

Assessment of Value of Resource Curse Concept for a Practical Solution of the Problem of Industrial and Innovative Development of Kazakhstan

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Abstract: Abundance of natural resources has to be a basis of creation of national wealth in connection with growth of export which allows to import bigger number of means of production and to use a rent from natural resources for capital investments. However in many cases and in many regions of the world the return situation is observed. In this regard research of economy of Kazakhstan, being characterized high security with natural resources is of special interest. It is important to define, whether the resource wealth can influence development of industrial and innovative development of the country. It makes an essential contribution to a current situation explanation, allows to predict development of economy of Kazakhstan and to correct the directions of economic policy in the country rich with natural resources. In article is given the assessment of value of resource curse concept for a practical solution of the problem of industrial and innovative development of Kazakhstan.

Key words: Resource curse • Paradox of plenty • Dutch disease • Industrial and innovative development • innovations • Industrialization • Oil and gas sector

INTRODUCTION

A large number of scientists and experts, including the International Monetary Fund and World bank note a phenomenon of resistant inverse relationship between rates of economic growth of the countries and wealth (existence of considerable volume) natural resources. The interrelation between the size of stocks (“abundance”) of resources and low indicators of economic activity became a subject of special researches and received the name “resource curse” or “paradox of plenty”. The theory essence of resource curse consists in the following: considerable volumes of natural resources can be harmful for national economy and serve as the reason of economic recession (in the worst option-social and economic decline).

The term “resource curse” was entered by R. Auty [1] in 1993 for the description of a situation at which the countries rich with natural resources, weren't able to use this wealth for development of the economy and, contrary

to intuition, had lower economic growth, than the countries which own smaller natural resources. However, the thought that natural resources can be rather a curse of the country, than advantage, began to arise in the 1980th of the XX century. In different researches, including known work of J. Sachs and A. Warner [2], the interrelation between prosperity of natural resources and poor economic development of the country was traced.

Key basis of development of Kazakhstan are its oil and gas resources. Economic development of Kazakhstan for many years is depending on production and development of natural resources in a country subsoil. Exhaustion of these stocks at insufficient development of production sector will inevitably lead eventually to recession of economic growth. For this reason paramount value has now country transition to industrial and innovative model of development of economy.

Essence to industrial and innovative model of development of economy which became the dominating

doctrine of economic growth in economically and technologically developed countries of the world and also in the countries with positive dynamics of economic changes, is large-scale introduction in the industry through innovative processes of such products of intellectual work, as advanced technologies, scientific and technical development and other objects of intellectual property rights of the scientific and technical sphere and also introduction of effective organizational administrative decisions for the purpose of their commercialization or receiving social and economic effect [3]. As the certificate of the statement of industrial and innovative model of development of economy distribution of innovative processes to the industries acts.

For an assessment of value of resource curse concept for a practical solution of the problem of industrial and innovative development of Kazakhstan it is necessary to consider existence of resource curse factors in Kazakhstan [4]. Resource curse factors and their consequence are shown in Table 1.

It is expedient to consider manifestations resource curse in the Republic of Kazakhstan.

Weakness of Institutes: The basis of the analysis of the institutional environment in Kazakhstan is made by databases of World Bank WGI (Worldwide Governance

Indicators). Each index can accept values from -2.5 to 2.5. For the situation analysis the following estimates (Table 2) can serve in Kazakhstan.

Table 2 shows that in comparison with Norway where are noted low level of corruption, the reasonable regulatory bureaucracy, transparent counterbalancing forces in decision-making system, indicators of the institutional environment in Kazakhstan is much lower that testifies to weakness of institutes in the country.

Strengthening of a Real Exchange Rate: Growth of raw export involves inflow of foreign currency to the country. For payment of internal expenses exporters sell this currency that leads to rise in price of national currency. To growth of a real rate of national currency there is an increase in expenses in all branches of economy. Resource sectors to a lesser extent react to a change of course of currencies, partly due to bigger efficiency to growth of a rate of national currency. Processing branches are more sensitive to changes of course of national currency and at its increase lose competitiveness in favor of growth of cheaper import.

The average exchange rate of tenge for 2012 made 149,08 tenges for US dollar. In 2012 in nominal terms the tenge weakened in relation to US dollar for 1,58%. In 2012 the official rate of tenge in relation to euro weakened for 3, 73%, to Russian ruble-for 7, 16%.

Table 1: Resource curse factors and their consequence

| Resource curse factors | Emergence reasons | Results |
|--|---|--|
| Fight for a rent | Imperfection of the market. Indistinct definition of the property rights and their bad protection. Weakness of institutes and state | Protectionism of branches of national economy because of growth of a rate of national currency and, as a result, decrease in volumes of trade and degree of openness of economy, probably further rise in price of national currency due to decrease in import, preservation of structural imbalances and decrease in rates of economic growth |
| Strengthening of a real exchange rate | Growth of the export income promotes additional inflow of foreign currency to the country | To growth of a nominal rate of national currency there is a real strengthening of an exchange rate. |
| Deindustrialization | The resource boom promotes “pulling” of factors of production from processing sector in resource sector | Deterioration of conditions for production sector and its reduction, to competitiveness loss |
| Degradation of education and human capital | The most part of the income from use of natural resources isn't connected with a salary. Extracting branches-not knowledge-intensive also don't demand highly skilled labor. The labor occupied in extracting branches, is deeply specialized and can't be used in other branches | There is no strict dependence between an education level and remuneration level that reduces incentives to investments into the human capital. Extracting branches owing to the specifics aren't interested in scientific researches. Such specifics of labor and the capital impose restrictions on a free overflow of resources from sector in sector and reduces efficiency of their distribution |
| Failures in policy | High security with natural resources can generate “carelessness” in carrying out economic policy while the countries poor in resources, aren't able to afford similar luxury | Delay of economic growth |

Table 2: The analysis of the institutional environment in Kazakhstan

| Indicators | Kazakhstan | | | Other countries (for comparison) | | | | | |
|---------------------------------------|------------|-------|-------|----------------------------------|-------|-------|--------|------|------|
| | | | | Russia | | | Norway | | |
| | 2002 | 2007 | 2012 | 2002 | 2007 | 2012 | 2002 | 2007 | 2012 |
| Efficiency of state management | -0.92 | -0.56 | -0.44 | -0.34 | -0.38 | -0.43 | 1.90 | 2.03 | 1.89 |
| Quality of regulating institutes | -0.73 | -0.35 | -0.39 | -0.26 | -0.29 | -0.36 | 1.23 | 1.33 | 1.53 |
| Quality of legal institutes | -1.12 | -0.87 | -0.66 | -0.87 | -0.95 | -0.82 | 1.84 | 1.92 | 1.95 |
| Efficiency of anti-corruption control | -1.06 | -0.91 | -0.88 | -0.92 | -0.95 | -1.01 | 2.22 | 1.96 | 2.24 |

Source: [5].

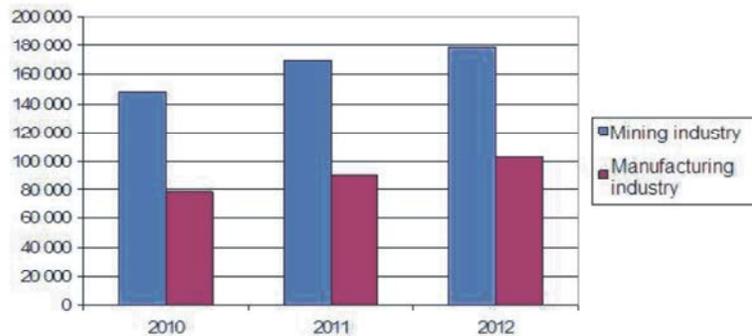


Fig 1: Growth of the average monthly real wage in resource sector, %

Source: [6].

In 2012 the index of a real effective exchange rate was 12, 0% higher than a basic level of competitiveness in 2000. Thus, concerning level of December, 2011 strengthening made 0, 1%. In 2012 decrease in real effective exchange rate index calculated to a basket of currencies of CIS countries made 3,3%.

As the reason of strengthening of real rates of tenge presence of excess quantity of foreign currency at the republic, caused by high prices of oil served.

It should be noted that strengthening of an index of a real effective exchange rate of tenge could happen also because of growth of the relative prices of not traded goods which reasons of growth salary growth in resource sector and as result the equation of salaries among other sectors is.

Salary Growth in Resource Sector: The average monthly salary in Kazakhstan in 2012 made 101 thousand tenges, having increased in comparison with 2011 by 12,5%.

Inflows of investments to resource sector led to salary growth in this sector. On a labor market the compensation imbalance that compelled production sector of economy and the state to raise a salary of the employees was established.

The average monthly real wage of employees of the mining industry of Kazakhstan in 2012 made 178 thousand tenges, in 2011-169 thousand tenges, in 2010-148

thousand tenges. In manufacturing industry: in 2012 I made 103 thousand tenges, in 2011-90 thousand tenges, in 2010-78 thousand tenges (Figure 1). Thus, growth rate of absolute measures of the average monthly real wage in the mining industry made in 2012 in comparison with an indicator of 2010-23%, in manufacturing industry-32%.

For reduction of an imbalance of a salary between resource sector and budgetary the state carries constantly out increase of a salary of employees of the budgetary sphere.

Deindustrialization: Concerning Kazakhstan it is possible to note not absolute deindustrialization (negative growth of manufacturing industry) and relative deindustrialization (decrease in production sector concerning sector of services).

It is possible to see the first evident signs in dynamics of change of gross domestic product which, being the aggregated indicator of production, in the structural cut reflects result of a production activity of all residents of the country in (Figure 2).

Excessively high share of a segment of the services, exceeding 50%, testifies to development of the sectors making not traded goods and services, i.e. not entering a foreign market. It is a characteristic sign of the Dutch disease.

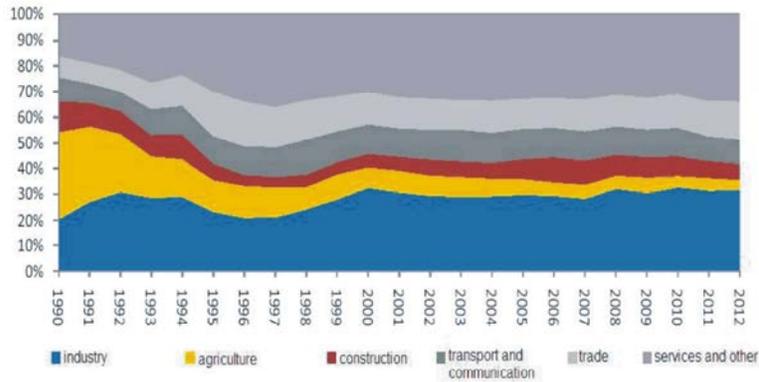


Figure 2. Structure of gross domestic product of Kazakhstan in 1990-2012
Source: [6].

It should be noted that for Kazakhstan the following symptoms of the Dutch disease [7] are characteristic:

- When developing fields of hydrocarbon raw materials the country received and continues to gain considerable income that is one of major factors of annual GDP growth on the average for 8,3% in 2001-2012. At the same time level of the income of workers of oil and gas sector grew, therefore, solvent demand of the population increased. As rates of development of processing branches considerably lagged behind growth rates of the income of the population, there was an excess demand for not traded goods which can't be imported in exchange for exported raw materials. In response to excess demand sector of services and construction reacted increase of the offer of production and respectively stimulated labor inflow from other branches, generally labor being released of processing branches.
- Even at full withdrawal by the state of the oil income and their fair redistribution between citizens there can be problems of regional imbalance of supply and demand of products. As as it was noted above, in Kazakhstan intensively developed the branches which are rendering services and letting out nontransportable types of production, increase in demand for not traded goods led to a rise in prices for them, release of traded goods was thus reduced.
- Stable reduction in production of a traded product and employment in processing branches means emergence of unprofitability and bankruptcy of the enterprises of manufacturing industry and agriculture. It results in structural unemployment, decrease in the income of the population and other social problems.

In Kazakhstan the oil and gas sector continues to develop excessively intensively in comparison with other industries. So, its share in gross domestic product grew from less than 1% in 1991 to 16,7% in 2012 that creates prerequisites for the Dutch disease. Tendencies of development of raw sector of economy, nature of influence of scales of a production activity of the oil and gas companies both on the macroeconomic environment and on microeconomic factors of activity of the enterprises of processing branches give strong grounds for refusal of the concept according to which “engine” of development of economy is the increase in production of hydrocarbons, in particular, in the Kazakhstan sector of the Caspian Sea. Oil production growth on shelf fields to 150 million t. in a year and will create serious obstacles to development of processing branches above and will transfer the Dutch disease to a chronic form.

One of threats to the Dutch disease is that the excessive growth of raw sector can lead to preservation of technological backwardness of Kazakhstan, will reduce profitability of processing industries and will orient them on production of investment goods for raw branches. Mining companies, as a rule, are less knowledge-intensive, than the companies of processing branches and don't demand a large number of highly skilled labor.

At the same time, the oil and gas sector, thanks to high profitability, distracts on itself considerable volumes of resources of economy and, respectively, creates a lack of resources for development of processing industries. In particular, the oil-extracting companies easily entice highly qualified personnel from other branches and fields of activity.

Degradation of Education and Human Capital: Within the last 15-20 years the steady tendency of degradation of the Kazakhstan education system is observed.

In the course of transition to the market the distinct regressive shifts which direction remained and during economic growth were outlined in structure of the domestic industry. At increase in specific weight taken in raw branches (from 14,7% in 1990 to 24,6% in 1998 and 28,7% in 2012) the share of branches where first of all NTP materializes, namely mechanical engineering (from 37,5% in 1990 to 31,4% in 1998 and 19,7% in 2012) and the light industry which production is used directly for satisfaction of final requirements (from 11,3% in 1990 to 5,2% in 1998 and 3,8% in 2012) [6] was reduced.

Thus there was a reduction of a share taken in processing sector due to its growth in extracting branches and production of services. Employment in the branches of non-material production providing quality of economic growth (the new knowledge connected with generation and information distribution, with accumulation of the human capital), was steadily reduced. Behind externally positive shifts of sectoral structure of economy there are the processes connected from employment. The last is shown in deindustrialization of agrarian and industrial work, increase in volumes of trade and providing simple services to the population.

High Level of Corruption: Corruption level in Kazakhstan is high, as the certificate to that the researches Transparency International (TI) serve, to the largest international organization which is engaged in fight against corruption. According to its data Kazakhstan in 2012 took the 133rd place from 174 countries on the Index of perception of corruption (Corruption Perceptions Index. CPI). Figure 3 shows data on the Index of perception of corruption of the Republic of Kazakhstan.

In 2005-2012 in the Republic of Kazakhstan 11089 corruption crimes were revealed. Speaking about statistical data of those crimes, it is possible to note that if in 2005 the quantity of such crimes made-1505, by results of 2011-2012, i.e. increased for 27%. According to financial police in 2012 were 1 828 corruption crimes, including on the facts are revealed: bribery-483; connected with assignment or waste of entrusted someone else's property-380; abuses of powers of office-389; office forgery-368; excess of the power and powers of office-21; connected with fraud-158 [9].

The provided data testify that corruption in Kazakhstan strengthens the positions.

Failures in Policy: In national economy the resource curse is shown in braking of process of restructuring of economy and lack of effective distribution of funds for these purposes.

If to consider resource curse factors (table 1) in relation to Kazakhstan, it is possible to state their obvious existence.

Though Strategy of industrial and innovative development of the Republic of Kazakhstan was accepted, last years showed that in economy of Kazakhstan signs of resource curse are obviously traced. The innovative sphere aimed at the development of the knowledge-intensive productions, practically isn't created, its share in gross domestic product is very low and can't influence development of own production. Obvious development of oil sector and the related productions and also labor overflow in this branch [10] is observed. Further development of these branches affects on all economy not in the best way.

The economists developing a subject of resource curse concept were offered two instruments of prevention of this problem. Creation of stabilization funds and development of public institutes concern to them.

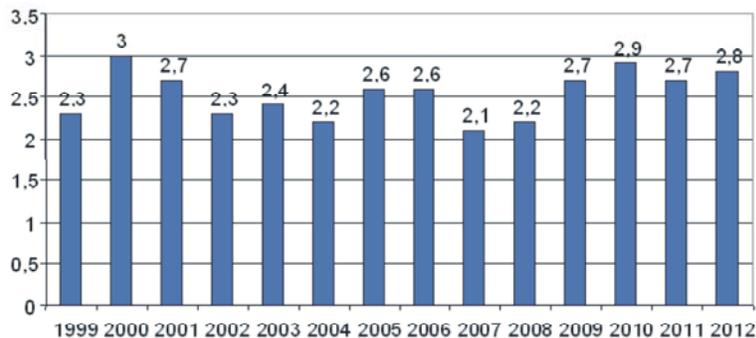


Fig 3: Index of corruption of the Republic of Kazakhstan, 1999-2012
Source: [8].

In Kazakhstan the National Fund which purposes were decrease in dependence of the republican budget from an environment of the world prices and formation of accumulation of the state for future generations was created. Formation of revenues of Fund it is carried out at the expense of direct taxes from oil sale, also other operations connected with oil sector that had to increase receipts in National Fund. Expenses of National Fund make transfers on development programs which are accepted by decisions of the Government of the Republic of Kazakhstan. Though all conditions for Fund activity were created, nevertheless there is no transparency in functioning of this Fund and actually the public has no reliable information about volumes of sale of oil, the list of the companies which taxes arrive in Fund, there is also no information on Fund and activity expenses in Fund investments. Thus, Fund creation as that doesn't solve a problem of resource dependence.

The second tool is development of public institutes. The political forces, seeking to use economy in the purposes, do harm and to social development of the country and its political image.

There are two ways of the order the raw material resources which are available in the country. The first is export in the raw, the second-deep processing of raw materials in the territory of the state. Such practice is used in the developed countries: USA and Norway. In Norway development of the knowledge-intensive industrial complexes, capable to replace future reduction of oil production is actively conducted. Such researches allow to create perspective productions instead of the extracting. Such experience is very important for Kazakhstan as oil production according to forecasts of the World Bank considerably will decrease by 2020. Therefore it is important to reconsider now priorities of development of economy from resource-selling to the resource-saving. Reorientation of the general state programs, development of public institutes and expansion of transparency of National Fund are for this purpose necessary.

Thus, consideration of resource curse factors in relation to Kazakhstan stated their obvious existence. Though Strategy of industrial and innovative development of the Republic of Kazakhstan was accepted, last years showed that in economy of Kazakhstan signs of resource curse are obviously traced. The innovative sphere aimed at the development of the knowledge-intensive productions, practically isn't created, its share in gross domestic product very low and can't influence development of own production. Obvious

development of oil sector and the related productions and also labor overflow in this branch is observed. Further development of these branches affects on all economy not in the best way.

Economic development of Kazakhstan for many years is depending on production and development of natural resources in a country subsoil. Exhaustion of these stocks at insufficient development of production sector will inevitably lead eventually to recession of economic growth. For this reason paramount value has now the balanced development of industrial production in Kazakhstan. The requirement of transition to industrial and innovative model of development of national economy shows a question of efficiency of investment policy in the industry. The important directions of its realization is stimulation of attraction of investments, legislation improvement in the sphere of attraction of investments, reorganization of system of the state investment, development of the investment market, development of state-private partnership and improvement of organizational forms of housekeeping at the state enterprises. The embodiment of these directions will allow to increase investment receipts in the industry of the country which will promote modernization of production and technological base of the enterprises, increase of profitability of productions and ensuring growth of industrial production.

The main task of industrial and innovative development of the Republic of Kazakhstan consists in ensuring industrialization on the basis of innovations. Prospects of industrial development of Kazakhstan are connected, first of all, with technological development and structural transformations to the industries. Structural transformations are promoted by methods of the state industrial and innovative policy. Overcoming of disproportions in the ratio raw both processing industries and formation of progressive structure of production have to lead to transition from raw structure of economy to the late industrial.

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