірлерде ғана емес, тұтастай ел экономикасының деңгейінің көтерілуіне жақсы және айтарлықтай серпін бере алады. Адами капиталды талдау бүгіндері заманауи инновациялық экономика мен қоғамның айтарлықтай дамуын қамтамасыз ететін басты факторы болғандықтан, еңбек ресурстарын, олардың білімдерін, зияткерлік және басқару еңбегінің құралдарын, өмір сүру және қызмет ету ортасын қамтитын дамудың өндірістік факторы ретінде адами капиталдың тиімді және ұтымды жұмыс істеуіне кепілдік беретін қазіргі заманғы инновациялық экономиканы дамытуды қамтамасыз ете алады. Осы бағытта адами капиталды

қолдау мен дамытуға байланысты мәселелер басымдыққа ие бола отырып, оның әлеуеті жеке алынған өңірлері мен тұтастай елдің индустриялық-инновациялық және интеграциялық дамуы шеңберінде толық көлемде пайдаланылуы тиіс. Мақалада Қазақстанның индустриялық-инновациялық және интеграциялық дамуы жағдайында Шығыс Қазақстан облысындағы моноқалаларының адам капиталының даму болашағын бағалау нәтижелері келтірілген. Мақала авторлары моноқалаларды дамытудың қарастырылған модельдері шеңберінде монобейінді муниципалдық білім беру аумағында жеке бастамалар мен шағын бизнесті дамыту мен қолдаудың жалпы бағыттарын ұсынды.

Кілт сөздер: моноқала, адами капитал, адами әлеует, әлеуметтік саясат, экономикалық дамытудың кешенді жоспары, инвестициялар.

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Модели развития человеческого капитала в моногородах Восточного Казахстана

Развитие моногородов — одна из наиболее актуальных проблем социально-экономического развития сегодняшнего Казахстана, решение которой способно дать хороший и дополнительный импульс подъему экономики не только в отдельных регионах, но и в стране в целом. Анализ человеческого капитала является важнейшим фактором развития современной инновационной экономики, обеспечивающим развитие экономики и общества, включающим трудовые ресурсы, их знания, современный инструментарий интеллектуального и управленческого труда, среду обитания их трудовой деятельности, гарантирующим эффективное и рациональное функционирование человеческого капитала как производительного фактора развития. В данном ключе приоритетностью обладают вопросы, связанные с поддержанием и развитием человеческого капитала, потенциал которого должен быть в полной мере использован в рамках индустриально-инновационного и интеграционного развития отдельно взятых регионов и страны в целом. В статье приведены результаты оценки перспектив человеческого капитала моногородов Восточно-Казахстанской области в условиях индустриально-инновационного и интеграционного развития Казахстана. В рамках выделенных моделей развития моногородов авторами статьи предложены общие направления развития и поддержки частной инициативы и малого бизнеса на территории монопрофильного муниципального образования.

Ключевые слова: моногород, человеческий капитал, человеческий потенциал, социальная политика, комплексный план развития, инвестиции.

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