

# Human Resource Management in the Innovation Activity in the Republic of Kazakhstan

A. T. Omarova, G. N. Nakipova

**Abstract**—This article discusses the principles of object-oriented human capital development using the technology program. Also the article includes priorities of the strategy of industrial-innovative development of Kazakhstan in conditions of integration activity into the world community. The article shows the tasks of human resource management in the implementation of industrial and innovation development, particularities of Kazakhstan's theory of management staff, as well as due to the specificity of the Kazakhstan authorities. In the article had considered the factors which are affecting to the people in the organization and also had considered mechanisms of HRM within organization in the conditions of innovative development in Kazakhstan.

**Keywords**—Programming, management of human resources, innovation, investment, innovation process, HRD model, innovative development, integration, management, transformation, economic potential, competitiveness.

## I. INTRODUCTION

THE integration of Kazakhstan into the world economy and the development of interstate relations in the CIS increased the level of competitiveness of the country, and traffic on this road is the need for effective economic development and definition of strategic priorities reflecting country-specific features and peculiarities of the economy.

Program of Kazakhstan till 2020 year FIID and Strategy-2030, in the long term, is focused on the transition of the economy from export of the commodity to an innovative type of development. The program had raised the challenge of achieving world standards in science funding, education and health conditions of the accelerated formation of the intellectual and human capital. This requires radical and creative personnel managers, scientific intellectuals, managers. Emerging from the depression and the transition to a new technological way of having special significance of rational use of financial resources and effective financial support for important tasks, demanded special programs and business plans, Strategy-2020.

## II. UNITS

1) Natural resources, of course, served as a springboard for economic growth. But objectively there is a need for structural changes in the economy that would implement the winnings from the possession of natural resources through the development of its own high-technology

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- industries, a reduction in imports of consumer goods, especially agricultural and food industry [1, p. 210].
- 2) In 2012 the commodity industry in Kazakhstan accounted for more than 60% of the volume of production and more than 80% of national exports. The share of innovative products in the total production was 1.0%, which is inferior to those of European countries in 25 times. The share of innovation active enterprises not more than 5.6%, which is below the 9-10 times than in the leading European countries (Fig. 1).
  - 3) At the beginning of 2012, in the manufacturing industry of Kazakhstan, due to the aging of equipment and not competitiveness of production capacity utilization hardly reached 55%, as a result of the low labor productivity. Depreciation of fixed assets by industry amounted to an average of 43% and approximately 33% of the non-oil companies' failure to participate in programs forced industrialization.

Based on the survey analysis Center of JSC «National innovation centre», held in 2010, because of the poor condition and lack proper of the 24% of the non-oil companies were not ready to implement complex projects and cannot participate in the technological modernization of the economy [2].

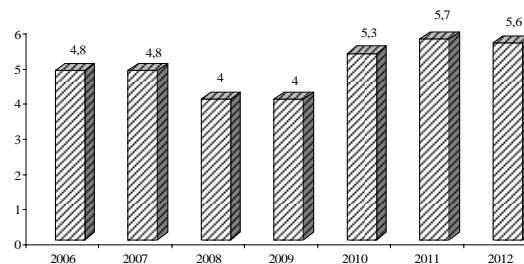


Fig. 1 The level of innovation activity of enterprises in Kazakhstan in 2006-2012, % Created by author based on data from the Agency of statistics of the Republic of Kazakhstan

The industrial base in Kazakhstan is such that, with the exception of the commodity sectors remaining units industrial complex look obsolete, archaic, and a number of important parts of engineering, entire industries of light and food industry were lost. Modernization must precede innovation. Modernization should be a universal source of simultaneous challenges of the post-industrial and innovation economy.

- 4) Raises serious doubts about the scientific validity of the basic indicators of the program (Table I), each of which must be a serious scientific calculations and assumptions, all of which must be scientifically accurate work on the

justification for the program of industrial-innovative development of the Republic. In accordance with the tasks the program of industrial-innovative development of the vector of development of Kazakhstan's economy must

move in the direction of coherent and balanced growth not only in mining, but also manufacturing, innovation and technological and social sectors.

TABLE I  
REACHABILITY OF THE STATE PROGRAM OF FORCED INDUSTRIAL-INNOVATIVE DEVELOPMENT OF THE REPUBLIC OF KAZAKHSTAN FOR 2010-2014 YEARS

Rate of SPFIID	2012	2014 or 2015	Comments
GDP in real terms	122.5	138.4	The backlog of PFIIR -3, 1 p.
Non-primary sector GVA	123.4	139.5	Achievable rate
GVA of the manufacturing industry in real terms	122.3	143.6	The backlog of PFIIR -10, 5 p.
The proportion of non-raw (processed) exports in total exports	24.7	30	The backlog of PFIIR -5 p.p.
Labour productivity in manufacturing	165.7	250.0	The backlog of PFIIR -25 -30 p.p.
Labour productivity in industry	167.1	115	Achievable rate
Labour productivity in agriculture	114.1	300	The backlog of PFIIR -125 -150 p.p.
Innovative activity of enterprises	7.6	10	Achievable rate
The volume of oil refining at REFINERY	115.9	122.1	Achievable rate
GVA of metallurgical industry	111.5	150	Achievable rate
GVA of the chemical industry in real terms	122.1	170	The backlog of PFIIR -25 -30 p.p.
Labour productivity in the manufacture of chemicals and chemical products in real terms	246.2	300	Achievable rate
GVA in mechanical engineering	151.7	170	Achievable rate
Productivity in the machinery industry	204.5	330	Achievable rate
HCPS in the pharmaceutical industry	191.6	300	The backlog of PFIIR -60 -90 p.p.
Availability of domestic drugs market	15.4	50	The backlog of PFIIR -25 -30 p.p.
The productivity of industry of basic pharmaceutical products	320.9	150	Achievable rate
Meeting the needs of the domestic market for construction materials	68.3	80	Achievable rate
GVA APK	106.9	116	Achievable rate
HCPS in the light industry	105.1	109	Achievable rate
Degree of satisfaction of the needs of the country in fixed satellite communication channels	57.1	80	Achievable rate
Degree of satisfaction of the needs of the country in high-precision satellite navigation services (% coverage)	8.3	55	The backlog of PFIIR -15 -20 p.p.
The share of innovative products in the total volume of GDP	1.25	1	Achievable rate
The share of domestic research and development costs from the gross domestic product	0.17	1	The backlog of PFIIR -0.8 p.p.
The proportion of modern retail formats in the total volume of retail trade turnover	12.3	40	The backlog of PFIIR -10 -15 p.p.

Made by the author using the literature [2]

Is the gradual move away from the raw material export dominance in industries and sectors with high added value, reducing the country's dependence on imported technology and products, which allow you to manufacture their own, primarily petroleum and petro chemistry, metallurgy, as well as food.

5) Implementation of the first phase of the program of forced industrial-innovative development illustrates the orientation on the criterion of competitiveness of traditional sectors-oil, gas, uranium, rare earth metals, mining and Agriculture and grain. Accordingly, on the basis of forward are oil refining, petrochemical industry, metallurgy, high levels of corporate takeovers in the nuclear industry and food processing. They will first need to transfer the competitive advantages of the new technologies.

Preference and emphasis on the oil and gas sector, in our view, is not completely justified. First, the technical and technological level of production, prevailing in the industry, enough is traditional with established international practices on the countries of the near and Middle East, North Africa and Latin America. It is hardly possible to rely on radical innovation (with the exception of possible technological innovations when removing and cleaning the sverhsermityh

oils from under salt domes). Secondly, quite controversially rely on the construction of the mining and processing of oil and gas complex of chemical plants, which are controlled by foreign owners, TNC affiliates in a number of countries. The latest in the case of interest and are actively opposed by Kazakhstan, which is the minority shareholder has no casting vote on policy issues. JSC "KazMunaiGas" does not play a significant role in this area, producing roughly 16% oil. Thirdly, none of the owners in the commodity complex is going to change the orientation of their companies in this situation. And the proposed construction of the MCR at the stage of judgment and the terms of the erection of such objects in good coincidence of circumstances and factors are usually at least stretched to 5-7 years. And it is unlikely, although important costing 3-5 billion. \$ would set a precedent in the reorientation of the innovativeness of the whole industry (oil and gas), the plans for the next ten years, which mainly target the extensive expansion and extraction of petrodollars beaten option. By the way, all of the projects of the State program of forced industrial-innovative development totaling more than 43 billion dollars, 13 billion dollars oil and gas account for more than 10 billion -transport and communications, about 8 billion -mining and metallurgical industry, 4 billion -energy and almost 2 billion -the chemical industry [3].

Even the national welfare fund Samruk-Kazyna JSC makes essentially bet on oil and gas. And in other industries and fields, such as metallurgy, agriculture, uranium production, owned by other campaigns, a radical shift towards manufacturing and completion of the technological cycles. On the application of NWF Samruk-Kazyna "JSC," ... in those sectors of the economy where there are no trained manpower, not engineers, and are far from markets, the competitive advantage you can talk ... our national campaigns cannot compete with global firms. It is the commodity sector can give the demand for innovation. Innovations that Kazakhstan can give, offer must be born primarily in the oil and gas sector-new drilling, pipe, spare parts, transfer station ... Trendsetters in the petrochemical industry are countries which developed mining and production, or the largest consumers " [4, p.42].

Position where innovation can be born in the oil-that is problematic. The industrial progress of innovative principles, or rather on technology-based innovation even within the priorities, you need to create, generate, evolutionarily. Moreover, according to international practice, for raw materials periphery of TNC affiliates will not deliver and develop of technology, equipment, spare parts, because it is expensive, and the import of know-how to third world countries does not allow legislation to hi-teck each developed country. In addition, the innovation and industrial development shows such a big interest from foreign investors. They will be seeking to extensive production and exportation of the product.

Program RK FIID must be interested, above all, the national bourgeoisie and domestic investors that the public-private basis must address important strategic tasks of the Republic. In this regard is questionable and disturbing the validity of some regional programs forced industrialization. The quality of projects by region in a number of cases, the corresponding notion of "big" does not meet the criterion of "innovation", i.e. a technologically new.

When discussing the programs in Mazhilis, it turned out that in a number of areas of industrialization Map included projects that were previously available in the regional program for the development of small and medium business, agriculture.

- 6) Kazakhstan remained commodity-enclave 50% of export income comes from the sale of crude oil. Despite Kazakhstan's rapid industrialization known programs-Strategies-2020, a number of top managers responsible for implementing drastic measures to overcome the technological gap is still focused on the previous, pre-crisis growth model.
- 7) Innovative economy, the knowledge economy is based primarily on the basis of the achievements of their own science, implementation of its results in the form of discoveries and inventions, scientific practice of establishing the bases for the industry and aim to produce marketable products. But in Kazakhstan, today the only possible way of upgrading-importing technology from abroad. The process of using foreign technologies and products has gone too far. So the upgrading and

construction of new facilities and infrastructure is entirely based on foreign technology. In the absence of own scientific ideas and implemented development system borrowing as much as facilities and production lines in the Republic erected in a rank formally adopted and not much worries technology policy [5, p.145].

- 8) Owing to the lack of appropriate entry points of scientific, technological and innovation progress in solving problems of industrialization of branches and sectors of the economy that has been degraded and de-industrialization in the transitional period, the use of technology transfer. It should be remembered that the transfer of technology will not display a country on the path to innovation development, because the effectiveness of the current economy and its competitiveness, as world experience shows, depends primarily on its ability to generate and manage knowledge, create a high level of innovative environment-science and new technologies to produce innovative products. The trend is confirmed by the rapid increase in the contribution of innovation in the growth rate of GDP of the developed countries. So, in the United States it increased from 31% in 1980 to 35.6% in 2007; in Japan, respectively, with 42.5% to 30.6; in the EU, with 45.5% to 50%. The use of science and technology has become the leading factor for 80-85% of the growth in labor productivity in the developed countries and leads to radical changes in the economy of many countries and entire continents. NTP, creating the basis for sustainable development, is becoming a key factor in the growth of the GDP of developed countries, and it defines the boundary between good and in others countries. United States-the largest Innovation Center that generates and accumulates the results. Japan from 1940 to the mid-80's. the emphasis was mainly on the improvement of the inventions, borrowed from other countries (mainly the United States and the EU). These countries, especially the United States, provided access to its scientific and technical information. Now Japan has reached a very high level to generate scientific and technological knowledge and high technology [6, p.79].

I.e. transfer of technology can be used only as a short-term instrument at the initial stage of innovation and industrial development of Kazakhstan.

### III. CONCLUSION

Industrial-innovative development of the country implies high quality employees, the higher the quality, the more likely the success of complex technologies and technical equipment.

However, in the process of modernization begun, updates, principal of a number of industries, such as machine-building, metal-working, etc., are facing acute shortage of highly qualified specialists, which the national labor market are still present. And because the current foreign oil companies in Kazakhstan, opening new Western-style production with appropriate techniques, due to the lack of staff is widely practiced by engaging its professionals.

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