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TECHNOLOGICAL TRANSFORMATION OF EMERGING MARKETS: EXPERIENCE OF KAZAKHSTAN

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Abstract: *The resonance of information and social revolutions involved humanity into a series of cyclical fluctuations in the economy. The global financial crisis that shook the global economy since the beginning of the XXI century is the tip of the iceberg aggravated the internal contradictions of post-industrial society. World capital involved in its turnover post-Soviet countries, forcing them to evolve according to the laws of market relations. Kazakhstan, with a range of resource advantages, nevertheless significantly lags behind in technological development not only of advanced countries, but also from rapidly developing countries the average level of economic development. The results of the initial phase of implementation of the state program of industrial-innovative development of the country do not reach the desired effect. Among a number of reasons the most important is the low assessment of the role of labor and its productivity, the cost model of the Soviet attitude to work.*

The main problems, which will be answered in the studies:

1. *To Identify the features of the global technological transformation of the XXI century*
2. *To describe the conditions and causes of technological backwardness of Kazakhstan*
3. *To show possible scenaries of technological change and transformation of labour relations in Kazakhstan. In order to study the theoretical foundations of the given problem, works of Western scientist were studied: K. Marx, who reseached the cyclical nature of economic development, J. Schumpeter, who considered inovations as a mechanism of technological upgrading, and also Russian researchers of technological transformation: N. Kondratyev, G. Kitchin. Institutional peculiarities of technological transformation in countries of developing market are studied by following scientists: A. Auzan, Hernando de Soto.*

Research Methodology*: The methodological basis of scientific research are the scientific works of the classics of economic and institutional theory, and their followers, also the national program of industrial-innovative development of Kazakhstan. The methods of observation, analysis and forecasting revealed several contradictions between GDP growth and labor productivity.*

The practical significance of the study: *Seems to identify the reasons due to which Kazakhstan may be in a "trap" is not only natural resources but also the low income population, limiting the motives of productivity growth. Building the model of labor relations, enabling and motivating*

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employees and employers in increasing the quantity and quality of work, will be an important factor in increasing the competitiveness of the national economy.

Conclusions and recommendations: *Based on studies, will allow the relevant departments to conduct the following activities aimed to technological upgrading and increasing productivity.*

1. *Kazakhstan is characterized by catch-up model of technological transformation. Accelerating of transformation may contribute to the creation of joint enterprises with advanced technological and institutional foreign companies.*
2. *The priority factor in the new technological order is labor. In the context of the predominance of the intellectual component of modern technologies related to labor, both from the employee and employer reflect the level of technological advancement of the economy of different countries*
3. *For many Kazakhstani businessmen worker remains as s subject of administrative and economic exploitation. A key factor of technological transformation is the socio-economic modernization of labor relations, the revival of the role of trade unions of workers.*

Keywords: *Technological transformation, productivity, evolutionary changes in labour relations, trade unions of workers.*

1. INTRODUCTION

Technological transformation, as evidenced bu the history of mankind, as shown by research - is the invention and implementation of new technologies, the transformation of the content of the factors of production and methods of their use in order to increase profit margins, improve conditions of life and labour. In accordance with the laws of spiral development, the formation of each new technological paradigm is based on the previous one, in which there are new ideas and inventions that allowed to make a technological breakthrough in some industries, giving impetus for technological change in all sectors and spheres of economy.

Technological advances of each stage becomes the basis for a new stage of development of the productive forces and modernize industrial relations, primarily labor relations.

However, in each cycle of economic development comes the phase of exhaustion of internal sources of income, the economy goes into a depression, causing reduction in the level of demand, a decline in production and rising unemployment. In these circumstances, the competition law is forcing market players to seek new technologies to increase the added value.

However, this is not enough to close the depression. The important question is distribution of value added on labor costs and profit. In deciding of this question the company's interests, interests of shareholders and employees facing with each other. In the developed countries to reach consensus actively involved trade unions. In Kazakhstan, this institute has kept nominal status, limiting their function of collecting fees and paying part paying part of the cash on medical treatment and

disease prevention. In labor disputes, in working conditions of labor contracts the role of trade unions is formal.

2. DISTINGUISHED FEATURES OF MODERN TECHNOLOGICAL STRUCTURE

In the study of the process of changing technological structures it could be logical to use the methodology of the theory of cyclical dynamics of economic development, methodological foundations of which are described in the scientific heritage of K. Marx, N. Kondratiev, J. Kitchin, J. Schumpeter, Phyoe, E. E. [1, 2, 3, 11].

The theory of singularity by I. Dyakonov shows us the relationship of man and historical eras more specifically, in which his view is "the cause of historical cycles are qualitative changes in a man "[5]. Institutional factors of evolutionary change in the method of production concerns by modern Russian scientist A. Auzan [6], also by researcher of the problems of the development of the countries of the former Soviet economic space H. De Soto, Teng, F., Quoquab, F., Hussin, N., & Mohammad, [7, 12]

In our opinion, the scientific views of scientists reveal different aspects of the theory of cyclical economic development. In this case, each of them reflects a key factor informing the moment for transition to a new stage of technological and socio-economic progress.

The main idea of the scientific works of the technological changes is that not what you produce, but how to produce. Technology determine not only the properties of the product, but also the quality of life of society. It is also clear that technological progress suggests appropriate changes in the system of economic relations, primarily labor.

Evolution of labor relations is a long process of climbing from compulsion (physical, administrative, economic) to motivation and creativity for self-realization. In this regard, the role of institutions of labor and management is increasing.

History testifies to the dialectical relation of intellectual development of man and his achievements in the creation of life benefits. At each stage of human development it is necessary to resolve the contradictions between human needs and opportunities of society. A method for manufacturing at all times changed under the influence of new technologies created by man.

This methodological key created by the founders of economic theory, and their followers, is the basis for the approval of the place and role of man in the technological and socio-economic transformation. If in the middle of the XX century "economic man" was the central figure of the consumer society, while for the modern society the main value is a creative person, who is "looking ahead". According to experts, in the major OECD countries, 50% of GDP is created at the knowledge base,

and the success of the national economy is determined by the effective use of new technologies in the field of information.

It is known that the scientific discoveries of individuals in some countries have become the impetus for industrial and scientific-technical revolution. Firstly generation of technical ideas covered in European countries and later in the United States. The time lag from one to the next innovative breakthrough cover from 50 to 100 years (from the first steam engine, created in the XIX century to the first electric motor in XX century). This fact explains to a certain extent the long lead England (over 300 years), then by the US (30s of XX century till now), Germany (50es of XX century till now) and Japan (70th years of XX century).

In this regard taking about the information revolution (80-ies of XX century), the scale and speed of coverage is much more powerful. Nanotechnology revolution is brewing, in which the priorities are intellectual abilities in the field of "Fine Sciences."

The prerequisites for the transition to a new technological structure is a number of material, social and economic conditions that require changes in factors of economic growth in the paradigm of economic behavior of market participants. Among them are:

1. Acceleration of growth and leveling the technological upgrade in the world. Globalization has opened national markets of capital, knowledge, labor, accelerated innovation spillover between countries with different levels of technological development.
2. The urgent need to find alternative sources of energy due to the depletion of natural resources and rapid growth in consumer demand and rapid changes in its consumer preferences.
3. Competition knowledge, a quick update of the rules and unpredictable prospects.
4. The need to improve labor productivity due to the growth of the world population, accelerating the process of aging and its corresponding decline in the share of the working population.
5. Reduction of investment in the real sector of the economy because of the increasing outflow of financial investment in the speculative market.
6. Development of information social networks that allow societies to unite to solve the contradictions in society.
7. Growth in the share of economically active population with high levels of education and self-awareness, which requires an adequate relationship with the state and owners of capital.

These are, in our opinion, the basic preconditions for the creation of new technologies not only in production but also in the social sphere. The need for self-

expansion of capital can not be realized without the unity of the interests of all parties involved in this process. If we group features of the modern stage of technological change, we can distinguish in them the following basic characteristics:

1. The global process of technological renovation. Inventions, obtained in one country, due to information technology, become the property of the expanding range of customers in the global space. The competitiveness of the product increases with the expansion of its consumption.
2. Generating new knowledge becomes a source of innovation. The result is a rapid renewal products. Innovative transformation accelerated in the global space. (eg, within 5 years appeared 6 modifications products from Apple, such progress in modifications phones Nokia).
3. New knowledge primarily change the way of thinking and life: awareness, agility and mobility. If the industrial and technological revolution dominated the functions of capital in material form, in the current conditions in the formula of Cobb-Douglas function of human capital becomes predominant. A person with the ability to generate knowledge, which is the main demand of new technologies, is able to create value many times greater than its cost. For example, the ability of Bill Gates, Steve Jobs to generate ideas brought their companies billions in profits.
4. Change geographical point of technological breakthroughs. If the country has made the first steps of industrial and scientific and technological revolution, it has been developed Western countries, the generation of ideas, the introduction and spread of new information technologies at the beginning of the XXI century ahead of Eastern countries: India, China, United Arab Emirates.
5. The close relationship of technological and social and labor modernization. The imbalance between the parties of the economic system leading to social upheavals and economic regression.

3. FEATURES OF THE MODEL OF TECHNOLOGICAL TRANSFORMATION IN KAZAKHSTAN

If we turn to the models of labour relations in developed countries, it is possible to observe the historical process of ascent from simple labour ad physical coersion through economic coercion to competitive intellectual, creative and motivated labour, to the model of labour relations when employers compete not only in domestic, but in the global labour market.

In Kazakhstan attitude to the labour has another history and logic of development: revolutionary transition from feudal system of relations to the soviet model, and then about 70 years of administrative-command economic system and shock transition to the market relations led to the deformed labour market.

It should be noted that not all countries of the world have experienced successive stages of technological progress. Many of the developing countries (especially the former colonies) had passed the stage of industrial development. Having political independence, they remain more than half a century are economically dependent, maintaining the economy with a deformed structure and low level of economic development. The system of education, health, employment, quality of life remains at the pre-industrial development.

Countries of the former Soviet Union are different from the former colonial countries that in these countries resides literate population, most of them have a university degree and professional qualifications. However, political crises and social upheaval during the transition from the administrative-command system to a market economy led to the loss of many economic assets and social values.

Kazakhstan is a country with resource competitive advantages. The main advantage of Kazakhstan is rich in natural resources, a transit location, human resources with a high level of education and skills.

However, the effect of the use of the labor potential in the country is relatively low. The indicator is the low labor productivity.

On average across Kazakhstan productivity per person is 30-40 thousand USD., while in developed countries this figure is 200 thousand USD. The most high productivity observed in the extractive industries, due to high prices in the world markets. The lowest labor productivity observed in agriculture - about 3 thousand USD per employee per year, while in the developed countries - 50-70 thousand USD. In engineering industry of Kazakhstan, the figure is 10-17 thousand USD, while in developed countries - 90 thousand USD[8].

The dynamics of GDP growth for all the studied years of the markets of oil, reserves of which Kazakhstan is ranked 12th in the world.

The most important reason for the emerging gap between competitive and productive capabilities of their use are the institutional costs of labor relations.

The problem is that changes in the economic behavior of individuals and society is much more complex and occur more slowly in comparison to upgrade technological structures. If the new technologies available in the world markets, the creation of such values as the conscious attitude toward work and corporate culture requires special and sustained efforts of society.

Kazakhstan, was a kind way of Soviet industrialization, passing characteristic of Western historical stages subordination of labor to capital in which to develop a system of economic coercion, such as “Taylorism”, “Fordism.” Meanwhile, the capitalist mode of production has become the only possible mechanism for the introduction of industrial technologies and systems of machines in production. The Industrial Revolution was the basis for a revolution in labor relations. The labor

force has become a special commodity whose price is determined by the ability of the employee and market laws. The Soviet model of worker excluded commodity form of reproduction of its labor force, respectively - and the economic mechanism of development properties of the product "labor force".

For the Soviet worker constitutional guarantees of labor did not create a competitive environment in the labor market, in addition, a model of employment did not have such an important element of the price of labor - the main incentive to improve productivity.

The equal wages for a number of years has led to a decrease in the level of employment potential and the exclusion of such institutions as the work culture, the prestige earned income, commitment to the labor collective, etc. The incompleteness of the structural development of the previous technological structures, holding back the transition to a new system of organizational and institutional relationships appropriate to the new technological order.

Thus, Kazakhstan, moving to a new technological order, bypassing the capitalist mode of production with a distinctive economic duress, where the relationship between labor and capital were valuation content. If in the developed labor market has taken the form of goods, the price of which is determined by the market and its laws, and its cost to the owner of the capital became the capital that can bring profits, for many Kazakh businessmen worker remains subject to administrative and economic exploitation.

Long working hours without overtime pay, low labor motivation, lack of social security, etc. remains in small and medium businesses. Only in large companies, most of which are transferred to foreign investors, to some extent, follow international standards and working conditions.

Kazakhstan's labor market has not yet reflect the effects of the economic laws governing the equilibrium price of a commodity - labor force, that is why its properties are not adequate for the new technologies.

As the experience of economic development of the Western world during the replacement of the dominant technological structures unique opportunities for advancing development through the timely development of the key factors in the new technological order. However, the problem of the "path of previous development" in the countries of the former Soviet Union impede this process. The primary objective is to fracture the existing trends, overcoming depression and initiating economic growth, based on promising opportunities and expected results.

One of the reason is seen in the fact that in these countries there is a significant backlog of institutional changes of the technological transformation. An example of this can be new jobs with low quality in the new facility, when low-skilled workers are attracted to exploit cheap labor and lower the cost of the product. Also it is

important to consider the approach in the competitive selection of staff. In this organizational approach there is no reason to require employees to high culture and the corresponding productivity. Here it can be traced not only unmotivated of employees, but managers also.

In developed countries, the relationship between labor and capital have changed under the influence of social protests of workers, the requirements of the trade unions to modernize labor relations. In Kazakhstan, cause of the market transformation Institute of Trade Unions has been destroyed. It takes time and effort to its revival.

In addition, the owners of capital take into account that "Taylorism" acceptable for unskilled labor, and at the stage of use of mental and intellectual work, you must take into account the interests of employees, to create conditions for a motivated and creative approach to work. The experience of foreign companies is an example in the formation of a modern model of labor relations. Educational trainings, social packages for personnel, profit sharing, talent management in these companies allow you to achieve high productivity.

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