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# **PARADIGM OF SUSTAINABLE DEVELOPMENT IN THE AGE OF GLOBALIZATION**

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This scientific paper is the result of multi-year joint research of two scientists of different generations, some part of this research material is a synthesis of previous ideas, and a significant part is the result of new research. The logic of the scientific work begins with a study of the welfare theory evolution, which naturally came to the formation of present-day welfare theory. The work defines the criteria to assess the level of economic development in the country and the level of economic inequality in the distribution of income in the country. The key section is a section about the factors of economic development in the context of globalization. The paper analyzes the reasons for the “Economic Miracle” of South Korea and China in implementing the strategy of economic development, the reasons for the failure of economic reforms in Ghana after gaining independence, as well as in some Asian countries.

The authors reveal their understanding of the Asian model of economic reforms in Kyrgyzstan and the trends of its future development. Much attention is paid to the specific features of the economic reforms in Kyrgyzstan, the formation of the agricultural and industrial policies of Kyrgyzstan in the context of globalization. The final section of the study identifies the main components and economic mechanism of the future development strategy in Kyrgyzstan.

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## FOREWORD

The economy of Kyrgyzstan, like all post-Soviet countries, has experienced unprecedented shocks during the last few decades. The representatives of the Russian scientific circles have to make great efforts to understand the development laws in the country.

The slowdown in the economic development of Eastern Europe was observed in the 1950's of the XX century. A gradual slowdown of economic development in Russia, Belarus and Ukraine was observed later, by the 70's – 80's of the last century. However, the economies of the countries of Central Asia, being referred to the countries of Central Asia in the new geopolitical conditions, continued developing by that time, and therefore the reformist moods were not adequate here by the beginning of the perestroika period due to the lower starting level of development. Thus, the former Soviet republics of Central Asia were involved in the reform under pressure.

The representatives of post-Soviet science spent a lot of time and energy to understand the essence of the events. The authors of this scientific work, having enough capabilities and abilities, also gave many years of their life to research the reform processes. Finally, they have come to understand the theory and practice of the transition period as an “Asian model of the transition economy”. A distinctive feature of this reform model is that post-Soviet Kyrgyzstan, unlike Western and Eastern Europe, has come to socialism “bypassing capitalism”, that it did not have a market stage in its past and was located far from the countries with developed market economies. All this predetermined the need for a long and extremely difficult period of adaptation, to which the population of the country was not ready.

Due to the peculiarities of socio-economic, cultural and historical features of development (nomadic way of life), the Kyrgyz people are distinguished by their freedom-loving and “democratic aspirations”, which predetermined the choice of radical economic reforms. However, the lack of expertise and knowledge of the market economy made the Kyrgyz people suffer from great shocks. Finally, present-day Kyrgyzstan is among developing countries, other ways of saying, underdeveloped countries.

This study is the result of multi-year joint research conducted by two scientists of different generations; some part of this research material is a synthesis of previous ideas, and a significant part is the result of new research.

The logic of the scientific work “Paradigm of Sustainable Development in the Age of Globalization” begins with a study of the welfare theory evolution, which naturally came to the formation of present-day welfare theory, being discussed in the second chapter.

The third chapter defines the criteria to assess the level of economic development in the country, the level of economic inequality in the distribution of income in the country, which characterizes the Lorenz curve, the Gini coefficient and the Simon Kuznets curve.

The key section of this study, according to the authors, is a section on the factors of economic development in the context of globalization. The fourth chapter is devoted to the identification and justification of the country’s growth points ensuring the achievement of sustainable economic growth. According to the authors, such points include: increasing the competitiveness and

innovative nature of the domestic products; all that will ensure the growth of products with high added value; priority development of the agricultural sector to overcome poverty and inequality, ensuring productive knowledge, increase the efficiency of the integration processes (EAEU) through synergistic effect, state regulation of financial resources to mobilize them for the development economy.

The next chapter is devoted to the “Economic Miracle” of South Korea and China in implementing the strategy of economic development. The reasons for the failure of economic reforms in Ghana after gaining independence, as well as in some Asian countries are also analyzed here.

The sixth chapter reveals the author’s perception of the Asian model of economic reforms in Kyrgyzstan and the trends of its future development. Much attention is paid to the specific features of the economic reforms in Kyrgyzstan, the formation of the agricultural and industrial policies of Kyrgyzstan in the context of globalization.

The final chapter of the study is devoted to the problem of economic development strategy generation in the context of globalization. The main components and economic mechanism of the development strategy in the developing countries are defined here.

# **PARADIGM OF SUSTAINABLE DEVELOPMENT IN THE AGE OF GLOBALIZATION**

## **CHAPTER 1. WELFARE EVOLUTION THEORY**

Age-long focus of the human society was directed at achieving welfare or happiness. Welfare or happiness is typically seen as provision of the population, a social group or a class, a family, and a separate person with tangible, social and intangible values required for life.

If we refer to the dialectics of early social development, the great thinkers of that time defined criteria to differentiate between the states and the goals these states set to achieve. In particular, Aristotle believed that the quantity of empowered people and the goals implemented in the state were the main criteria for differentiation between the states. Aristotle thought that the forms of states were defined by the quantity of empowered people; he distinguished the rule of one, few persons and the majority<sup>1</sup>. The degree of providing freedom and promoting interests of each person by the state was used by Aristotle as the second criterion to differentiate between the states<sup>2</sup>.

If we take the social and economic formations, when one person was oppressed by another (slave-owning and feudal society), we can conclude that the majority in this society governed the country, possessed tangible values, had control over the life of

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<sup>1</sup> Аристотель. Политика. Афинская политика/Предисл. Е.И. Темпова.: Мысль, 1997, - с.103-105.

<sup>2</sup> Ibid, - p.109, 204.

people owned by or being dependent on them. The society welfare was defined by the material status of the ruling elite.

Succeeding capitalist society proclaimed Liberty as the main goal. Adam Smith in his book “The Nature and Causes of the Wealth of Nations”<sup>3</sup> explained the laissez-faire concept and demonstrated the effect of individualism and egoism on growth of labor capacity and national welfare.

The economic society has actually achieved astonishing results in general economic growth and national welfare, however, increased inequality of the society members was the reverse side of this process. In this respect the alternative welfare theories were elaborated to oppose private ownership during development of the human civilization.

The thinkers of Ancient Greece and Rome condemned private ownership and material inequality. They believed that the state of the society was natural during the period before class formation.

Utopian socialism doctrine based on egalitarian or equalization social ideology became widespread during early Christianity till the XIX century.

Originators of the utopian socialism – the English humanist writer, Thomas More and the Italian Tommaso Campanella – associated social inequality with private ownership. The European enlighteners, T. Campanella and Morelli proclaimed the ideas of early utopian socialism consisting in obligatory destruction of

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<sup>3</sup> Смит А. Исследование о природе и причинах богатства народов. Изд. «Эксмо», 2017г.

private ownership and equal distribution of incomes. In the XVII-XVIII centuries, the ideas of the French enlighteners were mainly based on the concept “natural law”, the human rights and obligatory nature of labor for everyone. They supported the idea of necessary social equity in distribution of funds, transformation of land into public ownership.

C.H. Saint-Simon, Ch. Fourier, R. Owen, the great utopists of the XIX century, lived during the golden age of capitalism and therefore their ideas were focused on creating large-scale public production. They managed to overcome the trend of the society equalization and asceticism and insisted on the need to provide distribution “according to the abilities”; they believed that the future society should have been the affluent society.

K. Marx and F. Engels proposed and grounded the theory of “scientific communism”, the idea of building a socialist society was the first phase of this theory followed by the construction of communism. Practical implementation of the first phase - socialism demonstrated that the socialist society can ensure social equality in distribution of funds to result in loss of efficiency. The experience of many countries shows that the socialist society can ensure social equality in distribution of funds to result in equalization of distribution. Equalized distribution neutralizes the interest in the final results of one’s work to reduce motivation to work “according to the abilities”. The result is that the “fair” society, in the context of funds distribution, is left behind in efficiency to the advantage of the capitalist society and is not able to build an “affluent society”.

The alternative welfare theories were gradually formed in the history of economic mind. Opinion on social development from

an individual point of view is among these theories. In respect of the modern welfare theories, the welfare theory of J. Bentham (1748-1832) is among the most famous theories; it defines welfare as aggregate satisfaction (the idea of utilitarianism) of the greatest number of individuals<sup>4</sup>. Aggregation of personal preferences is the most difficult problem in use of a utility criterion, since there is a problem of how to solve issues affecting the society welfare – the preference of the society members' majority or the individuals, whose intensity of preferences is the highest. The scientists acknowledge that this criterion cannot be practically used, as it represents a subjective belief and therefore an interpersonal comparison of utility is an insoluble problem.

Pareto characterizes another equally well-known criterion of welfare as resources allocation, when no one can be made better off without making someone worse off. The term “Pareto optimum” says nothing about the degree of income distribution. One of the individuals can be very well off, and the other one can live in poverty. Pareto efficiency supports an economic state where one individual cannot be made better off without making at least one individual worse off, and the economy will be settled down on its consumer power curve. Therefore, any change in economic conditions to create benefits for any part of society and not to cause damage to anyone, increases social welfare. In real life, almost any change in conditions creates benefits for one part of the

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<sup>4</sup> Бентам И. «Деонтология, или наука о морали». Избр. Соч., т.1, СПб, 1867.

society and causes damage to another part of the society to make the use of this criterion unsuitable<sup>5</sup>.

The English economist Arthur Pigou<sup>6</sup> developed a criterion based on the theory of diminishing marginal utility in his scientific paper “The Economics of Welfare” published in 1924. This theory states that the social optimum is set for each commodity when the marginal social benefits from production of a particular commodity are equal to the marginal social costs. The author believes that the state intervention is required as the market is not able to provide such ratio. He presented the intervention mechanism as follows - if the social benefits of a particular commodity exceed private benefits, therefore the state shall provide subsidies to a manufacturer to assist it in increasing the supply of this commodity, as well as allocate subsidies to a consumer to purchase this commodity. Taxes shall be imposed either on the commodity or on the economic activity to produce this commodity if there are negative external effects.

John Rawls, the Professor of the Harvard University, offers a fundamentally different criterion to determine the welfare level. He argues that the society welfare depends only on the welfare of an individual who is far worse off<sup>7</sup>. His theory states that the social welfare changes only if the welfare of an individual, who is far

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<sup>5</sup> Селигмен Б., Основные течения современной экономической мысли. Пер. с англ., М., Прогресс. 1968, - с. 600.

<sup>6</sup> Пигу А. Экономическая теория благосостояния. В двух томах. Изд-во «Прогресс», 1985г. - с. 512.

<sup>7</sup> Rawls R. A Theory of Justice. Cambridge. MA: Harvard University Press, 1971.

worse off, changes. Therefore, no improvement in material status of a wealthier individual can compensate society for deterioration in financial standing of a less wealthy individual. Formulated differently, the welfare of the least wealthy individuals becomes the main criterion to assess the social welfare. We believe that this criterion cannot be used as the main criterion to assess social welfare, since it focuses on the interests of a particular society sector - less wealthy individuals. Nevertheless, we think that the criterion proposed by Rawls is an extremely important assessment indicator used to understand the situation of the poor in the country.

The proposed criteria to measure the level of social welfare in real life are practically unsuitable due to difficulty in identifying the optimum. Therefore, the welfare theory has gradually been transformed into the public choice theory, according to which the society initiates analysis of public preferences identification. World economic mind provides a huge variety of approaches to understanding welfare theories and the criteria for their evaluation. However, only a few of them take acknowledgement in the scientific community and come into practical use. The economic growth theories and the sustainable human development paradigm have got widespread use in the economic theory and practice.

**Economic growth theories.** Economic growth is characterized by a trend set by the overall economic advance, increased real output in the economy in the long run. For a long time till the 1990's of the XX century, there was a prevailing view about economic growth to be the main indicator of the economic development, i.e. an increase in the ability of the economy to produce goods and services over a long period of time, as well as

about economic growth to be a quantitative increase and qualitative improvement of the social product and factors of its production. The growth of GNP contributes, in turn, to increased income, and higher level of consumption provides higher living standard. This society considered wealth as material values, when growth of material values per capita became an indicator of the society wealth status. This principle can be explained as follows: each individual is free and strives to produce and acquire material values. The desire of each society member to acquire the material values in turn becomes the driving force for the national capital accumulation.

Among the objectives of this study is to explain the reasons for the GNP change through time, as well as cross-country differences in this indicator. The key issue of the modern economy is why the growth starts accelerating in certain countries. Until recently, there is no single opinion in respect of the reason for development and achievement of a high living standard in some countries and poverty in others. The living standard of different countries varies significantly. Thus, GDP per capita in 2016 was USD 102,389 in some countries (Luxembourg) and USD 699 in others (Central African Republic)<sup>8</sup>.

The World Bank classification differentiates the countries by income per capita. There are high-income countries - more than USD 12,056 per capita; medium-income countries - USD 3,896 – USD 12,056 per capita; low-income countries: USD 996 – 3,896 US dollars per capita. Thus, according to the World Bank database,

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<sup>8</sup> As per PPP in international dollars, source: World Bank database, 2018.

in 2017, (see Table 1.1), GDP per capita in US dollars was distributed as follows:

**Table 1.1. GDP per Capita in the Countries as per Word Bank Classification (in USD), 2017**

	<b>Number of countries</b>	<b>GDP per capita, USD</b>
High-income countries, per capita	81	41,211
Medium-income countries, per capita	103	5,169
Low-income countries, per capita	34	750
<i>Worldwide, on average</i>	<i>USD 10,715</i>	

**Definition:** Economic growth is usually understood as an increase in real income (GNP, GDP, NI), as well as growth in real production output per capita. There are two indicators used to measure economic growth. The first indicator expresses GNP growth rate for a certain period. The formula can be represented as follows:

$$Y = \frac{Y_t - Y_{t-1}}{Y_{t-1}},$$

where  $Y_t$  – GNP of the current period,

$Y_{(t-1)}$  – GNP of the past period.

The second indicator expresses an increase in the volume of real GNP per capita for a certain period. That is, in contrast to the first indicator, it takes GNP per capita as a basis.

$$Y = \frac{Y_t^{pc} - Y_{t-1}^{pc}}{Y_{t-1}^{pc}}$$

Economic growth is regarded as extensive if it is promoted by attracting additional resources and does not change the average capacity of labor. Intensive growth is provided by the use of more perfect factors of production and technology, i.e. is carried out at the expense of increased return of resources costs, rather than growth in volumes thereof. Predominantly intensive or extensive economic growth is usually mentioned depending on the share of certain factors to cause this growth.

The extensive factors of growth include the growth of capital and labor costs. The intensive factors: process improvement, economies of scale, improvement of educational and professional level of workers, increased mobility and better distribution of resources, improved production management, improvement of legislation, etc. Aggregate demand as the main accelerator for output expansion is sometimes identified to be an independent factor of economic growth.

There are different opinions about the factors of economic growth in the economic theory. For example, an English economist Thomas Malthus (1766 - 1834) believed that the rates of economic opportunities expansion to cater to the basic needs of people were not very large and fell behind the growth rates of the population.

Angus Maddison, an American expert on the theory of economic growth, divided (see Table 1.2) the 15-century period into 4 stages by the growth rates:

**Table 1.2. Stages of Economic Growth by A. Maddison<sup>9</sup>**

<b>Stages of economic growth</b>	<b>Population</b>	<b>Output per capita</b>
Agrarianism (500-1500)	0.1	0
Developed capitalism (1500-1700)	0.2	0.1
Commercial capitalism (1700-1820)	0.4	0.2
Capitalism (1820-1980)	0.9	1.6

Simon Kuznets is a founder of a quantitative approach to the study of economic growth, who believes that modern growth rates were achieved during the industrial revolution, i.e. during the time of capitalism establishment.

The problems of economic growth were in focus in the 50's of our century. The growth potential observed in the post-war period started gradually diminishing (lack of goods, lack of housing, increased demand for equipment provided with the currency reserves). This period was characterized by a creation of growth models used to search for optimal relationships between

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<sup>9</sup> Angus Maddison, *Phases of Capitalist Development* (Oxford and New York: Oxford University Press, 1982), Table 1.2.

growth factors, to determine the conditions providing the desired rate and stability of development, to explore the most important proportions, as well as between consumption and accumulation.

E. Domar, an American economist, and R. Harrod, an English economist, are usually rated among the founders of the classical economic growth theory<sup>10</sup>. They proposed similar variants and therefore they are often considered as one model - the Domar-Harrod model. They believe if labor capacity (labor savings) grows, the capital coefficient, i.e. the capital-output ratio, will not change significantly. Therefore, the capital-labor ratio and the output-labor costs ratio will increase. Consequently, the capital-output ratio will practically remain unchanged. The Domar-Harrod formula can be expressed as follows:

$$G = S : C,$$

where G is the rate of economic growth, S is the share of savings in the national income (the share of net investment in NI), and C is the capital-output ratio or the capital coefficient. The model demonstrates the conditions required to provide a sustainable growth. The authors believe that a constant share of savings in the national income and an unchanged capital-labor ratio provide such conditions.

The growth model of Robert Solow is a bright exponent of the neoclassical approach to identify the factors of economic

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<sup>10</sup> С.А. Бартнев. История экономических учений в вопросах и ответах, М.: Юристъ, 1998. — 192с.

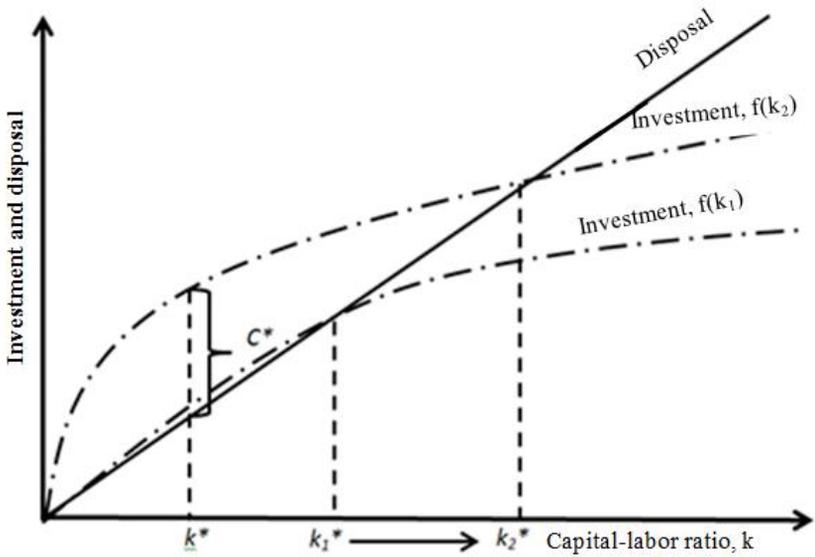
growth<sup>11</sup>. It shows dependence of production output on the following three factors: savings (capital), population growth (labor power) and technological progress (technology). Consequently, the scientist believed the primary factors of production: capital (K), labor (L), technology (T) to be the sources of economic growth. If Q is an output, then  $Q = Q(K, L, T)$ .

The impact of each of the aforementioned factors shall be considered. We will primarily consider the impact of the savings ratio on the production volume. We will use the chart of the production function  $Y = F(K, L)$  to carry out an analysis, in particular, there is the investment curve (see Chart 1.1) growing simultaneously with the increase of savings, and the disposal curve being characterized by a steady upward trend.  $K$ , the intersection point of both curves, shows a stable level of capital investment (capital-labor ratio is the amount of capital per one worker), i.e. equivalence between investment and disposal. The diagram demonstrates initial increase in savings being accompanied by economic growth. Further increase in the savings ratio, after the point of a stable level of capital investment ( $K$ ), results in slowdown of economic growth. Thus, Solow believed that high savings rates resulted in economic growth; however there are objective boundaries in this acceleration, i.e. this process does not last forever. Meanwhile, the level of capital accumulation providing the highest level of consumption in the country is called the Golden Rule (Phelps).

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<sup>11</sup> Solow R. A Contribution to the Theory of Economic Growth, The Quarterly Journal of Economics, Vol. 70, No. 1. (Feb., 1956), pp. 65-94.

**Chart 1.1. Investment Impact on Economic Growth<sup>12</sup>**



$k^*$  - capital-labor ratio as per the Golden Rule

$C^*$  - consumption as per the Golden Rule

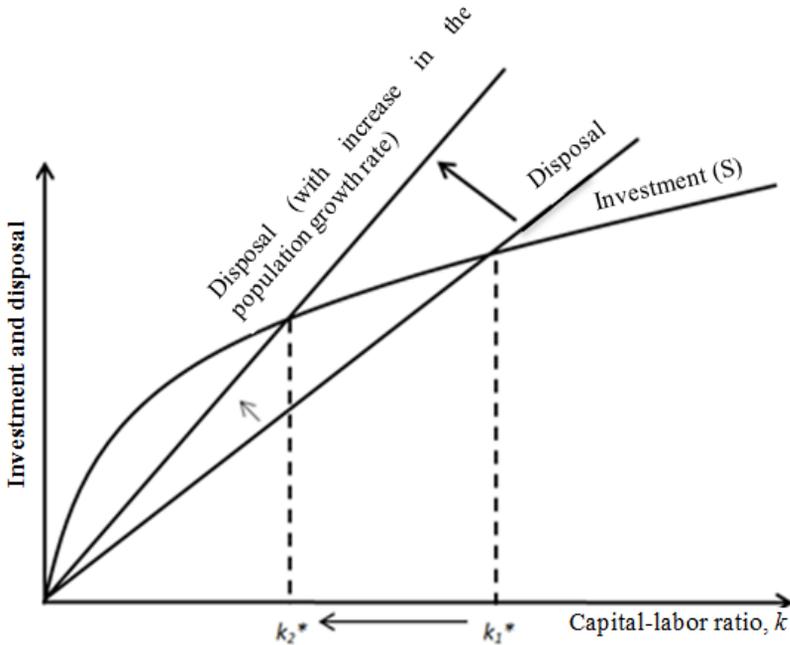
Let us now consider the impact of the growth in the number of workers on the volume of production. The first conclusion is that increased number of workers conditions reduced capital per one worker. Thus, Solow believes that rapid population growth results in a decline of the living standard in the country.

The chart demonstrates with a higher rate of population growth, a stable level corresponds to a lower capital-labor ratio ( $K_2$  instead of  $K_1$ ).

<sup>12</sup> G. Mankiw, Macroeconomics, 7th Edition, Harvard University, 2010, p. 205.

Now, the third factor - technological progress shall be introduced. The production function will be presented as follows:  $Y = F(K, L * E)$ , where E shows a change of the labor effectiveness (efficiency). Indeed, the technological advance provides higher final results upon introduction of modern technologies compared to additional costs associated with them.

**Chart 1.2. Population Growth Impact on Economic Growth<sup>13</sup>**



Solow has made a general conclusion that a high level of savings can condition economic growth; however this factor is functional until a sound financial standing has been achieved. Only technological advance can support a continuous output growth, and consequently, a continuous increase in the living standard of the

<sup>13</sup> G. Mankiw, Macroeconomics, 7<sup>th</sup> Edition, Harvard University, 2010, p. 201.

population. Thus, the Solow model shows the impact of saving, population growth and technological advance on the production output through time. Meanwhile, according to Solow calculations, within 1909-1949, only 12% are provided by the increase in capital per one worker, 88% are accounted for the technological advance.

Data of Edward Denison, a researcher of the U.S. economic growth using the Solow approach, are also well known. He believes that 32% of the real NI growth are accounted for an increase in labor costs in his country. An increase in labor capacity - the remaining 68% - are accounted for another factor.<sup>14</sup>

A “new growth theory” or an endogenous theory of economic growth was in focus in the 80-90’s of the last century. Essentially, the main factor of economic growth is an increase of investment in R&D and in human capital assets. In this regard, an economy with a developed science investing in human capital assets has all the prospects for sustainable economic growth. The Arrow-Romer model is also classified as an endogenous model of economic growth confirming that sustainable economic growth is the result of workers training in the process of activity.

In 1912, I. Schumpeter, the Austrian-American economist, was among the first economists to identify a new conceptual approach to understanding the essence of economic growth, the basis of which is implementation of the “new combinations” or “innovations”.<sup>15</sup>

Each theory of economic growth, in our opinion, is a regular reflection of the level of productive powers in which its

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<sup>14</sup> Денисон Э. Источники экономического роста в США, 1974.

<sup>15</sup> Шумпетер Й. Теория экономического развития. Капитализм, социализм, демократия. М.: Эксмо, 2007.

authors lived. Generally, it reflects the economic conditions typical for each stage of economic growth in a particular country. At first glance, the Domar-Harrod theory of economic growth cannot demonstrate an adequate picture of real processes for the economic development in modern countries. Meanwhile, the Domar-Harrod model fully corresponds to the level of economic development being characterized by extensive growth. Under the conditions when the countries possess idle resources, additional investments provide an opportunity to use them for gaining production or economic growth. We believe that the Domar-Harrod model nowadays still reflects the economic situation in many countries, and, primarily, in the developing countries. This is because many developing countries have enough free labor forces and natural resources; however, very often they have insufficient physical capital slowing down economic growth. The extensive growth factors, i.e. investment intended to acquire physical capital, can be used for these countries. However, low income prevents the developing countries from accumulating high savings levels and therefore the opportunities for economic growth are limited in these countries.

The results of the authors' empirical analysis that investment in the countries with the lowest level of development is the most effective can serve as the arguments to confirm the applicability of the Domar-Harrod model to the developing economies. The following table (see Table 1.3) gives the indicators to characterize the level of investment in GDP in different groups of countries, economic growth and efficiency of investment use. According to Joseph Stiglitz's approach, the investment efficiency was calculated as the ratio between GDP growth and the share of investment in GDP. Data for different groups of countries for 1960-2016 were taken to carry out calculation.

**Table 1.3. Calculation of Return on Investment by Groups of Countries for 1960-2016.**<sup>16</sup>

	Investment, in % to GDP $AK = \frac{\sum_{i=1}^N \frac{I_i}{Y_i}}{N} \times 100$	Economic growth, % $Ag = \frac{\sum_{i=1}^N g_i}{N}$	Return on investment $AE = \frac{\sum_{i=1}^N \frac{g_i}{K_i}}{N} \times 100$
	<b>1960-2016</b>	<b>1960-2016</b>	
High-income countries	23.9	3.1	12.9
Medium-income countries	27.3	4.6	16.8
Low-income countries	17.7	3.5	19.8

We see that the highest level of investments in the gross domestic product is in the medium-income countries - 27.3%. It is a bit lower in the high-income countries - 23.9%. The low-income countries are characterized by the lowest level of investment in the country's GDP - 17.7%. In context of economic growth, the medium-income countries are characterized by the higher rates of economic growth - 4.6%. Moreover, the high-income countries

<sup>16</sup> Calculations are based on statistical database of the World Bank.

can be expected to achieve lower growth rates compared to the medium-income countries, but higher growth rates compared to the low-income countries, as they have higher investment in GDP. The reality is that the countries with a lower level of investment (low-income countries) achieve the higher rates of economic growth - 3.5%; meanwhile, the growth rate of the high-income countries is only 3.1%.

J. Stiglitz said that if capital shortage is taken as a basis, the capital can be confirmed to be more productive in the developing countries compared to the developed ones and the economic growth will be higher in the developing countries under other similar conditions<sup>17</sup>. However, many researchers believe that everything is different in reality. According to J. Hoogendoorn, it does not happen as the productivity or efficiency of investment play a more important role, and these indicators are lower in the developing economies. The return on new investment turned out to be higher when the available capital was significant. Less effective use of capital investment in the developing countries compared to most developed countries is among the possible reasons why its value is underestimated in the developing countries<sup>18</sup>.

However, our calculations demonstrate quite the opposite compared to J. Hoogendoorn's statements. The empirical evidence for 56 years shows that J. Stiglitz's idea that investments can be used more efficiently in the developing countries than in more

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<sup>17</sup> Stiglitz J., *Economic Organization, Information, and Development*, Handbook of Development Economics, vol. 1, 1988. P. 143.

<sup>18</sup> Hogendorn J., *Economic Development/ Second Edition*, Harper Collins, 1992. P. 92.

developed and rich countries due to an acute shortage of capital, is confirmed. The medium-income countries take the second place in efficiency, and the high-income countries are the last in efficiency. Anyway, our calculations fully confirm this idea. We see, that the empirical evidence for 56 years confirm J. Stiglitz's idea that investments can be used more efficiently and are used comparatively effectively in the developing countries than in more developed countries.

How can this phenomenon be explained? Is it possible for the underdeveloped countries to provide such modern growth factors as a higher level of productivity, including education, technological advance, internal and external economies of scale, improved management, better infrastructure for the economy (schools, roads, bridges, electricity, etc.)? As previously stated, concentration of large amounts of capital can be another important factor to provide higher return on new investments. There are surely no such factors in the underdeveloped countries. We believe that different levels of development in these two groups of countries and therefore use of different growth factors are the main reasons for higher efficiency of investments in this groups of countries compared to the highly developed ones.

The more developed countries have reached the level when their extensive growth factors are almost exhausted and they have to use the aforementioned current intensive factors. The low-income countries are underdeveloped due to inability to produce the GDP potential volume, and consequently the bulk of the resources in these countries has not yet been involved in the production process. Namely, the lower the level of the actual GDP is compared to the potential one, the less developed the country is,

the more free resources the economy possesses, correspondingly the lower their market price is in the domestic market. Consequently, the return on additional investment in such countries will be more effective.

Consequently, the extensive growth factors are still topical for the underdeveloped countries, and therefore the Harrod-Domar model, being substantiated by them for the developed countries, is fully applicable to them. Back at the time, when the authors studied the economies of their countries, the latter were also at the stage of extensive development. Under current conditions, the developed countries have to use the intensive growth factors as the extensive development factors have reached their limits. The developed countries have to attract additional resources to provide economic growth. The developed countries have to pay a higher price due to the natural scarcity and high competition in acquiring each additional resource unit. In this case, to explain this phenomenon, we can use the “Aggregate Demand - Aggregate Supply” classic model: the closer the GDP volume to the level of potential (maximum) GDP (namely, this phenomenon is typical for the developed countries) is, the higher the price level is.

Thus, we believe that a lower stage of economic development in the low-income countries is the reason for their higher efficiency. We think that these countries being at the stage of extensive development can purchase additional resources at a lower price due to availability of idle resources. Finally, investment in the underdeveloped countries is used more effectively.

In context of the paradigm of sustainable human development, this direction in the evolution of welfare theory is the subject for study of the subsequent sections.

The effort to systematize the existing welfare theories will distinguish two main directions in development thereof being based on two opposite value systems. The essence of the dilemma is as follows: a society that ensures justice cannot provide efficiency, and vice versa, a society that is able to achieve “overabundance” pays for it with a loss of justice. The economic scientists think that there is no clear-cut solution for this dilemma. Each society will have to pay with a decline in efficiency to provide greater justice, or vice versa.

The history of the human society development tells that there always has been opposition of two opinions on welfare understanding. The thinkers of the Ancient World already proclaimed disapproval of material inequality and superiority of a classless society. However, these ideas were recognized to be utopian despite being widely distributed among the enlighteners of many European countries later on. Meanwhile, this idea was widely disseminated among people in many countries in the 20<sup>th</sup> century; moreover, it was transformed into the theory of “scientific communism” from the idea of “utopian socialism” and became dominant in many countries after the revolution.

The idea of a fair society to ensure equal income distribution was implemented. However, we remember, that the efficiency of public production started declining at a certain period of time. Some societies, for example, the countries of Eastern Europe, the Soviet Union, decided to renounce the idea of equal

income distribution and to start raising the efficiency of public production.

Nowadays, we see that two economic systems, being based on opposite value systems, conflict in theory and in practice.

In the last century, the economic mind already tried to formulate the idea to draw two systems together, P.A. Sorokin was the first to propose this idea in the book “Russia and the United States”, written in 1944. The authors of this theory are as follows: John Galbraith, Walt Rostow, François Perroux, Jan Tinbergen, A.D. Sakharov and others. “Both the capitalist and the socialist system have a long-lasting development opportunity, taking each other’s positive features (and actually getting closer significantly).”<sup>19</sup>

We share this point of view. The current opposition of two economic systems in theory, and, as we see today, in practice, is on the brink of catastrophe. Under these conditions, the human society must find the “third way” to unite the opposing value systems. We believe that this is practically impossible rather than possible at all, due to immense complexity.

Nevertheless, the reality is that many countries are searching for this “third way” today. In particular, the reforms of Ludwig Erhard have opened the door for implementation of the socially-oriented market economy theory, and, in particular, the experience of “Swedish socialism” is among the options to find

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<sup>19</sup> Сахаров А.Д., Размышления о прогрессе, мирном сосуществовании и интеллектуальной свободе, 1968. часть 2, - с. 16.

this way. The experience of China is surely another option to implement this idea.

We believe that Russia, having chosen the direction of increasing the efficiency of public production, is at the stage of searching for its development paradigm, and the idea of searching for a “national idea”, being widely spread in the society, confirms it<sup>20</sup>.

We think that the world economy is still at the initial stage of searching for a “welfare society” and we hope that it will be able to find this way before the irrecoverable things happen and the two uncompromising value systems find a “third way”.

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## **CHAPTER 2. FORMATION OF SUSTAINABLE DEVELOPMENT CONCEPT**

The idea of the country's development as insurance of economic growth was criticized in the 60's. Many researchers, namely Dudley Sears, Gunnar Myrdal, Paul Strathern, Hollis Chenery, Mahbub ul Haq, noted that no major changes occurred in the living conditions of the poor in the developing countries, despite the considerable economic growth after World War II (Myrdal, 1971, Strathern, 1972, Chenery, 1974).

The researches of Amartya Sen, a famous Indian scientist, influenced significantly the formation of a new idea. In times gone by, there were widespread views that only highly developed countries could afford "human development", understood as improvement of the public education system, health care, and other components of a "good life". Underdeveloped countries cannot afford it due to funds shortage. A. Sen strongly criticized this point of view. Relying upon numerous empirical studies (especially from India, China and Southeast Asian countries), he has rationally concluded that the idea of "a country, which must initially create a significant economic potential and afterwards think about "human development", is entirely wrong. The sequence should be reverse: the country's government and the whole society, wishing to ensure long-lasting prosperity to their society, must first choose public education and health care as development priorities. This rule should act for the rich and poor countries with small personal incomes. He is sure that preparation of the "economic miracle" should begin from investments in human capital assets, and investments in this area should directly affect the lives of ordinary people.

Thus, in the middle of the last century, several new authors concluded that development comprised economic growth and many other components being discussed till present. Finally, a new paradigm of social development was formed at the end of the last century.

The realities of the world economic development demonstrate that such processes as formation of a new paradigm of social development are extremely rare. More than good reasons are required for this phenomenon. The world economic development show that such reasons arise as a result of the new processes development in many countries. We believe that there are two processes to serve as the motivating reasons for emergence of a critical view of the existing paradigm of social development in the 60-70's and formation of a new theory of sustainable development. The first is the successes of the USSR centrally planned economy to have been achieved by the 60's of the last century. The second is the spectacular successes of the Northeast and Southeast Asian countries (Japan, South Korea, China, etc.) in the economic development, without classical factors available for economic growth, in the second half of the 20th century.

A firm conclusion was made in the 90's of the last century: the Soviet system lost competition with the capitalist system. We believe that the answer is actually not so absolute.

Collapse of the socialist system and destruction of the USSR centrally planned economy occurred so quickly that this processes can be called instantaneous from the historical point of view. At that time only a small portion of the population in the country could understand the essence, regularity and causality of

the ongoing events, nowadays, when a certain period of time has passed, we have the opportunity to try to understand these events.

The results of the centrally planned economy were spectacular during the first years after formation of its fundamentals. Few people remember this nowadays. Namely, the USSR economy produced only 1% of the world industrial production during the year of its formation, that is, in 1922. In subsequent years, the results were as follows:

**Table 2.1. USSR Share in the World Production**

<b>Period</b>	<b>Share in the world industrial production</b>
Year of the USSR creation (1922)	1%
Prior to World War II	10%
In the 80's	More than 20%

According to the UN data for 1980, in the context of the food products, with 6% of the world's population, the USSR provided:

- 13% of the world grain production,
- 20% of milk,
- 10% of meat,
- 12% of eggs.

All the aforementioned facts do indicate that the rate of economic growth in the USSR was very high during the first years of its existence, the socialist society achieved spectacular results for all

members of its society in such spheres as free education, medical care, physical education and much more.

Let us take the statistical data. Thus, according to the official data of the State Planning Committee, the rates of economic growth in the USSR were as follows:

**Table 2.2. NI Growth Rates in the USSR<sup>21</sup>**

Five-year period	NI growth rates increased by (%)
I (1929 - 1932)	98
II (1933 - 1937)	242
III (1938 - 1942)	92 <sup>22</sup>
IV (1946 – 1950)	64 <sup>23</sup>

High rates of economic growth provided serious progress in raising the living standard of the population during this period. Namely, according to the UN data for 1980, the daily average calories intake was as follows:

Worldwide – 2,900

USSR – 3,443

USA – 3,487

27% of the population in the USSR suffered from excess weight during that period.

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<sup>21</sup> Приводится по данным Госплана СССР за соответствующие периоды.

<sup>22</sup> Industrial production growth rates

<sup>23</sup> In comparison to pre-war level (1940)

All the aforementioned facts show that the economy of the USSR developed rapidly during the first years of its existence. The first human space flight is one of the most spectacular successes of the Soviet science. It is not surprising that the Western world, namely, the United States, intentionally analyzed the reasons for the USSR's advance in the conquest of the outer space. Nowadays, perhaps a few people remember or are aware that the large-scale plans were set in the Soviet Union, namely, collectivization and intensification. However, many plans were fulfilled, and some of them were even over-fulfilled. The data given below can serve as an example.

**Table 2.3. Comparative Data of the USSR and the USA**

<b>Indicators</b>	<b>USSR</b>	<b>USA</b>
Population (1989, thous. people) <sup>24</sup>	285,743	248,239
Area (thous.sq. km)	22,403.0	9,364.0
Production <sup>25</sup> (1987)		
Footwear (mln.pairs)	809	230

The data of this table indicate that, the USSR produced more footwear and milk, and significantly more tractors provided that the United States and the USSR have an equal number of the population and a higher economic potential (the area of one country is significantly larger than the area of another one). Other

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<sup>24</sup> СССР-США: факты и цифры. Статистический сборник/Госкомстат СССР.М.: Информцентр Госкомстата. 1991 – 167с. (Стр.20)

<sup>25</sup> Ibid. P. 106-109.

types of products could be selected, however, with some exceptions the result would be the same. The total deficit of the 60's and during the following years causes great doubts about correspondence of these data to the facts. Meanwhile, these data could reflect the actual state of things. The economy in the USSR was actually characterized by the progressive dynamics during the first 50 years of its functioning.

Within this context, the authors of this study remember their lectures and speeches abroad in the era of early “perestroika”, when someone from the audience started to speak as an opponent upon hearing the ideas to reform the USSR national economic complex. One student in Nebraska, the Lincoln University, judging by his appearance, he was born in India, asked the lecturer why the professor, who received a free education at the Moscow State University, spoke about the need to reform the Soviet economy, while millions of Indian women and men dreamed about the living standards we had in our country. The authors received similar questions during their lectures and speeches in other universities from the people who came from developing countries. All this made us look at our past in a different light, understand many of our fellow citizens, who also wistfully recall the achievements of the Soviet era. Nowadays, it becomes clear to us, that the goal of a socialist society - personal development, rather than economic growth – is the greatest achievement of the Soviet economy. And, we believe that this is the main achievement of a socialist society. The Soviet Union has in fact proved that the society, having such main goal as the welfare and equality of its members, can really exist.

The 70's of the last century became the starting point for changes in the economy of the country. The rate of economic growth in the USSR indicated that there was a steady downward trend in the national income of the USSR. If the annual growth of NI in the first postwar five-year period (1946-1950) amounted to 12.8%, however, during the eighth five-year period (1966-1970) - 8.2%, during the ninth (1971-1980) - 5.6%, during the tenth (1976-1980) - 4.2%, during the eleventh (1981-1985) - 3.3%, during the twelfth (1986-1990) - 1.3%. The total production deficit in the country indicated that the economic system was inefficient during the period of socialism. The economic climate indicated that inefficiency, gradual and steady downward trend observed in the country had an objective basis connected with the very essence of the economic system existing during the socialism (at least the socialism being built in the USSR), rather than was due to some single mistakes or internal reasons, as it was believed earlier, as well as in the mid-60's. At the beginning of the century, there were only certain thinkers namely, Kondratyev and Chayanov, to understand this idea, however, many clear-headed scientists started to share this idea by the end of the 70's and at the beginning of the 80's due to the analysis of the objective economic situation in the socialist society.

Indeed, the centrally planned economy did not manage to provide higher level of labor capacity, however the socio-economic system during socialism could formulate and implement new paradigm of development in favor of an individual.

The successful results of the centrally planned economy were undoubtedly the basis for the formation of critical thinking about the theory of economic growth by the 60's of the last

century. Meanwhile, the critical views were multidirectional. For example, Dudley Siers, a professor of economics, involves three requirements into the notion “development”: reduction of poverty and malnutrition, more equal distribution of incomes, settlement of employment issue (1979).

Gunnar Myrdal, a Nobel laureate, confirms that the development, besides improving the living standards, is based on the up-graded terms and ideas about the objective of the society development. He thinks that the current idea of the development proposes to change the whole society for achieving the following objectives:

- Provision of rationality (in applying technological expertise, structuring social relations, path-goal approach).
- Increase of production per capita and per one employed person through industrialization and increased capital requirements of production.
- Improvement of living standards.
- Establishing social and economic equality among people.
- Creation of more efficient social institutions contributing to increase of production capacity and ensure development as a whole through provision of mobility, initiative and entrepreneurship, effective competition, equal opportunities; development of faithfulness, punctuality, economic rationalization, honesty, rationality, openness to changes, solidarity and future orientation.

Such social indicators as life duration, literacy, level of education, infant mortality, telephone availability, the number of hospital beds, the availability of medical workers, balanced nutrition, etc. were included in the concept of development as a result of criticism of the growth theory.

The sociologists believe that development is not limited to the economic sphere. They think that this notion should comprise changes in the family composition, relationships in the family, mentality, cultural changes, demographic development, transformation of the rural population and urbanization processes.

The term “human development” or “development of human potential” became widespread in the 1980’s to emphasize departure from perceiving the term “development” within the framework of economic growth. The concept of economic development as an alternative for traditional concept of economic growth was initially formed in the early 90’s.

The world is changeable, it is changing every second. We should not foresee its development. Each country achieves successful results if it correctly understands the essence of occurring phenomena and events, and finds its place in a new reality. The present day world is very complex, and only few countries manage to understand the laws of its development.

The Soviet society implemented in practice a great idea – “the objective of the society development is human development or, as we currently say, human potential”. It is surely the greatest achievement. However, the centrally planned economy was a loser in the competition with the market economy, because the socialist society could not understand and accept a new reality – the world has become global and only the countries, being adapted to the new global trends, managed to survive in such world.

Some people associate the emergence of a new term with the name of R. Robertson, an American sociologist, who used the term “globality” in the title of his article in 1983, and gave definition to the notion “globalization” in 1985. The other people remember that Karl Marx was the first to use the notion

“globalization” in the meaning “creation of the world market”, he wrote in the letter to Friedrich Engels dated October 8, 1858 as follows: “The genuine objective of the bourgeois society is to create at least the general features of the world market with the production being based upon it. Since the earth is round, this issue can be considered completed upon colonization of California and Australia and opening the doors to China and Japan.”

The internationalization (globalization) is generally understood as the process of developing economic relations among the national economies, when the economy of the country is considered as a part of the global production process. This process develops based on the international labor division, production, scientific and technical specialization and cooperation. The national economy, i.e. the economy of a certain country, was the principal business entity in the world economy till the second half of the last century, however, many processes are perceived beyond the limits of the national states under the conditions of globalization. They are understood only within the framework of global processes. Basically, the notion “business entity” of the world economy is transferred from the level of the national economy to the level of the world economy.

What fundamental novelties has the process of globalization brought in development of the national economies? The main thing is that nowadays there are no borders between the national economies and the markets (there are no borders between the external and internal markets). We live in an era of the global market (goods, capital, labor force, technology) and international production formation. In fact, a common world, that is, a global economy, is being formed. The countries understanding the essence of the new reality successfully integrate into the new

economy, find their place and achieve success. The countries not understanding the essence of the new laws of development do not have time to restructure their economies in accordance with such laws, do not find their place in the new reality and fall behind in their development.

What challenges do the developing countries face under the conditions of a new economic reality? What priority tasks should the underdeveloped countries solve to achieve an economic recovery to enable them to ensure an increase in the living standard of the population? Misunderstanding strategic directions of development in the conditions of globalization results in deviation of the development vector from the necessary direction in many underdeveloped countries, and therefore they are not provided with the opportunity to achieve tangible advance in living standards of the population.

In the middle of the last century, the underdeveloped countries, being able to survive the most severe shocks, however having their economies in a state of devastation, managed to achieve an “economic miracle”, caught up, and then left behind the developing and many developed countries. A number of researchers believe that this was due to the assistance they received from the developed countries of the West, and above all the United States. We believe this is not quite so. Namely, everything, being said about assistance, was true. The assistance was undoubtedly given. However, we believe that the success of NIS (new industrialized countries) was primarily due to their ability to understand the essence of the new time and to find the right development strategy. Honestly speaking, only few countries managed to succeed among one and a half hundred underdeveloped countries.

The “Economic miracle” of several Asian countries was the second reason for a new paradigm formation. Since the mid-1950’s for more than 20 years, the economic growth in Japan was the most rapid in the world economy - almost 10% annually. The success of Japan was so impressive that it left behind all the developed countries of the West, except for the United States. The economic miracle of South Korea began in 1961. The extremely low starting conditions of both countries and the absence of any classical growth factors are the most surprising factors in this phenomenon. In particular, the economy of South Korea was destroyed after the Korean War of 1950-1953; the country did not have sufficient reserves of resources. The income per capita in this country was \$ 80 by the early 60’s, that is, lower than in many African countries. However, the GDP per capita in the Republic of Korea was 15,712 PPP in US dollars by 1999. The phenomenon of the countries of Northeast Asia and Southeast Asia is that they were able to find their development factors to achieve an economic miracle.

These countries took the idea of innovations of I.Shumpeter as the key element of their development strategy. This scientist managed to understand the essence of new trends in the world economic development and to substantiate the need for new approaches in achieving sustainable development. We think that the successful countries of East Asia managed to understand this need and implement it in practice.

The fruitful results of the market economy in the Western countries had a significant effect on the successful development of the countries in East Asia. The countries of Asia managed to direct their economies towards ensuring conditions to make domestic goods and services competitive. We believe that these countries

were even more successful. The countries which managed to make their goods and services competitive and provided according to Schumpeter “effective competitiveness”, achieved unprecedented results.

Nowadays, many countries focus on the human development potential in the course of economic development. The new approach to development is based on two concepts: the concept of human development and the concept of sustainable (supported) development.

Elaboration of the human development concept was initiated in the UN documents in 1990, when the first Human Development Report prepared by the United Nations Development Program (UNDP) was published, where the formulation of the development problem was represented from a new perspective - from development that is understood only as economic growth, to development, which takes into account the impact of economic development on people’s lives and the contribution of the people to economic growth.

The second basic concept of “sustainable development” was elaborated by the environmental specialists and adopted at the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro in 1992. They used the notion “supported development”. The supported development is generally understood as the development, which does not worsen the life (chances of life) of future generations (Brundland, 1987). A new concept called “Sustainable Human Development” emerged based on a combination of these two concepts reflecting the same approach from different sides.

Modern ideas that development is more than just economic growth lie at the heart of the aforementioned concepts. Namely,

these are special changes that occur in the structure of production, in the employment of the population, in the proportions between industrial production and agriculture (in particular, the increase in the share of industry and the reduction in the share of agriculture in GDP), etc. The followers of the new joint concept think that these changes are necessary to achieve economic growth and to ensure progressive changes in human development. Thus, a situation when growth is not supported by economic development can be easily imagined. In particular, this applies to the OPEC countries, where there is an increase in national income, but there are no significant changes in the structure of the economy.

The classical theory of economic growth and the modern concept of economic development allegedly declare the same ideas, however, actually have different approaches to evaluation of the result. Economic development should be focused on improving the quality of human life, rather than simply increasing the quantity of produced goods and services. We emphasize that there is no direct connection between the human development of the country and the level of its economic growth. Many states have a high level of gross national product per capita; however, their rates of human development are low. Meanwhile, there are quite the opposite situations. The specialists in economic development believe that the way the national income is used is more important compared to the size thereof in the country.

Thus, modern ideas about economic development go beyond the concepts of the three key growth factors: capital, labor and technology. The main differences consist in determining the factors of growth, and in assessing the outcome of development. Meanwhile, the modern concept of the essence of economic development does not contradict, moreover, it fully includes the

notion of economic growth. Economic development cannot be provided without economic growth. At the same time, the new concept is wider than the old one.

First, the final goal of the economic development is improving people's lives, rather than expanding production.

Second, human development is assumed to have two sides. One is the expansion of human abilities (for example, improving health, increasing literacy and skills). Another is the effective use of acquired abilities by people (for productive activities, political activity or recreation). The society is intent on developing human capabilities and ensuring equal access of the people to the opportunities for personal development. Harmonious development of the society implies maintaining a permanent balance between these parties.

Third, a fundamentally different distinction is made between the final goals and the means of achieving them within the framework of the human development paradigm. The classical theory of economic growth determined the GDP growth rate as a development criterion; meanwhile, the modern growth theory considers the increase in GDP as the main means for expanding the possibilities for human choice. The people are recognized to be the means and the final goals of development. However, an individual is not considered as a simple "tool" for the production of goods (through the growth of "human capital"). An individual is considered as the final goal of development, rather than the means to achieve material results.

Fourth, the paradigm of human development covers the entire society, rather than just the economy. Equal attention is usually paid to the political, cultural, social as well as economic factors.

The core difference between the strategies of economic growth and economic development is that they both declare the same idea; however in practice they don't have similar approach to the result evaluation. Economic development should be aimed at improving the quality of human life, rather than simply increasing the quantity of produced goods and services.

Thus, two ideas are the main motivating reasons for the formation of a new development paradigm. The first of these ideas is the socialist idea that an individual is a goal of the human society development. This idea was successfully implemented in the USSR by the 1960's. The essence of the second component can be defined as the formation of the sustainable development concept to have been formed due to achieving the "economic miracle" by the countries of Northeast and Southeast Asia that have made enormous progress in their economic development despite the absence of any classical factors for economic growth.

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## CHAPTER 3. CRITERIA FOR THE LEVEL OF ECONOMIC DEVELOPMENT

The question of the criteria to assess the level of economic development of a particular country is among the most important questions in economic theory. Which country can be considered relatively *rich*, and which one - relatively *poor*?

The answer to this seemingly simple question is quite difficult. There are different approaches to understanding the level of countries development. The level of GNP (the total volume of gross national product and the GNP per capita) was the most widely used criterion for a long time. Namely, the country producing large volume of GNP is considered to be rich.

There is another view on this issue: the country is rich or poor, where the level of people's welfare is higher or lower. Probably, the level of people's welfare is assumed to be dependent on the economic and non-economic factors. The non-economic factors are as follows: the size of the family, the quality of intra-family relations, leisure time, moral satisfaction from work, etc. We will focus on the level of human potential development as the main criterion of welfare in our study.

The concepts of *absolute* and *relative* poverty are separated in the economic theory. The absolute poverty it generally understood as the level of life, which is lower than the minimum established level for a particular country. The relative poverty is generally understood as the welfare level being below the welfare level of the society members majority.

Representatives of the concept of economic development believe that the GNP indicator is the most important among the system of indicators characterizing the level of economic development in any country. They believe that the level of economic development gives an idea of the quality of life and the

level of people's consumption in the present period and in the future. Moreover, they believe that this indicator cannot serve as the only criterion to assess the level of economic development. We think that the representatives of economic development offer a very reasonable system of indicators characterizing the level of economic development. The advantage of this system is that it is the product of the theoretical research conducted by the economists and the result of an analysis of the dialectic of development in 125 countries worldwide over the past 25 years. Let us consider them.

- The size of GNP per capita is the first and, as previously stated, the most important indicator of the level of economic development. In 2017, the average GDP level per capita in the world was USD 10,715, meanwhile, it constituted USD 38,196 in OECD countries, and USD 750 - in the least developed countries.<sup>26</sup>

- The employment level in the agricultural production is the second indicator of the countries' economic development. The followers of the concept of economic development believe that an excessively large number of people involved in agriculture - from 40 to 70% and more of the total number of population and small number of people employed in industry - from 5 to 15% indicates the poverty of the country.

It is worthy of note that this idea is often criticized. Meanwhile, the core idea of the arguments is as follows: a large percentage of the people involved in agriculture cannot be regarded as a negative factor. These arguments support the idea that agriculture is a traditional type of occupation for many countries, especially developing ones, to provide growth and economic development. Therefore, these countries should not try to reduce agricultural production and increase industrial output. We believe that this factor can actually take place. Meanwhile, it

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<sup>26</sup> База статистических данных Всемирного Банка, 2018.

cannot contradict the first condition at all. The representatives of this concept see the essence of the factor as follows: a reduction in the share of agricultural production and an increase in the share of industrial production have a positive effect if it results in general increase of labor capacity in this sector. Transfer of some portion of labor forces from this sphere to other sectors, for example, to the production of goods with a higher level of added value, can have a positive effect. First, the result of this process will increase the incomes of the population; second, the population of the country will be able to satisfy their needs in food products, to raise the living standard through the possibility of purchasing various goods and services. Indeed, the country with a significant part of labor forces engaged in the production of food products does not have an opportunity to satisfy other needs. The best practices show that the export of food products does not provide large incomes. The data on the underdeveloped countries worldwide show that the level of people employed in agricultural production is 68%. This indicator was 27% in our Republic in 2017<sup>27</sup>.

- The indicator of the trade volume with developed countries is the third indicator characterizing the level of economic development. The experts believe that the country is poor if 70% of its trade falls on developed countries. This idea probably indicates that the excessively high dependence of the economies of some countries on other advanced industrial countries can reflect the existence of economically unequal, unprofitable relations of some countries with others. Developed countries have great potential and opportunities and therefore have the upper hand.
- The experts of the concept of economic development think that the high rate of population growth is among the indicators of

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<sup>27</sup> База статистических данных Всемирного Банка, данные представлены за 2017 г.

the country's poverty. They believe that under the conditions where the total number and rate of population growth exceed the available quantity and quality of resources that can provide them, the poverty rate of the country increases even though economic growth may be generally typical for it. The data indicate that with the exception of the United States, for which the population growth rate is relatively stable, the growth rates of rich countries are relatively lower than those of the poor ones (see Table 3.1).

**Table 3.1. Population Annual Growth Rates<sup>28</sup>**

	<b>1967- 1976</b>	<b>1977- 1986</b>	<b>1987- 1996</b>	<b>1997- 2006</b>	<b>2007- 2016</b>
Low-income countries	2.5	2.5	2.8	2.8	2.8
Medium-income countries	2.3	2.0	1.8	1.3	1.2
High-income countries	1.0	0.8	0.7	0.7	0.6
USA	1.0	1.0	1.1	1.0	0.8

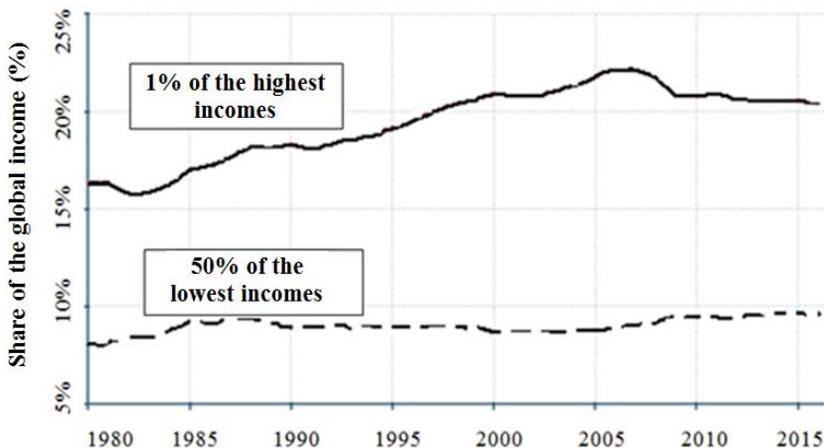
It means that the average income per capita in rich countries will increase much faster than in the poor countries provided that the other conditions (for example, economic growth rates) are equal. Consequently, the population of the rich countries will become richer and of the poor countries - will be poorer.

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<sup>28</sup> Ibid.

- The high level of dividing different categories of the population by income is among the peculiarities typical of poor countries. It means that insignificant incomes fall to the share of the poor people in many countries. Thus, 50.1% of the world income is accounted for 1% of the population worldwide<sup>29</sup>. This trend is escalating (see Chart 3.1). Inequality of income distribution between different segments of the population in different countries is determined through the Lorenz curve, the Gini coefficient and the Kuznets curve.

**Chart 3.1. Growth of 1% of the Highest Incomes amid Stagnation of 50% of the Lowest Incomes Worldwide, 1980–2016, 1980–2016<sup>30</sup>**



- Such indicators of the quality of life as the indicator of life duration (life expectancy at birth), the index of the educational

<sup>29</sup> Алвердо Л. и др. Доклад о неравенстве в мире за 2018 г., World Inequality LAB, 2018.

<sup>30</sup> Ibid.

level (calculated by taking into account the literacy rate of the adult population and the cumulative gross enrollment ratio of the educational institutions of all levels), the level of infant mortality (per 1,000 newborns), etc. are the standard characteristics of the country's economic development. Table 3.2 gives the average indicators for a particular group of countries.

**Table 3.2. Survival. Population Literacy Rate<sup>31</sup>**

	<b>High-income countries</b>	<b>Medium-income countries</b>	<b>Low-income countries</b>
Life expectancy at birth (years)	80.4	71.3	62.9
Infant mortality rate (per 1,000 live-borns)	4.5	29.1	50.8
Adult literacy rate (in %, age-15 years and older)	...*	85.6	60.6

In context of particular countries, the range of indicators will be much larger: for example, if the infant mortality rate per 1,000 live-born children in Iceland in 2016 was 2 people, however, in Somalia this rate was 133 people<sup>32</sup>. Rich and poor countries differ in the share of expenses on food. Less than 30% of the total

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<sup>31</sup> World Development Indicators of the World Bank, 2018.

\* No data.

<sup>32</sup> UN Inter-agency Group for Child Mortality Estimation (UNICEF, WHO, World Bank, UN DESA Population Division), 2018.

personal consumption falls on food products in the rich countries, meanwhile, this indicator constitutes 50-70% in the poor countries.<sup>33</sup> It means that the population of the poor countries spends most of their income on food and less on housing, clothing, medical care, education, entertainment, etc.

- The followers of the concept under consideration believe that the difference between the concepts “*economic growth*” and “*economic development*” is considered to be critically important for classification of the countries in terms of development level. This means that a country can have positive economic growth rates, however, fall behind in economic development, eventually resulting in deterioration of the population welfare in such country.

The notion “economic development” is much broader than the notion “economic growth”. As was already mentioned, economic growth is reflected in an increase in the growth rates of the total GNP and GNP per capita during a relatively long period of time. Economic development also includes an increase in the rate of economic growth as one of the most important indicators. However, economic development assumes a positive change in many other parameters, for example, such as production and employment structures, income distribution among different segments of the population, increased productivity through introduction of the advanced technology, increased participation of people in political processes (increased government accountability), increased share of manufactured goods in the turnover, improvement of the quality of human (labor) resources, the reduction of child and infant mortality, and the increase in

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<sup>33</sup> Global Consumption Database, World Bank, 2018.

longevity. Other ways of saying, economic development is the economic growth providing or being accompanied by the positive advances in the sphere of human development; this is the economic growth increasing the welfare of the majority of the population in the country.

Economic growth is simply measured through the GNP indicator. However, the economists warn against using this indicator to generalize and characterize the cumulative results of social production. They believe that linkage should be carefully provided between the growth of the gross national product and the corresponding general increase in welfare. The problem is that taken as an evaluation indicator it has several disadvantages. This is due to several circumstances. First of all, this indicator does not take into account the actual production output in the country. Statistical data do not include what is produced for use in the households, i.e., the labor contribution of family members. The goods and services that can be purchased in the black market are not taken into account, meanwhile, these goods and services includes the production of home-distilled vodka, and the goods and services being not sold or rendered in the official and registered markets. The use of this indicator underestimates the total production output in the country.

Another problem is related to the cost estimate of different products. The problem is that the statistical data include the cost of finished products at the market prices. However, in many cases there is no possibility to do it. It is applied to the free public sector services being not sold in the market. This is education, health, and law enforcement activities. The added value is usually determined by the costs of production in this sphere. That is, the real

contribution of teachers, doctors, officers, etc. is determined by their wages not reflecting the individual contributions of these specialists to the added value.

Gross national product cannot serve as a generalization when comparing the living standards of different countries. First, GNP does not take into account the price level in various countries and it is among its main shortcomings, therefore the real GNP per capita can differ noticeably from the nominal GNP. For example, the prices for many goods in Southeast Asia are lower than in Europe or the United States. Second, quite often there are situations when this indicator does not reflect the real living standard of people. For example, in many OPEC countries, even with higher incomes of the government and the population, the real living standard is still relatively low. In the United Arab Emirates (USD 40,699), in Kuwait (USD 29,040), GNP per capita exceeds this indicator of some developed countries, for example, Portugal (USD 21,136)<sup>34</sup>. Therefore, in classification of the countries worldwide according to the level of development, statistical data published under the auspices of the United Nations Organization in the Human Development Report of the country are as follows - the oil suppliers do not belong to the highly developed countries, but stand out among the countries of the Organization for Economic Cooperation and Development (OECD) with high income and the lowest level of development<sup>35</sup>. And, finally, the main shortcomings of this indicator are as follows: the size of GNP does not reflect the nature of the resources distribution, does not indicate who directly

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<sup>34</sup> World Bank database.

<sup>35</sup> Classification “Least developed countries” derived from UN, dated 1994.

receives the results of increased production. GNP per capita is an average indicator. It remains unknown whether each member of the society receives the appropriate part of GNP or the main part of GNP falls to the share of a small number of rich people. Therefore, we should support the ideas of Eklund that the indicator of the GNP volume should be applied with some caution, especially when comparing countries with different social systems, different shares of natural economy and the distribution of income structure. We should also agree that the GNP movement can not be directly translated into welfare terms. The gross national product is primarily an indicator of the market economy efficiency rather than welfare, and it can be used as an indicator of the production dynamics only with known tolerances.

Meanwhile, we would like to note that some shortcomings of this indicator such as generalization can be overcome. Adjustments are usually made in the world practice to take into account differences in price when calculating GNP. Adjustments were made for 150 types of products and services. Moreover, in particular, the World Bank uses GDP per capita as an estimate, taking into account its real purchasing power (see Table 3.3).

A conclusion can be made based on the data that the difference between the GDP adjusted indicators are slightly less than the unadjusted ones. For example, GNP per capita in the least developed countries is 14.75 percent of all developing countries and 1.77 percent of the developed countries. However, the GNP adjusted indicator is 17.25 percent and 4.3 percent, respectively.

**Table 3.3. GDP per Capita in Different Countries in 2016<sup>36</sup>**

<b>Country category</b>	<b>GDP per capita (in USD)</b>	<b>GDP per capital, taking account its purchasing power</b>
High-income countries	39,675	45,789
Medium-income countries	4,766	11,439
Low-income countries	703	1,973

The amounts of people's incomes should be primarily converted into a common currency unit to compare the incomes of people living in different countries. Till 1999, incomes were converted using exchange rates to assess income inequality worldwide in *the Human Development Report* (for example, when comparing the incomes of the richest 20% and the poorest 20% of the world population). However, the difference in the price level between countries is not taken into account when the exchange rates of currencies are used. This difference is very important in comparing living conditions. The purchasing power parity (PPP) conversion factors are used to convert the income indicators into a single currency; the PPP conversion factors contribute to eliminating the difference in the price level between the countries.

These two approaches to measuring inequality provide different results. The indicators of the inequality level, obtained when using the exchange rates, are much higher; the trends in the inequality dynamics also change.

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<sup>36</sup> World Bank database.

The ratio of the income of the richest 20% to the income of the poorest 20% increased from 34:1 in 1970 to 70:1 in 1997 when conversion was made on the basis of exchange rates (see Table 3.4). The PPP method decreased this ratio from 15:1 to 13:1, although we can conclude, based on these measuring methods, that the inequality between the richest 10% and the poorest 10% increases, the exchange rate-based conversion method reflects a much more significant increase in inequality, taking into account the real growth of the living standard.

Although the PPP method is the best way to convert income indicators for comparing the living standards, it has some theoretical and practical shortcomings. These shortcomings reflect the need to provide more significant financial and organizational support to collect data for PPP calculation.

**Table 3.4. Income Inequality between the Richest and the Poorest Segments of the Population, based on the Average National Indicators, 1970 and 1997<sup>37</sup>**

Method and Year of Measurement	Comparison of the richest 10% and the poorest 10%		Comparison of the richest 20% and the poorest 20%	
	1970	1997	1970	1997
Conversion method using exchange rates	51.5	127.7	33.7	70.4
PPP method	19.4	26.9	14.9	13.1

<sup>37</sup> Доклад о человеческом развитии за 2001 г. - с. 20. Вставка 1.3.

*Международные сопоставления уровня жизни: необходимость расчета паритета покупательной способности.*

The essence of the concept of “economic development” suggests the idea that it cannot be measured using a single indicator, since it is multivariate. There are the attempts in the world practice to develop the living standard indicators built on a fundamentally new basis than those made through the general indicators of the gross product and income. The system of indicators, which should reflect different levels of the human life and the society as a whole, characterizes social development of the society and the living standard. If you try to systematize these views, you can identify a number of indicators characterizing the general living standard and the welfare of people.

The generalizing indicators are as follows: the population literacy level, the percentage of pupils in school, the life duration, child mortality; the following indicators are given in the appropriate units per capita:

- provision with calories;
- power consumption;
- number of vehicles;
- consumption of iron, steel, cement;
- purchase of durable goods;
- number of radios and TVs;
- meat consumption;
- the number of letters sent;
- entertainment;
- income distribution (GDP per capita).

However, we think that this truly universal and rather comprehensive system for assessing the living standard of people has not yet been applied in practice. These factors are difficult to use as a general criterion of the living standard, as they are difficult to measure and especially bring to some single general indicator. So far it has not been possible to determine the place and role of each particular indicator in a single generalizing measure. These factors otherwise cannot be used as an estimate. It seems that in the

near future the specialists and scientists worldwide will be able to come to some common understanding and agreement on this issue. Any system of indicators cannot be an ideal reflection of life, because it will not always reflect it completely. And yet the system of indicators characterizing various aspects of life and human welfare would give a real possibility of a single and relatively complete assessment of such complex phenomenon as the level and quality of people's lives. The world practice uses different estimates as such system of indicators has not been developed yet.

Another generalizing indicator used in the world practice called the *Physical Quality of Life Index (PQLI)* is based on three indicators: literacy, child mortality and life duration. All three indicators are sure to characterize the most important aspects of the people's level and quality of life. The weak side of this synthetic indicator is that it does not take into account the influence of an equally important factor that determines the quality of life in each given period of time. The question is about income per capita. Only the amount of income can characterize the real volume of goods and services that each member of society can consume in a given period of time. As it was already mentioned above, the gross domestic product per capita is used as such index in the world practice taking into account its purchasing power in various countries.

*The Human Development Index (HDI)* is the synthetic indicator widely used in the world practice to characterize the people's level and quality of life. It is based on three indicators. They include: life duration, level of education, real GDP per capita, taking into account its purchasing power. The advantage of this generalizing indicator is that it characterizes the most important qualitative characteristics of people's lives. The first indicator - the life duration - characterizes the physical level of life.

The second indicator - the level of education - characterizes the general intellectual level of development, as well as the possibilities of personal development. The third indicator - GDP per capita - characterizes the real opportunity for a member of the society and his/her family to meet their diverse needs.

Naturally, it is difficult to argue that this generalizing indicator cannot fulfill its function, since it does not cover the whole system of indicators that can characterize the people's living standard. However, this criterion is widely used by the international organizations for evaluation purposes. Among all existing indicators, it is the best indicator in full covering the most diverse aspects of the people's living standards. However, we believe that the economic science will gradually develop new indicators to better characterize the living standard.

The human development index is a macroeconomic indicator to characterize the main material indicators used to form the people's living standard in the country. The quality of life indicator is often used in the economic literature besides this indicator. The quality of life is "a concept used in sociology, economics, politics, medicine and some other areas to denote the evaluation of some conditions and characteristics of a person's life, usually based on his/her own degree of satisfaction with these conditions and characteristics. It is broader than the material security (living standard), and includes the objective and subjective factors such as health status, life expectancy, environmental conditions, nutrition, household comfort, social surroundings, satisfaction of cultural and spiritual needs, psychological comfort, etc."<sup>38</sup>

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<sup>38</sup> Качество жизни [Электронный ресурс], Новая философская энциклопедия, под редакцией В. С. Степина. 2001.

Consequently, the main difference between the concepts of the human development index and the quality of life indicator is that the first is a macroeconomic indicator to characterize objective material indicators, while the other is an indicator to characterize both objective and subjective indicators of a person's life.

We think that the results of a scientific study by K. Toktorbayeva are interesting, i.e. the quality of life was characterized as follows: the human development index was taken as an initial indicator, it was supplemented by the important components<sup>39</sup> such as adequate housing, availability of non-material needs and benefits necessary for the formation of the individual, calculated through the level of cultural and educational activities of the population (the number of public libraries users per a year, the number of theatrical spectators per a year, etc.). Calculation of the last indicator based on the materials of our country in the regional context (in Chapter 3 "Rules, Trends and Peculiarities of the Quality of Life Formation at the Current Stage of the Economic Development in Kyrgyzstan") confirms the idea that a higher level of cultural and educational activity of the population (Bishkek - 0.83, Issyk-Kul - 0.71) is typical for more developed regions of the country. Conversely, a lower level of this indicator is characteristic for the less developed regions of the country (Batken - 0.18).

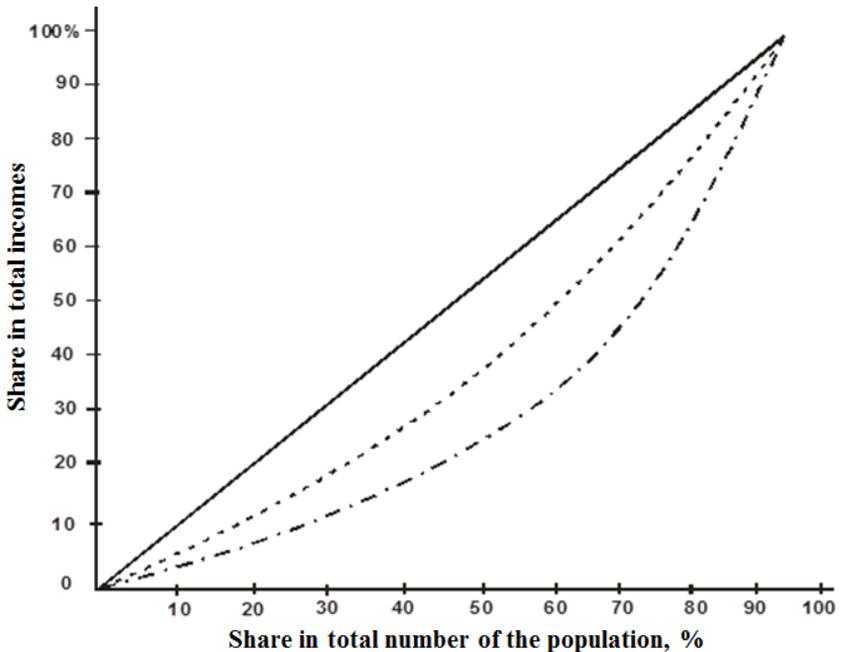
The level of economic inequality in the distribution of income in the country is characterized by three indicators: the Lorenz Curve, the Gini Coefficient and the Simon Kuznets Curve.

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<sup>39</sup> Interviewing and questionnaires conducted by the author in regions of Kyrgyzstan showed the importance of such indicators, as provision of housing and the level of cultural and educational activities.

The Lorenz Curve is drawn as follows: the shares of the population with a certain amount of income in the total amount of the population in percent are marked on the horizontal axis. Meanwhile, the share of the population that has the lowest incomes is marked first; it is followed by the population with higher incomes. The share in the total income of the corresponding percentage of the population is marked on the vertical axis (Chart 3.2).

**Chart 3.2. Lorenz Curve**



- Curve characterizing absolute equality of incomes
- Curve characterizing the families of the Russian citizens

----- Curve characterizing the families of the US citizens

The x-axis bisector is a curve that characterizes the absolute equality of income. For example, 10% of the population receives 10% of the country's income, 20% of the population - 20%, etc. Absolute equality of income is an abstract concept. There is a part of the population (poor) in real life receiving a smaller share of income and vice versa - rich, receiving the most significant share of income. The diagram gives examples of the families of the Russian and US citizens. The dotted line is a curve for the Russian families and dotted lines with sports are a curve for the families of the US citizens. We see, the Lorenz Curve together and the bisector line remind a bow and therefore it is often called the "Lorenz Bow". The more the tension of the bow is (that is, the greater the distance from the bisector), the greater the level of uneven income distribution in the country.

The idea of justice is one of the universal and therefore the desire for a more equitable income distribution is a thought leader. However, the scientists have currently accumulated some experience, and it shows as follows. First, the Lorenz Curve approaching the direct line of absolute incomes equality kills the incentives for productive work (people lose motivation to work if they get the right to equal income irrespective of the result of their labor). Therefore, some scientists believe that destruction of private property resulted in painful consequences. They believe that certain income inequality should be recognized as a normal, vital element in encouraging people's labor activity to provide healthy economic development. Economic history shows that as the economy of the country develops and the general level of citizens' welfare increases, the degree of income inequality rises.

Other ways of saying, income inequality is the price that society has to pay for accelerating the growth in the welfare general level of all citizens in the country. Meanwhile, the negative result cannot be denied with increasing inequality in the income distribution among people. Moreover, the people's patience is limited. The experts in economy say that the limit of "tightening" for the Lorenz Bow is observed when the total income of the poorest 40% of the population constitutes 12-13%.

The Gini Coefficient is the next indicator of the inequality in income distribution. It is, in fact, an indicator intended to use of data derived from the Lorenz method to compare the level of inequality in the income distribution worldwide. The Gini

Coefficient is defined as follows:  $\frac{A}{A+B}$ , where A - this is the figure area limited by the x-axis bisector and the Lorenz Curve in the chart, B is the figure area limited by the Lorenz Curve, the horizontal axis and the line drawn from X to the horizontal axis. The value of the coefficient is in the range from 0 to 1. The incomes are absolutely equally distributed in the society if a coefficient is close to or almost equal to zero. The country is characterized by a poor majority and a super-rich minority (that is, the highest level of income unequal distribution) if a coefficient is close to 1.

The positive characteristic of this indicator is that it is expressed in one number and is more convenient to compare than the different lines of the Lorenz Bow. The Gini Coefficient indicators for some countries are given below (Table 3.5).

**Table 3.5. Gini Coefficient Worldwide<sup>40</sup>**

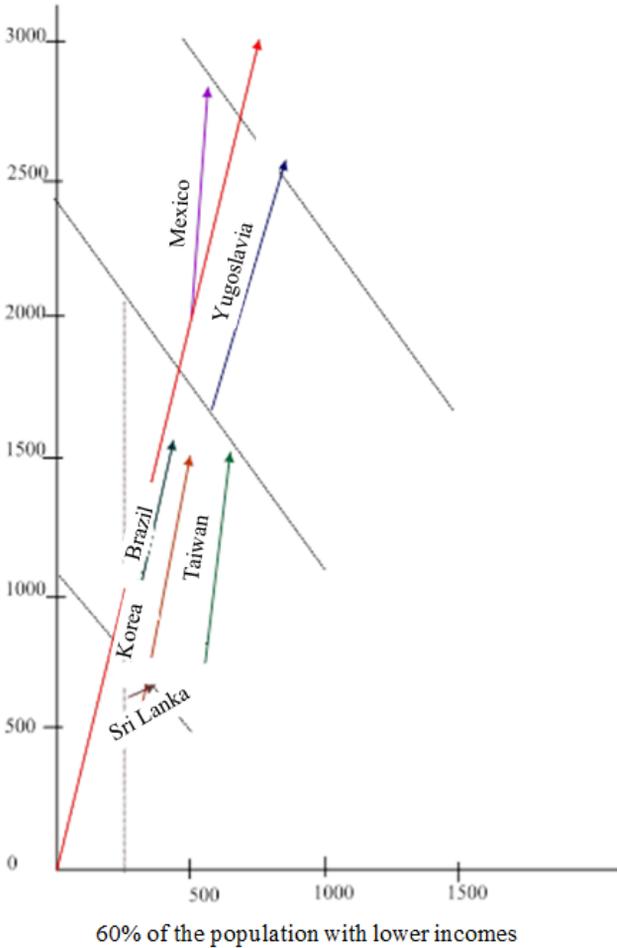
<b>Country</b>	<b>Coefficient</b>	<b>Country</b>	<b>Coefficient</b>
Iceland	0,246	Poland	0,298
Slovakia	0,247	South Korea	0,302
Slovenia	0,251	Netherlands	0,303
Denmark	0,256	Canada	0,313
Norway	0,257	Italy	0,326
Finland	0,257	Australia	0,337
Czech Republic	0,257	Portugal	0,338
Belgium	0,266	Greece	0,339
Sweden	0,274	Spain	0,344
Austria	0,274	Estonia	0,346
Hungary	0,288	New Zealand	0,349
Germany	0,289	UK	0,356
France	0,293	Israel	0,365
Switzerland	0,297	USA	0,394
Ireland	0,298	Turkey	0,398
		Mexico	0,459

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<sup>40</sup> Статистические данные ОЭСР, неравенство доходов, данные за 2014 г.

The Simon Kuznets Curve is defined as follows. Income per capita for 40% of the country's population with high incomes is marked on the vertical axis. 60% of the population with lower incomes is marked on the horizontal axis.

**Chart 3.3. S. Kuznets Curve**



The Kuznets Curve is shown as a straight line for each country; it reflects the level of inequality in income distribution between the rich and the poor people in terms of economic growth, that is, when the country's income grows over time. The level of inequality in a particular country is determined through a comparison with the original Kuznets Curve (it shows the unchanged level of income distribution between the rich and poor in the country with an increase in the country's income). A deviation to the right from the original Kuznets Curve indicates a growing equality in income distribution in a particular country, and vice versa - a deviation to the left from the original one shows growing inequality (Chart 3.3).

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## **CHAPTER 4. FACTORS OF ECONOMIC DEVELOPMENT UNDER THE CONDITIONS OF GLOBALIZATION**

Factors of economic development are the key subject of this study. Education of one author at the University of Nebraska-Lincoln in the USA had a great influence on the formation of the authors' views on this issue. It was back in 1994. That year was the most difficult in the transition economy of Kyrgyzstan. The economy of the country was at the bottom of its fall. The country's GDP decreased twice. Most of the population thought that a catastrophe occurred, the world was about to collapse, and the country had no future. The fall in living standards was so catastrophic that the population of the country was in a distress. Such situation affected particularly the people who received a fixed wage. During this period, participation in the "Partnership" program and education at the University of Nebraska-Lincoln was a memorable experience for the author of these lines; it opened up new knowledge and opportunities. The course "Economic Development" had the greatest impression on the author. It brought hope that even the most desperate countries being in difficult conditions had the opportunity to overcome these difficulties it was just necessary to have a strong desire to learn a lot. This knowledge helped the author of the lines to believe in the possibility of overcoming the difficulties the country faced in its development and to make this line of research a matter of the further scientific life, which the second author was soon involved in.

The author of the lines was fortunate to have the textbook by J. Hogendorn as recommended training toolkit for the course "Economic Development" that year. We believe that this textbook

is among the best publications on this course. Unfortunately, publishing of this textbook was soon stopped, as the author retired due to his age. We think that J. Hogendorn's position on the factors of economic development is of scientific interest nowadays. In this regard, we will further try to present our own interpretation of J. Hogendorn's position being previously published<sup>41</sup>.

The modern concept of economic growth and development differs from the classical one by orientation, i.e. by purpose and factors. The main goal in the classical model is economic growth and the main factors of achievement thereof are as follows: capital, labor and technology, however, the new approach focuses on an individual and development thereof. The new approach considers the human potential development as one of the most important factors of economic development.

The most important in this concept for Kyrgyzstan today is that, through the example of many countries the practice proves that the economic development and the high living standard of the majority of the population are not achieved by the countries possessing economic rationale for it. The successful development experience of Germany and Japan (after World War II), South Korea and Taiwan, as well as unsuccessful experience of Ghana (which had excellent prospects for development, however failed to use them) indicate that there are very important development factors that go beyond our previous ideas about economic development, which every country should know and use, striving to achieve success. The strategies of economic development of Japan, South Korea, Taiwan, and China are successful. Other way

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<sup>41</sup> Hogendorn J., *Economic Development/ Second Edition*, Harper Collins, 1992.

of saying, international practices show that there are no obstacles for the country with the lowest economic potential to achieve prosperity. And vice versa, a country that seems to have all the possibilities for this cannot achieve positive results. Subsoil resources or other material assets turned out to be not the most important factors of economic development. A modern concept of growth has a new approach to the role of the already known classical factors of economic development.

They believe that the increase in productivity through saving and investing a significant (increasing) part of the national income and product is the most significant growth factor. Moreover, investment in innovation and technological progress is the main key to success. And it is rightly so: the more is invested in the country's economy, the higher the productivity is, and consequently the more effective the result is - the volume and quality of the national income and product. According to the World Bank<sup>42</sup>, increased investment in the country's GDP by 1% provides an economic growth by 0.1-1%. *Innovation* and *technological progress* are the key factors of growth in many rich countries. Technical progress is generally understood as the new methods of production, and, moreover, new forms of management and arrangement of production. Meanwhile, the *efficiency of investments* is of great importance. In different countries, they are used in differently. In some countries, their effectiveness is 4 times higher than in others. We will consider the following

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<sup>42</sup> Hogendorn J., *Economic Development/ Second Edition*, Harper Collins, 1992. P. 91.

Расчет сделан за 1973-1987гг. по 125 развивающимся странам.

macroeconomic formula to define what the financing of capital-forming assets depends on:

$GNP = C + I + (X - M)$ , where

C - consumption (governmental and state),

I - investment (also governmental and private),

X – export of goods and services including income received abroad,

M – import of goods and services plus income paid abroad.

If we combine the first formula given above with the formula  $V = C + S$  having the meaning of the total income being equal to the total expenditure, we obtain the following formula:

$$C + I + (X - M) = C + S,$$

Consequently, the result is as follows:  $I = S + (M - X)$ , which means that the opportunities for investment are determined by the domestic savings (S) plus capital (M - X) received abroad.

Hogendorn believes that the idea about the ability to generate domestic savings is more important than the ability to attract foreign capital is among the results of new research. Meanwhile, significant share of the domestic savings directed to the capital market in many developing countries are the private household savings. To confirm this idea, let us turn to the results of international studies conducted in 1989 to demonstrate that 13% of GDP fall to the share of household savings in underdeveloped countries. However, 6% thereof are directly invested in business through acquisition of the shares, etc., 7% - through intermediation of the monetary institutions. 9% of savings fall to the share of business, and it invests more - 16% of GDP. The remaining 7% are borrowed funds. Government savings constitute 5% of GDP, it

invests 7%. Foreign aid and private capital are the sources of the remaining 2%. Proceeding from the above, one very important conclusion can be made: domestic savings are more important for the developing countries rather than foreign contributions. Moreover, private savings constitute most part of the domestic savings - 60 - 70%. Consequently, the countries striving to achieve economic growth and development must be aware of the priority factors of this process without relying or overestimating the importance of others.

The experts give the following facts to confirm this idea: if domestic capital was at least 10% more efficient, it would be much better for the economy of the country than a tenfold increase in capital (foreign assistance and investment) received from the developed countries<sup>43</sup>.

Experts point out the development of agriculture as one of the most important factors of growth and economic development. There has long been a steady preference for urban economy and neglect of rural one. There is also a theoretical justification for this view. For example, Arthur Lewis<sup>44</sup> dual-sector model to claim that underdeveloped economy consists of two sectors: the traditional sector with natural agriculture, hidden overpopulation and zero marginal productivity, as well as a high-performance modern (industrial) sector. The conclusion is as follows: it is necessary to develop and invest in modern sector - industry. And this approach was the most typical. Finally, the agricultural worker

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<sup>43</sup> Hogendorn J., *Economic Development/ Second Edition*, Harper Collins, 1992., стр. 93.

<sup>44</sup> Lewis W.A. *Economic Development with Unlimited Supplies of Labour // The Manchester School*. — 1954. — C. 400-449.

worked manually with a small invested capital and primitive technology. Financing was always transferred to the city, and it was partially implemented through the taxes collected from agriculture. Meanwhile, a policy of reducing food prices was carried out. Low productivity was the natural result of all aforementioned processes. Economic development requires reforms of the agriculture, formulating a strategy for its development to ensure an increase in the productivity of insufficient production factors in this sphere.

There are no clear-cut opinions and approaches in respect of the main directions of agricultural development. Many Western scientists believe that such process in the world economy as the “Green revolution”, being understood as the rapid growth in cereal production due to introduction of the new hybrid sorts of wheat, rice and maize, provides significantly increased yields of the farms in many developing countries, however, there are several very serious scientists<sup>45</sup> who think that this movement provides benefit only to the rich landowners (due to the use of very expensive hybrid seeds and the need of additional expenditure for irrigation, fertilizers, insecticides, etc.) and results in increased poverty of the ordinary farmers.

Moreover, a clear solution has not been found yet for the issue of the village-city migration. The attitude towards migration ranges from the negative views to the statement (Todaro model)<sup>46</sup> about migration as an economic phenomenon and the decision about it can be justified for a separate individual.

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<sup>45</sup> For example, Vandana Shiva (1989) and Michael Todaro (1997).

<sup>46</sup> Микаэль Тодаро «Экономическое развитие». – М.: МГУ, ЮНИТИ, 1997.

As previously noted, the excessively high level of employment of the population in agricultural production is among the criteria for the country's poverty. Therefore, it is necessary to develop and strengthen this sector to achieve growth and development. The arguments are as follows. Economic development cannot be achieved until the labor capacity in agriculture increases. Experts believe that the domestic markets will be restricted to introduce new industrial goods if incomes in agricultural production do not increase. Followers of the new concept believe that if the number of people employed in agricultural production exceeds 40%, therefore, this country is mainly engaged in production of food and agricultural raw materials and less in production of other types of necessary material values and services. The experts believe that the strategy of integrated agricultural development can solve the problem. They think that consistent improvement in the living standards of rural residents through increasing the incomes and efficiency of small-scale farmers is the main task of agricultural development. Therefore, the structure of farms and the land lease system should be reorganized to ensure growth of the food production and dissemination of the progress among agricultural structures, a system to support small-scale farming should be created, as well as to increase the incomes of the farmers and the entire rural population through employment growth, to develop the agricultural processing enterprises, to expand the education network, medical care, to improve nutrition and housing conditions, to reduce the inequality of economic opportunities and income between rural people and the urban population.

The level of development in the country depends directly

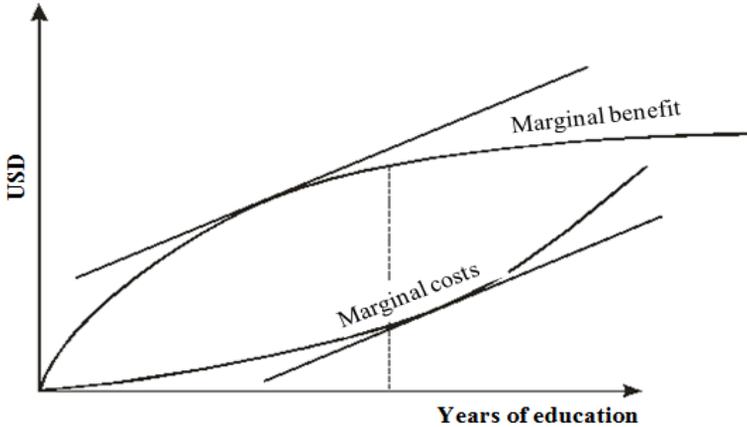
on the growth of trade with foreign countries taking into account comparative advantages. Best practices demonstrate that export can help the country in achieving revenue growth faster compared to domestic activities. Experts believe that a country striving for economic development should achieve exceeding the growth rates of exports over the growth rate of domestic production. The experience of the countries of Southeast Asia confirms this conclusion. However, this factor is not so simple. There are various theories – the theories of dependency claiming the opposite. For example, the *neocolonial dependency theory* confirms that developed countries exploit underdeveloped countries. Another theory - the *theory of the false paradigm* of development declares that the up-to-date theories and factors of the rich countries development are not applicable as an example to follow by the poor, underdeveloped countries, since they do not take into account the specifics of their development. The *theory of dual development* believes that the poor countries are poor, because they are initially poor. And if the world really wants to fight poverty and poorness on the planet, the rich countries should help the underdeveloped countries in withdrawing from the vicious cycle of poverty. A *new economic order* should be established with the purpose to create the conditions for economic development of all countries, including the poor ones. As we can see, each of these theories has its own particle of truth, corresponding to reality. Therefore, a balanced approach is needed regarding the degree of openness and the principles the relations with other countries are built on. Nevertheless, the practice shows that the more open the country's economy is, the more results it achieves in the future.

Effective distribution (allocation) of resources is among the most important factors of economic development. Best practices show that the market mechanism for resources distribution is cheaper than the administrative one. Nowadays, many specialists believe that the countries with large price distortions pay tribute by a decline in economic growth. Perhaps, this is the only factor of development, which directly concerns the problem of choosing the socio-economic system and the economic management mechanism. It shows that a country striving to achieve production efficiency must be aware that the market (supply and demand) is the most effective regulator of public production.

Finally, the factor of human resources development covers the qualitative characteristics of labor resources, their educational, cultural, professional level, the state of physical and spiritual health, etc. The specialists think that it is almost impossible to overestimate the contribution of this factor to the economic development of the country. Some experts say that physical investment increases by  $1/3 - 1/2$  upon its involvement in education. There is worldwide increasing awareness about the importance of influence affected by this factor on the final result.

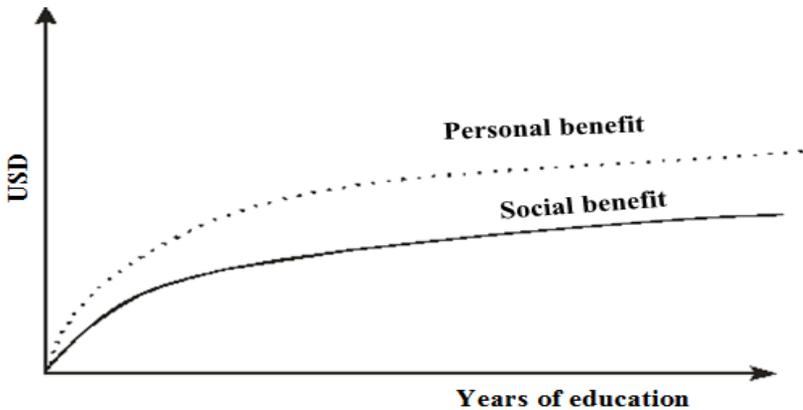
Meanwhile, the costs and benefits of education for the society and the individual are not equally measured. Primary education provides sharp increase in the social benefit - productivity of the workers who have received elementary literacy increases, infant mortality decreases, if mothers are more educated, etc. (see Chart 4.1).

**Chart 4.1. Costs and Benefits of the Primary, Secondary and Higher Education**



The public benefit from higher education consists in reducing crime, increasing tolerance, responsibility, etc. Unlike personal benefit, its increase from secondary and higher education is not so high (see Chart 4.2).

**Chart 4.2. Personal and Public Benefit from Education**



Personal benefit, on the contrary, increases sharply upon obtaining secondary and higher education.

The risk that the human capital strategy may contravene some means aimed at increasing income per capita is another point that the experts recommend to pay attention to in the interests of growth and economic development. The experts say that the policy is probably needed when a trainee rather than his/her family and society, bears the greater part of the expenses during the course of education. This can be done in different ways, in particular, by provision of a loan with its repayment thereafter or the obligation to work after graduation in rural areas.

Thus, J. Hogendorn defines five factors of economic development:

1. The role of savings, investment and technological innovations.
2. Development of agriculture.
3. Growth of trade with foreign countries taking into account comparative advantages.
4. Efficient allocation of resources.
5. Human development.

Much time has gone, nowadays we are aware of the new results of a multi-year research conducted by the world's scientists, including the representatives of the Harvard School, however, we think, the modern view of the economic development factors actually includes everything that was justified by this talented researcher.

The written work by Joe Studwell is among the most interesting books of the last decade devoted to the mysteries of the "Asian Miracle"; and Bill Gates "... included it in the number of

five books having the strongest impression on him in 2014”<sup>47</sup>. Joe Studwell lived and studied the course of reforms in East Asia for 20 years. This author thought that the “Asian Miracle” success was accompanied by three main components. He calls the first factor “Agrarian Development”. This is actually a complex factor including such components as land reform, establishing the new economic entities in this sector of the economy, ensuring the competitiveness of agricultural products, developing the processing industry, and formation of the market state agro-industrial policy.

The author thinks that the second factor consists in implementation of an effective industrial policy. The researcher believes that own processing industry provides success for the Asian countries. Studwell thinks that the processing industry still remains vital for accelerated economic transformations in poor countries despite current prevalence of the services sphere in the economy of the rich countries. The processing industry assists the poor countries in overcoming the main obstacle at the earliest stage of development - lack of production skills<sup>48</sup>.

The author explains the accelerated development by the primary advance of the processing industry compared to the service sector and he believes that this is resulted from direct dependence of the increase in productivity (and this is the main measure of the economic development) on the education and skills of workers. Second, the author believes that productivity in the

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<sup>47</sup> Ствадвелл Д. Азиатская модель управления: Удачи и провалы самого динамичного региона в мире. Пер. с англ. – М.: Альпина Паблицер, 2017, с.137.

<sup>48</sup> Ibid.

service sector is increasing more slowly than in the processing industry, as industrial goods are freely sold worldwide compared to the services. The sale of services often faces the technical and political obstacles. The services with rare exceptions (call centers, software) often require the sending of goods or specialists back and forth.

Joe Studwell believes that export-oriented policy is another component of effective industrial policy. The author thinks that only international markets and trade encourage companies to select extraordinary development mode, adapting their products to various demands and thereby significantly expanding their potential cumulative market.

Thus, this factor is in turn complex and actually includes the components such as required competitiveness, production with high added value. As far as the export orientation is concerned, i.e. the focus on export-oriented policy, we think that in the context of globalization, i.e. during current open borders, it should not be emphasized. This is due to the fact that the domestic entrepreneurs working in the current conditions even in the domestic market have to compete with the foreign products. Other ways of saying, an entrepreneur in the context of globalization has to comply with a high level of quality in the foreign and in the domestic market.

Studwell believes that a financial expert is not the final element in ensuring economic development. Nevertheless, he thinks that the financial system is an operational component of the development process to be determined by the surrounding economic environment and sensitive to it<sup>49</sup>. He thinks that

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<sup>49</sup> Стадвелл, с.340.

underdeveloped countries have a weak financial system being unable to finance economic development. In this case, the ability of the country's government to develop the tools influencing the financial sector and to force it to participate in this process is an important component of economic development.

We fully support the author's conclusion on this issue and, in particular, that "Financial control, which manages money in accordance with the agrarian and industrial policies, is necessary at the stage of development formation"<sup>50</sup>.

We think that misunderstanding the significance of the modern factors in economic development under the conditions of globalization is the first key point frustrating the efforts of many developing economies to achieve sustainable economic development. The global market of goods, capital, labor, technology and international production forms under the conditions of globalization. Those countries that understand the essence of the new reality, and are built into a new economy, find their niche and achieve success. The countries that do not understand the essence of the new laws of development do not have time to restructure their economies in accordance with them, do not find their place in the new reality and fall behind in their development.

There are a lot of approaches to understanding the main factors of sustainable development in economics. The authors determine the following factors of economic development based on the written works of the world economic scientists and their own researches.

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<sup>50</sup> Ibid, c.342.

**The first factor.** Many classical theories and positions stop functioning and new ones replace them under the conditions of globalization. Previously, the producers set such significant tasks as increasing sales volume and increasing business profitability, however, the state focused on the development of economic sectors and creating jobs, meanwhile, all this is provided automatically in the conditions of globalization provided that products competitiveness has been achieved. Each company starts competing with other producers in the external and in the domestic market. The domestic producer has to compete with the foreign producers in any market, even in small courtyard markets of the city microdistricts near each house, where today the food products of various countries are struggling for the consumer. The winners of this struggle are those who provide more competitive products.

The relationship between the global competitiveness index and the level of income per capita was identified in the Global Competitiveness Report of the World Economic Forum<sup>51</sup>. The global competitiveness index explains 2/3 variations in the income per capita worldwide in a two-dimensional logarithmic regression using data from 143 countries. Moreover, the Report presented an analysis of the interdependence between the global competitiveness index and economic growth using the formula of growth convergence<sup>52</sup>. This analysis confirmed the hypothesis that the global competitiveness index is a productivity level

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<sup>51</sup> The Global Competitiveness Report 2014–2015, Всемирный экономический форум

<sup>52</sup> Barro, R. and X. Sala-i-Martin. 2004. Economic Growth, 2nd edition. Cambridge: MIT Press.

determinant and it determines the economic growth of the country over the long term.

Thus, if we set goals such as sales of products, ensuring stability and profitability of the business, creating new jobs - all this is possible provided that our products or services are more competitive than the products and services of other manufacturers.

Ensuring the competitiveness of the national economy is an extremely difficult task and it cannot be successfully solved by the underdeveloped and by many developed countries. The essence of the problem is that many countries cannot create an effective system to support and ensure the competitiveness of the national economy.

Ensuring the competitive economy involves the formation of an integral national innovation system. This mechanism is very complicated. It involves creation of an infrastructure to support the system of scientific and innovation funds. The evidence from practice shows that the innovative products can be manufactured as a result of the activities conducted by the scientists and engineers and as a result of the entrepreneurs' and businessmen' activities. The state should, at every possible way, actively support their activities.

It should be admitted that underdeveloped and developing economies do not have a developed system of the scientific and research centers, a national innovation system to provide their producers with new technologies, to enable them to produce better products, to reduce production costs, cannot offer the domestic producers new, innovative products. Therefore, the underdeveloped and developing countries are initially in unequal conditions, and the lack of the necessary components for a

successful competitive struggle creates conditions when they are gradually falling down in a competitive range of economies worldwide.

The experience of some countries shows that they managed to break the vicious circle of poverty and succeed without having such system, however, having set achieving the competitiveness of the domestic products and services as a strategic goal among its national priorities system. The experience of the same countries demonstrates a necessary condition for this is the existence of political will, since they have to make maximum use of all available limited resources, among which the state policy of supporting competitive products has a special role.

Without a well-developed scientific base, the countries of the “economic miracle” started to support selectively the activity of the individual scientific centers, entrepreneurs, who managed to start the production of the innovative products and services. At the beginning of their route to success, the underdeveloped countries, naturally, due to a lack of funds and a scientific base, do not have the opportunity to develop new technologies, innovative products with a high level of added value. Nevertheless, some of them, having a strong desire, manage to use available resources and create something new, competitive. Production of palm oil, created by the scientists in Indonesia, is a vivid example of this type of product. Palms can grow only in the subtropical and tropical regions of the globe. Therefore, the production of oil on its basis has become a highly competitive product in the world market.

Attraction of direct foreign investment is an extremely important development direction that helped individual countries to gain access to new technologies. They provide the host country

with the inflow of financial resources, as well as attract progressive technologies and the necessary equipment being even more important for the underdeveloped countries, and, finally, they attract the knowledge and skills to conduct business in the complex conditions of the modern world. This direction was adopted as a priority direction of development in China.

Use of non-traditional ways of sharing modern expertise and best practices being tested in many successful developing countries of Asia is effective for small economies that unlike large economies such as Russia do not have a developed scientific-research base. We are talking about the invitation of the world-class highly skilled experts to the country by supporting migration to the country of the highly skilled foreign specialists (together with their families) who expressed a desire to promote the national economic development. Anyway, such experience helped many developing countries to achieve success. Namely, the program to attract Japanese specialists over-50's was called "Gray Hair" in Malaysia. Later this program was expanded and became known as "Malaysia is my second home". The studies of the German scientists<sup>53</sup> also show that the world-class scientists with a narrow specialization in the chosen topic or sector, called "star scientists", make a huge contribution to the economic development.

A positive example of successful countries demonstrates that it is possible to start with the production of relatively simple types of products, gradually supporting, developing and

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<sup>53</sup> Trippel M., Maier G., *Star Scientists as Drivers of the Development of Regions, Innovation, Growth and Competitiveness Dynamic Regions in the Knowledge-Based World Economy*, Springer-Verlag Berlin Heidelberg 2011, c. 113-115.

transitioning to the production of more complex types of competitive innovative products and services. It is important not to lose the target and not to turn off the main road. The countries that do not understand the importance of this need and are not so persistent in achieving the competitiveness and innovativeness of their products fall behind and cannot break the vicious circle of poverty.

**The second factor.** The structural reorganization of the economy is among the important challenges faced by the underdeveloped countries in the context of globalization. The scientists at the Harvard University have identified a strict relationship between the product complexity index, being determined by the level of added value, and income per capita. They ranked 5,107 products from 124 countries using the Hidalgo and Hausmann products complexity criteria. Calculations helped them to make the conclusion that high-income countries are the exporters of the most complex products; the low-income countries are the exporters of the least complex products. Calculations of the scientists demonstrated that 75% difference in incomes of the countries is explained by the economic complexity. Based on their calculations, they identified the relationship between economic growth and the development of the country with the export comprehensiveness, it is necessary to raise the level of the country's integrated production as a strategic goal of developing the national economy for the sake of growth and prosperity of the country<sup>54</sup>. The most complex products, according to the scientists' calculations, are the production of machinery, chemicals, metal

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<sup>54</sup> Hausmann, Hidalgo et al. *The Atlas of Economic Complexity: Mapping Paths to Economic Prosperity*, 2011. P. 27.

products. Raw materials and commodities, timber, textiles, agricultural products are among the least comprehensive products.

We think that a lower living standard in the developing countries is a confirmation of this conclusion, because the lower level of production complexity is a characteristic of the developing economies, since raw materials, commodities, and agricultural products, etc. are the main types of products manufactured there. Analysis of the products exported from Kyrgyzstan, which is among the developing economies, shows that the share of products with a high degree of complexity in its economy constituted only 5.22%<sup>55</sup>. Therefore, we can conclude that if a country wants to increase the level of the population's income, it should change the structure of production towards increasing the share of products with a high degree of complexity.

**The third factor.** Uneven development of the world economy and high level of the population poverty is among the most acute problems of the developing economies. The UN provided the data that the income gap between the richest and the poorest countries worldwide was increasing each decade. Thus, in 1820 it was estimated as three to one, in 1913 - as 11 to one, in 1950 - as 35 to one, in 1973 - as 44 to one, in 1992 - as 72 to one, in 2002 - as 75 to one. This problem is aggravated by dividing the population into a mass of very poor people and a small part of very rich people. According to the United Nations Development Program estimates, approximately 1 billion people live on less than USD 1 per day (this level is traditionally considered by the World Bank as a poverty), and 3 billion (almost half of the world's population)

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<sup>55</sup> Calculated based on National Statistical Committee of the Kyrgyz Republic for 2013.

people live on USD 2 per day. According to the UN forecast, in 2010 the size of the world's population amounted to approximately 8.5 billion, 1 billion thereof live on USD 1 per day, and another 2 billion live on USD 2 per day<sup>56</sup>.

The high polarization of income, the division of people who differ greatly in their material position, values and interests are among the main reasons preventing the country from improving its economic situation. Low incomes, large families, poor health, poor quality of education, and, consequently, qualification, unemployment among the majority of the population characterize a high level of poverty. A high level of poverty is the low aggregate demand for goods and services, which is in turn an obstacle for economic development.

Poverty has its own face and this is the face of a villager. Three out of every four people living on less than USD 1 per day live in the rural area. Movement of the poor citizens to the cities does not improve the situation. In 2005, approximately half of the world's population lived in the cities; meanwhile, one of three city dwellers (about 1 billion people) lived in the slums and huts<sup>57</sup>. This is due to the different incomes in agriculture and industry. Agriculture, being the supplier of the food products, is an industry with low added value, meanwhile, other sectors of the economy that manufacture products with higher added value are located mostly in the cities. Therefore, the incomes of the population in the rural regions, being primarily engaged in the production of the

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<sup>56</sup> Электронный портал Новый континент, Дисбаланс мира. Коллекция фактов, 2008.

<sup>57</sup> Ibid.

agricultural products, are much lower than in the city, and hence the quality of life there is much lower. In this respect, if a country heads for overcoming poverty and achieving sustainable development, the rural economy, that is, agricultural development, should be primarily improved. The experience of the successful Asian countries has shown that the countries to start their way from agricultural improvement succeeded in achieving their goals.

Studying the experience of successful countries, we have previously concluded that land reform is the main component of the agrarian development; the essence of this reform is to provide access to the land for the rural workers. This is an extremely difficult task, which involves redistribution of land from the large landowners or the state to the direct producers, who did not have access to land. The second component of this factor is the policy of supporting rural producers through the formation and implementation of the effective state policy. If the rural producer, having received a land plot, as a result of the realization of private personal interest, is able to increase labor capacity, the following stages of the agrarian reform should be implemented, i.e., transition to the larger farms, which should increase the level of the farms specialization and mechanization, to increase the productivity and profitability of agricultural production. The experience of the “Asian Miracle” countries shows that the focus on development of the processing industry in the rural regions is an important component of the agrarian development. Other ways of saying, the third factor essentially follows from the second factor or is its continuation, since the deep causes of the uneven life of the rural and urban population, the differences in producers’ incomes in agriculture and other branches of the economy, regional differences in the living standard of the population are largely

related to difference in the level of production complexity in the countryside and in the city.

**The fourth factor.** The scientists of the Harvard University presented the results of their multi- year research to show that the “wealth and potential of the countries arise from productive knowledge”<sup>58</sup>. They confirm that a formal “explicit” education that offers the facts and figures to the students is not enough for the poor countries to succeed in economic development. The scientists think that more productive knowledge involves accumulated experience sharing. This experience helps successful countries in producing new types of products that require the same abilities and knowledge.

The lack of experts and specialists being able to develop and implement successful strategies, to ensure the promotion of domestic products and services in the global market is the other side of the problem of poor quality of education in the underdeveloped countries. The term STEM (science, technology, engineering, math) is used for this category of specialists in the world practice. Nowadays, absence of specialists of this category means only one thing - our economies have no future in the new global reality. If we turn to the experience of the countries that have succeeded in the new conditions, this is sure the experience of the United States. In this country STEM education is a national priority<sup>59</sup>. A Federal STEM Education 5-Year Strategic Plan has been developed to provide the students with a quality education

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<sup>58</sup> Hausmann, Hidalgo et al. *The Atlas of Economic Complexity: Mapping Paths to Economic Prosperity*, 2011. P. 15.

<sup>59</sup> Levy et al., *The Case for STEM Education as a National Priority*, Council on Foreign Relations Press, 2012.

and to prepare them for providing the country's success in the global economy<sup>60</sup>. In 2015, USD 472 million were allocated under this plan to support and develop STEM education.

The development strategy of South Korea is an example for understanding this factor. Focus on the human potential development is reasonably considered to be the key factor in the economic development of this country. Korea pays a lot of attention and allocates sufficient resources to raise the educational level of its population and, primarily, of the youth. A program of primary development of the school system as opposed to the university one was of the first-rate importance for Korea. Upon the education reform, the literacy rate in the country progressed from 30% in the mid-50's to 93% in 1980. The percentage of the youth studying in the higher educational institutions of the country is the highest than in many developed countries of the world. Korea has attracted unprecedented tools to improve the skills and knowledge of its people. This can be confirmed by the following: the costs of training and professional development of the employees, the cost of employees' hiring, and the development of infrastructure were refunded to the foreign companies owning at least 30% of the capital in Korea.

Knowledge and skills of foreign specialists were widely attracted to China by inviting foreign direct investment through the system of FEZs. Previously mentioned program "Malaysia is my second home" is a vivid example of applying the foreign specialists' advance experience.

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<sup>60</sup> Federal science, technology, engineering and mathematics (STEM) education 5-year strategic plan, White House, 2013.

We see that using the opportunities of more advanced educational systems to prepare STEM specialists with the necessary experience (Germany, Japan, South Korea, etc.) in the developing economies is one of the main development factors. This factor will allow the “formal education” of the developing countries to obtain the missing knowledge and experience of the world’s “implicit education” and become “real”.

**The fifth factor.** Currently, the economy of the developing country cannot survive alone. Under the conditions of the world economy globalization, the involvement of individual countries in the global and regional integration processes is natural and therefore these processes have a significant impact on the development level of each country. This primarily referred to the developing countries with fragile economies and therefore vulnerable in front of the modern challenges. Under these conditions, the strategy of the national economy development should take into account the factor of the integration processes impact on the economy of the country.

There are potential threats for the countries with less developed economies if reforms are not carried out to improve the structure of the economies of the integration associations’ member countries. The following possible negative consequences are substantiated in the modern literature<sup>61</sup>:

- Strengthening regional economic and social inequalities.
- A trap for the production of the lowest commodity.
- Trade rejection.

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<sup>61</sup> Бекболотова С., Сравнительный анализ интеграционных экономических сообществ ЕС, АСЕАН и ЕАЭС, Университет “Туран”, 2015.

- The effect of trade substitution.
- The effect of circular causality.
- Environmental pollution.

The best practice shows that the results of integration associations can be polar opposites for different countries, it depends on the income level differentiation. The developed countries have great benefits from participation in integration processes due to more competitive products with a higher share of added value. However, the economies understanding that the problem of improving the economic security of the small economies, increasing the competitiveness of products, increasing the share of products with high added value is a problem of the small economies, and moreover the general task of the participants of this association, can achieve a synergetic effect, i.e. mutual acceleration of the economic development of the integration associations members. They understand that it is more profitable for all other partner countries, from all points of view, to support small economies and prevent the negative economic and political processes from developing in the region<sup>62</sup>. In this respect, the fears of the less developed member countries are understandable, and if they are classified as small economies, their fears multiply.

The Eurasian Economic Union includes the countries substantially different in their size and potential. The table reflects the indicators characterizing the EAEU countries in terms of the population and the share of exports.

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<sup>62</sup> OECD Development Center, Southeast Asian Economic Outlook 2013, Chapter: Overview of development gaps in Southeast Asia: Gaps between ASEAN-6 and CLMV countries, 2013

**Table 4.1. Comparative Data on the Population Size and Exports of the EAEU Countries in 2016** <sup>63</sup>

<b>No.</b>	<b>Country</b>	<b>Share of the country's population in the total population of the EAEU countries (%)</b>	<b>Export (mln. USD)</b>	<b>Share of the country's exports in the total exports of the EAEU countries (%)</b>
1.	Russia	80.18	285,490	90.29
2.	Kazakhstan	9.67	3,986.78	1.26
3.	Belarus	5.2	23,400	7.4
4.	Kyrgyzstan	3.29	1,544.6	0.488
5.	Armenia	1.66	1,782.9	0.564
6.	Total	100	316,204.28	100

We see that Armenia and Kyrgyzstan are among the small economies, the share thereof is within 3% for each country. The share of exports of each economy is much smaller and constitutes only 0.5% of the total export of the EAEU countries. If the state of security of the national economy from the external and internal threats, when it is able to ensure the progressive development of the society in the presence of unfavorable external and internal factors is understood as the economic security, the economies of these countries cannot but be concerned about the influence of the larger and developed economies. We believe that the position of Tajikistan, which refrains from joining the EAEU, is connected

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<sup>63</sup> As per statistical committees data of EAEU members.

with this kind of fears. We think that the decision of the small economies to join the EAEU is motivated by the expectation of positive results from joining the integration association, and moreover by the fears that non-participation in the regional association will negatively affect economic relations with Russia and Kazakhstan being strategic partners for two aforementioned countries. Anyway, this applies to Kyrgyzstan.

Thus, the ambivalent attitude of small, less developed economies, to involvement in the regional integration associations are completely justified by the reasonable grounds. Development of reforms to improve the economic security of all participating economies, increase of the products competitiveness, growth in the share of products with high added value to provide a synergistic effect, i.e. the effect of increasing the efficiency of activities due to efforts integration of the EAEU member countries can help in overcoming these threats. It is obviously more profitable to support small economies and prevent the negative economic and political processes from development in the region in respect of more developed partner countries.

Thus, the economic reforms of the EAEU member countries to provide a synergetic effect in improving the efficiency of activities as a result of integrating the efforts of the EAEU member countries are the fifth factor for the economic advance of the developing countries in the context of globalization.

**The sixth factor.** This scientific research is the completion of the multi-year research conducted by the authors, whose materials have already been published, and some are published for the first time. The authors have always paid much attention to such

important components of the economic mechanism as the economic and financial instruments when studying the section of the growth strategy economic mechanism for the developing countries. The financial instruments were not identified as a development factor; meanwhile, the economic instruments were identified as a development factor. We believe that it is our fault that the role of the financial instruments is really extremely important for the developing countries on the way to recovery. This is primarily due to the lack of own funds in the developing economies. There are several reasons for it. First, the developing countries are characterized by a lack of investment funds from the entrepreneurs and from the state. Second, there is no interest from the commercial financial institutions of the developing countries to invest their money in the development economy due to the high risk of non-repayment of their funds.

The relationship between the development of the banking services market and the economic growth of Kyrgyzstan using VAR-analysis with time series is determined in one written work of the local author devoted to the analysis of the banking services market impact on the economic growth of Kyrgyzstan<sup>64</sup>. The conclusion is that the development of the banking services market does not affect the country's economic growth in the short run. Change in the issued loans by 1 percentage point results in GDP change by 0.68 percentage points in the long run (48 - 82 months). Thus, the financial system of Kyrgyzstan does not almost

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<sup>64</sup> Мукарапов А., Автореферат диссертации на соискание ученой степени кандидата экономических наук по теме «Влияние рынка банковских услуг на экономический рост страны». Бишкек. 2017г. - с.14.

participate in the economic development of the country. Such situation is generally typical for all developing economies; their financial systems do not see much sense to participate in financing the development economy. In these circumstances, the Government provides interventions in development of the financial system to mobilize all available funds and create the conditions for their involvement in the development economy. Generalization of the experience of the “Asian Miracle” by Joe Studwell showed that the regulatory factor in the financial system was an important factor in the economic development of these countries.

We think that formation of the non-profit investment funds with a target value is among the main tools to mobilize funds for the development economy, which has become quite widespread in many countries. Namely, such fund providing significant assistance to the economic recovery in the country was established in South Korea. It is a public-private fund. Its objective is to provide investment funds to the domestic competitive industries. Funds distribution management on the basis of project financing is carried out by the independent experts carrying out their mission on a voluntary basis.

Attraction of the commercial financial institutions to work with domestic manufacturers is among the important tools to support competitive production. Thus, first, the state guarantee of these funds should be ensured, and second, it is necessary to assume the payment of interest on such loans. Creation of a favorable environment for foreign direct investment and various types of venture funds is another form of attracting foreign investment funds. Understanding the need for the latter instrument,

very few underdeveloped countries manage to actually use this important development factor.

The above factors of economic development can be used to determine the specific growth points in the country, which has challenged itself to achieve sustainable economic growth. The given economy is likely to set for itself the following tasks: increasing the competitiveness and innovation of the domestic products; all that will ensure the growth of products with high added value; priority development of the agrarian sector to overcome poverty and inequality, ensuring the productive knowledge, increase in the effectiveness of the integration processes (EAEU) through synergy, state regulation of the financial resources to mobilize them for the development economy.

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## **CHAPTER 5. EMPIRICAL EXPERIENCE OF VARIOUS COUNTRIES IN IMPLEMENTING THE ECONOMIC DEVELOPMENT STRATEGY**

### **The “Economic Miracle” in South Korea**

South Korea is a classic example of successful economic development in the global economy. The economy of South Korea at the initial phase of economic development was poor, and, moreover, it was destroyed after the Korean War of 1950 - 1953. Korea was a small country, deprived of natural resources, with a poor domestic market and technological base being human resources the only growth factor. The income per capita in this country was USD 80 by the early 60's. The unemployment rate was at the level of 22.3%. The share of industrial goods made less than 10% of the total output, the share of exports - 3.5% of GDP. The annual growth rate after the war did not exceed 1%.

Other ways of saying, it had all prerequisites to remain underdeveloped country for a long time. The economy of South Korea was destroyed after the Korean War of 1950 - 1953. The agricultural sector produced 43% of GDP. Very few people could hardly foresee economic advance for this country in the future. India, with current income per capita constituting only 1/9 of the same indicator in South Korea, had much better prospects in all respects back then.

Contrary to all circumstances, the economy of South Korea managed to achieve the “Economic Miracle” for a historically short period of time. In 1999, the GDP per capita in the Republic of Korea was 15,712 PPP in US dollars. In 2017, this indicator (gross national income per capita) reached the level of 38,260 PPP

in US dollars<sup>65</sup>. The country is the 18th among 188 countries in the world in terms of development level<sup>66</sup>. Exports of goods and services of South Korea reached 42% of GDP in 1999. Exports of industrial goods constituted 91% of goods exports, exports of high technology - 36% of industrial goods. The Gini Coefficient in this country was 0.302 in 2014<sup>67</sup>. The population of the country became more educated and, moreover, changed its physical appearance. Thus, the data of the research show that the height of the Korean boys increased by 11.43 cm from 1965 to 1990.

Nowadays, South Korea is a classic example of the impressive advance in economic development. This is vitally important for many countries worldwide. This experience is important for the countries (including our Kyrgyzstan) deprived of the traditional factors of economic growth and development: capital, labor, technology. The “Economic Miracle” of Korea demonstrates that success can be achieved with poor start-up conditions. Therefore, it is very important to carefully study this phenomenon, understand its driving forces, draw conclusions about what we can learn, what lessons we should learned from this experience.

The country’s successful development began in the 60’s, when the Government announced a program of radical economic reforms. The economic reform program of South Korea was developed by the Center for Economic Planning established in 1961. The staff of the Center attracted the most progressive, highly

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<sup>65</sup> As per World Bank database, 2018.

<sup>66</sup> Human Development Report 2016, UNDP.

<sup>67</sup> Statistical database of OECD on income inequality, 2014.

intelligent professionals, who achieved significant results in the field of economy and business<sup>68</sup>.

The economic program of South Korea was based on the five-year plans. The main goal of the first five-year plan (1962-1966) was to transform the country from a backward agrarian into a modern industrial one. Radical (one of the most radical in the region) agricultural reform is among the main development factors in South Korea. Joe Studwell<sup>69</sup> emphasized that land distribution among the rural workers stimulating the workers to invest their labor which being accompanied by the state support of agricultural loans and the marketing institutions, agrarian transformation and consulting centers, resulting in a sharp increase in production, was the driving force of agrarian reforms in a number of Asian countries, including South Korea. The share of owners increased from 10% of the total number of farm households in 1945 to more than 70% in 1964. The important components of the agrarian reforms were as follows: granting a remission to the peasants from payment of debts at the usurious rate, stabilization of prices for agricultural products. The banks were nationalized to strengthen control over business. The cooperative movement of the farmers was combined with the activities of the agrarian bank. Korea moved to a system of floating exchange rates in 1965. Interest rates were doubled to attract domestic savings. Imports (of grain) were liberalized.

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<sup>68</sup> Andrea Matles Savada and William Shaw, editors. South Korea: A Country Study. Washington: GPO for the Library of Congress, 1990.

<sup>69</sup> Стадвелл Д. Азиатская модель управления: Удачи и провалы самого динамичного региона в мире/Джо Стадвелл: Пер. с англ. – М.: Альпина Паблицер, 2017, - с.50, 72-77.

Labor force moved from the agrarian sector to the industry as a result of agrarian reforms. Reform in agriculture and development of the processing industrial enterprises in the rural areas provided more equal distribution of income per capita. Particular attention was given to improving the competitiveness of the key industries, reducing unemployment, developing effective management practices. The Government strongly encouraged establishing new sectors in the electronics, automobile industry, the focus was on the production of electricity, mineral fertilizers, petrochemical industry, cement industry, and shipbuilding.

The second five-year plan (1967-1971) was focused on industry upgrading and developing the sectors to manufacture products being previously imported from other countries: the production of steel, equipment, and the chemical industry.

The heavy and chemical industries were further developed during implementation of the third five-year plan (1972-1976). The country was focused on development of the export-oriented economy (iron and steel production, transport industry, household appliances, shipbuilding, petrochemical industry). Particular attention was paid to the production of iron and steel, transport industry, household appliances, shipbuilding and petrochemical industry. Development of the heavy and chemical industries contributed to expansion of the new industries, reduced dependence on imported resources and equipment. Particular attention was given to the comprehensive development of the country - new production sectors developed throughout the territory of Korea. The Government primarily provided support to electrification, production of the fertilizers, synthetic fibers, cement, and oil refining. Finally, the annual growth of industrial

production made 25%. In the mid-70's, the annual growth rates increased up to 45%. Thus, the size of GDP has increased by 5 times within the period of 1965-1978<sup>70</sup>.

The fourth five-year plan (1977-1981) was focused on increasing competitiveness on the global stage of the Korean export industrial goods, on the technology-intensive and knowledge-based industries: equipment, electronics, and shipbuilding.

The oil crisis of the 70's in the course of implementing the fifth five-year plan forced the country to shift its priorities from the heavy and chemical industries to the development of the technology-intensive industries: the production of precision instruments, electronics (TV sets, video equipment, semiconductors), and information technologies. The people's welfare was among the main tasks of this five-year plan. Therefore, the five-year plan of 1982-1986 was called the "Fifth Five-Year Plan for Economic and Social Development".

The sixth five-year plan (1987-1991) was aimed at supporting the previously chosen direction. Great attention was given to liberalization of the foreign trade, to solution of the problem of the excessively accumulated capital. Particular attention was paid to training and professional development of the workers in all sectors, especially at the levels of small and medium-sized enterprises being formerly deprived of state support. The sector of research and development received more funds - investments in research and development increased from 2.4% to 3% of GDP. This five-year plan was also generally overfulfilled:

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<sup>70</sup> Ibid.

the economic growth rate was 9.8%, however, the planned rate of GDP growth was 8.2%.

The main goals of the seventh five-year plan (1992-1996) were the development of high-tech industries: microelectronics, new materials, and chemical products of fine organic synthesis, biotechnology, optics, and aerospace industry. Development of these industries was concentrated in seven provincial cities to equalize the disproportionate elements of the economy.

The strategy of industrialization oriented toward development of the foreign trade is a key factor in the development of the country. The price system reflected real costs and demonstrated that the country had a comparative advantage in the production of labor-intensive products.

The production of South Korea was with focus on export, and, as previously stated, on exports of labor-intensive products. The development of external relations received an additional stimulus by introducing the following provision: if an entrepreneur exports goods being not basic necessities, this entrepreneur can implement duty-free re-export within a year. It is worth noting that the Koreans were able to use the benefits of a good reputation of goods from Asia, i.e. Japan, focusing on maintaining the quality of its products. They focused on the use of modern technology, buying high-tech computers, computer chips, etc. in Japan.

The Government of the country supported the industry exports by the subsidies and tax reduction to solve the problem of the industry establishment. It persistently and very selectively interfered in the decision-making on investments. The Government used restrictive quotas against imports (especially during the 50's - 60's) to support its entrepreneurs. Even during the 70's, the

restrictive quotas were applied for 40% of the main items of imports. By 1985, protectionist policy was replaced by liberalization of imports. By 1992, the level of liberalization was planned to bring up to 7 - 8%. Nevertheless, the producer protection policy is still used in some industries. Large tariffs were still imposed on beer - up to 80%, cars - 60%, agricultural products - 25%<sup>71</sup>.

Government regulation is among the most important factors in the economic development of South Korea. This country is characterized by interventionist approach in the national and foreign policy. Export strategy was developed for almost every firm. The Government undertook the mission of coordinating the efforts of various sectors of the economy to increase the level of technology.

South Korea cannot show a significant inflow of foreign investment in the country and therefore foreign financing was carried out mainly through borrowing, rather than attracting foreign direct investment. South Korea is distinguished by a very thoughtful approach to the use of foreign state assistance. This assistance was used to support the creation of infrastructure, namely, roads, railways, ports, communications, electric-power supply industry, etc.

Focus on the human potential development is rightly considered as the key factor of economic development. Particular attention and significant resources are allocated in Korea to increase the educational level of its population and, primarily, the

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<sup>71</sup> Hogendorn J., *Economic Development/ Second Edition*, Harper Collins, 1992. P. 74.

youth. The program for primary development of the school education as opposed to the university education was characteristic of Korea. Finally, the education reforms improved the literacy rate in the country from 30% in the mid-50's to 93% in 1980. The percentage of the young people currently studying in the higher educational institutions of the country is higher than in many developed countries of the world.

South Korea has achieved unprecedented success upon implementation of the reform program. The specialists in economic growth and development call the path travelled by Korea - a feat.

Experts consider primarily a high price being among the weak points of the economic reform in South Korea. Significant hardships were the cost the country had to pay for its economic development. First, this was a longer working week (in South Korea, working week consists of 54 hours, whereas in the developed countries it is about 41 hours.) Second, these were low wages. The hourly rate in the country (1.51 US dollars) was 11% of the same indicator in the USA, 14% in Japan, 75% in Taiwan, 80% in Hong Kong. Strikes (in particular, 1987 - 1988) were a natural result of this situation. Experts believe that a large debt was accumulated in the country due to loans. The expert think the dependence of the country on the US market (the share of exports to this country was 40%) is the negative result of the chosen path for the reforms. This factor becomes negative under the conditions of developing US protectionist policy. South Korea conducted a policy of low interest rates. The entrepreneurs were provided with the opportunity to obtain loans; however, the experts believe that such policy resulted in re-concentration of production in

shipbuilding, textile, and footwear. There is also an opinion that government support of the industry has provided mixed results. Many Korean economists believe that mistakes were made in approaches to agricultural reform. Generally, this experience of economic development is recognized to be the most interesting in the world practice in its entire history.

An attempt to identify the main factors of the “Economic Miracle” in Korea will single out the focus on increasing the competitiveness of the economy. Each producer can become successful if he manufactures only a competitive product or services in the context of globalization of the world economy. This is because he has to compete in the foreign and in the domestic market under the current conditions. The competitiveness of the products becomes a compulsory condition for the success of any business under the conditions of globalization of the world economy, regardless of whether an entrepreneur works for the foreign or the domestic market.

The rate for manufacture of the products with high added value is the second important factor in the “Economic Miracle” of South Korea. If transformation of the economic structure in Korea over the period from 1954 to 2008 is analyzed, we can make a conclusion that this country has steadily increased the share of the processing industry by reducing the output of the mining industry (see Table 5.1).

**Table 5.1. Economic Transformation in Korea for the Period from 1954 to 2008, % of GDP<sup>72</sup>**

	1954	1962	1972	1982	2008 <sup>73</sup>
Primary Sector	51.1	45.3	29.2	19.2	3
Processing industry	5.3	9.1	20.9	34.2	39.5
Service	43.6	45.6	49.9	46.6	57.6
Export	0.8	2.0	16.4	31.8	42.5
Import	7.2	15.6	23.7	36.5	25.6
Investment	11.9	12.8	21.7	26.2	31
Internal savings	6.6	3.3	15.7	21.5	...

Agrarian development is the most important locomotive for economic development in Korea. The radical transformation of the agrarian sector of the economy made it possible to turn agriculture in the country into a prosperous branch of the economy<sup>74</sup>, to achieve self-sufficiency in food by developing and implementing a state program aimed at maintaining fixed prices, conducting research in the field of agriculture, and improving the infrastructure of rural areas.

We think that focus on “productive knowledge” is the key factor that allowed the economy in South Korean to succeed. The

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<sup>72</sup> Congressional Budget Office based on data from Kim Kwang-suk and Park Joon-kyung, Sources of economic growth in Korea: 1963-1982 (Seul: Korea Development Institute, 1985).

<sup>73</sup> Data for 2008 derived from the World Bank database.

<sup>74</sup> Сатубалдин С.С. «Драконы» и «тигры» Азии: сможет ли казахстанский «барс» пройти их тропами? Алматы, 1998, - с.263.

new forces understood the laws of the world economic development in the era of globalization due to involvement of high-intellectual forces in the Center for Economic Planning. The elite of each country striving to achieve the same “miracle” should primarily learn to understand the requirements of the global economy and to provide very thoughtful and pragmatic justification for solving each of the problems standing in the way of economic development.

We should turn to the facts to confirm the aforementioned idea. The first is creation of a special fund (Equivalent Fund) to accumulate monetary assets for investment projects. The new scientific forces put a priority on creation of a competitive domestic production with high added value, however, the bulk of this Fund (87%) was aimed at the development of a promising industrial sector, meanwhile, 70% were used for development of the processing industry, transport, and construction. Only 6.5% of the funds were used to support traditional industries (agriculture, natural resources, etc.). S.S. Satubaldin, a Kazakh scientist noted that the bulk of the monetary assets were used in the strategic sectors - chemistry, engineering, and electronics.

Attraction of the foreign private capital was declared to be an important tool for economic recovery. This allowed solving several problems - to attract foreign capital, advanced technologies, necessary equipment, as well as work force with the knowledge of modern management and marketing. For this purpose the Korean Government used an instrument to grant a remission of taxation to such businesses and introduced a cash grants program to compensate the investors for their investment in the country's economy at the rate of 5%. This opportunity was

provided to the foreign companies owning at least 30% of the capital and providing investment in the amount of at least USD 10 million in advanced technology. Being aware that the domestic manufacturers did not have sufficient knowledge and skills, the Korean Government took an unprecedented step – compensated the foreign companies for their expenditure on training and improving the skills of the national work force and for infrastructure development. Subsequently, some countries (namely, China, Turkey) successfully used this experience as well.

South Korea, China and many other countries focused on the economic zones formation: industrial parks, foreign investment zones, free trade zones, and free economic zones to attract foreign direct investment.

The economy of developing countries is characterized by such problems as small size of enterprises, lack of own funds to create infrastructure, to develop technology and so on. The successful experience of Turkey shows that industrial zones formation is an extremely effective form of support for the small and medium-sized businesses. The industrial zone is an association of industrial enterprises located in the same territory with a common infrastructure system and conditions for rendering the social and cultural services. The enterprises located in the zone can receive a wider range of social services and benefits at a lower cost, such as medical care, library, education, electric lighting, transport services, etc. The interest of the enterprises in geographical clusters in the industrial areas of Turkey has significantly increased over the past twenty years. The industrial zones became very significant in ensuring the economic

development of the enterprises closely related to their activities and located in close geographical proximity to each other.

We would like to complete the section about the experience of the “Economic Miracle” in South Korea with the words of S.S. Satubaldin: “... there is no “frozen” South Korean model that has been created once and forever being suitable for “all countries and peoples”. This model is constantly developing and will undoubtedly undergo many more transformations in the future, however, one of its features remains unchanged, which should be studied especially carefully where the countries take the path of accelerated economic development”<sup>75</sup>.

V. Andrianov, one of the leading researchers of the South Korean economy, a Professor at the Moscow State University named after M.V. Lomonosov rightly noted that the secret of the dynamic model of the market economy and its superiority over other models of economic development consists in daily and hourly processes of adaptation occurring in such economy and resulting in the correct correlation of supply and demand, costs and revenues, exports and imports, etc. and thereby ensuring the balance and, accordingly, the dynamism and stability of the economic system<sup>76</sup>.

## **Evolution Reforms in China**

China was the first among the socialist countries to begin economic reforms and achieve stunning success. China managed to

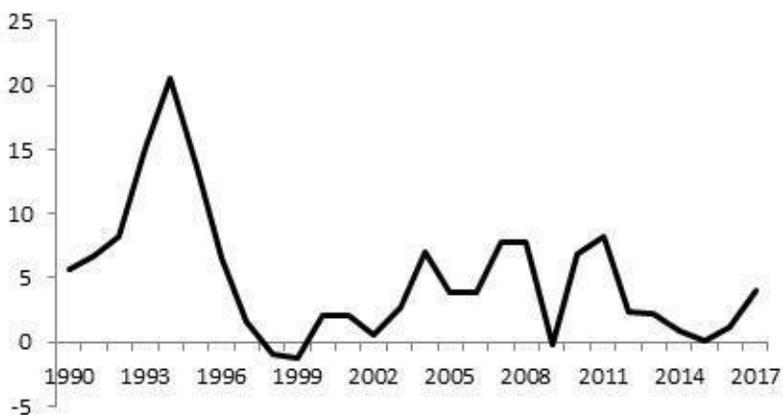
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<sup>75</sup> Сатубалдин С.С. «Драконы» и «тигры» Азии: сможет ли казахстанский «барс» пройти их тропами? Алматы, 1998, - с.281.

<sup>76</sup> Андрианов В. Роль государства в формировании рыночной модели динамичной экономики в Южной Корее. - с.96.

overcome rather successfully cataclysms - transformational recession, hyper-inflation, etc., inherent in most economies of the transition period. China is among the most dynamically developing countries and has recently provided up to 1/2 of world economic growth. The annual GDP of the country grew by 9.4% and increased from USD 147 billion in 1978 up to USD 1.65 trillion in 2004 over the past quarter-century <sup>77</sup>. The dynamics of the inflation development is characterized by the following data (see Chart 5.1). We see that the inflation rate in the country was not high, and it did not exceed even 20% in the most difficult years.

**Chart 5.1. Inflation in China, GDP Deflator (%)<sup>78</sup>**



The reforms in China are known to be initiated in December 1978 at the Third Plenum of the Chinese Communist Party Central Committee 11<sup>th</sup> session, where a decision was made on the need to modernize the national economy. The main objective of the reform

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<sup>77</sup> Страны мира: Справочник, 2006/Под общей ред. С.В. Лаврова. – М.: Республика, 2006, стр.239-252. –с. 243.

was “... to break the framework of the old system, which paralyzes economic development, to create a healthy and viable socialist economic system with Chinese characteristics. This system must be radically different from capitalism, as well as from the stagnant models of socialism not corresponding to the specific characteristics of the PRC”<sup>78</sup>. Generally, improvement of the enterprises activity was considered as the central element in the economic system reform. To achieve this goal, it was planned to create:

- A planning system that combines centralism and flexibility.
- A price system being able to quickly reflect the changes in the public labor capacity, in the supply and demand ratios and corresponding to the needs of the national economy.
- An economic management system with divided responsibilities of the government bodies and the enterprises.
- A wage system completely reflecting the principle of distribution according to labor.

The reforms in China can be divided into three stages based on the development logic<sup>79</sup>.

**The first stage** covers the period from December 1978 to September 1984. The main components of these reforms are as follows:

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<sup>78</sup> Юань Му. Теория реформы хозяйственной системы: Программа реформы хозяйственной системы в Китае. В кн. Реформа хозяйственной системы в КНР: Пер. с кит/Науч. Ред. А.И. Денисов. – М.: Экономика, 1989, -с.10.

<sup>79</sup> Коллектив авторов, 15 лет экономической реформы и открытости в Китае (1978-1993), 1994.

- Agrarian reforms.
- Expansion of the enterprises' economic rights.
- Formation of the free economic zones.

The particular attention was given to the village during this period with various forms of family contracts being introduced. The experiments to expand the economic rights of the enterprises were carried out in the city. Selection of an open course in the external relations was the most important component of the first stage in the reforms. Formation of the special economic areas was initiated in China - 14 seaside cities were declared to be open to the foreign investors. This stage of reforms was held under the slogan "the leading role shall be given to the planned economy; market regulation shall have an auxiliary role". Deng Xiaoping, a reforms founder, thought that the main goal of the reforms was to expand the thinking and firmly adhere to the realistic approach. He believed that the economic reform was an independent initiative of the socialist system itself recognizing the need for self-improvement and further development.

**The second stage** covers the period from October 1984 to December 1991. In October 1984, the Third Plenum of the Chinese Communist Party Central Committee 12<sup>th</sup> session adopted the "Decision on carrying out the reform of the economic system". The gravity center moved from the village to the city during this period. Restructuring of the economic mechanism of enterprises was the central part of the reforms in the city. This process was accompanied by a number of measures on market creation, price reform, and reform of the management system at the macro level. The reform covered many aspects of life in the city and in the village, scientific and technical work, education, etc., the

orientation towards the development of an open course continued: the Pearl River delta, the Yangtze River and the triangle in the south of Fujian were announced to be open. The Chinese reformers developed a “theory of socialist planned commodity economy” during this period.

**The third stage** lasts from January 1992 until now. The main goal of the reforms was formulated as “building a socialist market economy”. The reformers moved from breakthroughs in the individual components of the old economic system to creation of a new mechanism, i.e. they moved from the reforms in the individual areas to a complex, interrelated transformation. This period is characterized by the formation of a multilevel structure of the open cities and districts.

Mixed economic system was created upon the reforms carried out in China; this system includes state, collective, individual, and private sector, the sector of enterprises with foreign investments.

The main guarantee of success is the coordination of three points - reform, development and stability. The Chinese ideologists think that development of the productive forces in the society and improvement of the people’s welfare is a cardinal goal of economic reforms. They believe that the reforms and external openness are the engines (“propellers”) of development. Meanwhile, development is the basis for maintaining the socialist stability and the long-term safety and security in the country.

Strategy of socialist modernization suggested in 1980 can be considered as the theoretical basis of the reforms carried out in China. This strategy is expected to be implemented in three stages.

The first stage was supposed to be realized during 10 years, starting from 1980. The goal of this stage was to increase GDP of China twice and basically to solve the problem of providing the population with food and basic necessities. In reality, GDP was doubled already in 1988.

The second stage was planned to be implemented during the next 10 years, i.e. until the end of the century. GDP was planned to be increased twice once again and the level of people's welfare was supposed to be brought to the initial level of prosperity during this period. It is difficult to say that this purpose has been fully achieved; however, the objective to double GDP was solved long before the planned term.

The third stage was planned to be implemented during the entire XXI century. The goal of this stage is to catch up and to leave behind the medium-developed countries in terms of development level and to provide the people with a moderately prosperous living standard. In the first 10 years of the XXI century, the volume of GNP is planned to be doubled once again compared to 2000 and an integrated system of the market economy is supposed to be created, and basically, the modernization of the country shall be completed and intensive economic development shall be provided by the middle of the century<sup>80</sup>.

The economic reforms of China, like in many countries, began in the agricultural sector of the economy. The reforms initiation was associated with introduction of the land contract system.

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<sup>80</sup> Страны мира: Справочник, 2006/Под общей ред. С.В. Лаврова. – М.: Республика, 2006, стр.239-252. – с.243.

The purpose of this reform was to increase the material interest of the peasants in the final results of their labor. The land was transferred to the peasants for use free of charge. The difference between the Chinese agrarian reforms and the Kyrgyz is that the Chinese reformers did not force the dissolution of the collective farms and the land transfer for lease. Different regions of the country used different models of agrarian reforms. The collective farms remained prevalent in some regions, meanwhile, the private farms dominated in other regions. The peasants are entitled to decide on the form of management, provided that the land remains in state ownership. However, they are entitled to sell their right for land lease, however they cannot sell their land and use land for the purposes other than agricultural.

Creation and development of the so-called “township and village enterprises” (TVE) is the second important component of the agrarian reforms, or, the “great initiative” of the Chinese people in the terminology of the Chinese reformers. There were 24 million 529 thousand similar enterprises, which employed 123 million 451 thousand people in the country by the end of 1993. More than 80 million people were employed at these enterprises, i.e. half of the surplus labor force in the village. Finally, gross output of the processing industry increased by 23.4 times compared to 1980. Marketable value of the agricultural sector increased from 40% to 50%. They provided 52% of the net increase in the gross social product and 62% of the increase in the personal incomes of the peasants. The average real incomes of the population increased by 3.4 times in 1978-1993. Finally, the average annual increase of the gross agricultural output was 6.1% in 1979-1993, instead of 2.6% in 1953-1978.

The agrarian reforms, being the locomotive of the economic reforms in China at the initial stage, currently gave their leading positions to other sectors of the economy. Moreover, the products of many township and village enterprises do not meet modern requirements and need modernization due to widespread development of such enterprises. Lack of modern technologies in agricultural production conditioned decrease in the competitiveness of these products and, accordingly, a decline in the efficiency of agricultural production as a whole.

The point of view of V. Mikheev, a person who introduced the term “Chinese paradox”, on this issue is very interesting<sup>81</sup>. The author believes that conservation of the agrarian underdevelopment for some time being strategically important for the Chinese reforms better complies with the goals of increasing overall economic efficiency rather than breakthrough in the growth of labor productivity in agriculture. The author thinks that the latter is likely to result in overcritical increase of pressure in the Chinese labor market with negative consequences for the economic efficiency mentioned above. The paradox is explained by the main specific feature – by more than a billion people, with three-quarters thereof living in the village<sup>82</sup>.

To be sure, I would like to note the existence of a number of circumstances that assisted the Chinese economy to achieve positive results in the course of transformation processes. Reforms of the agrarian economy in China ensured sustainable economic

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<sup>81</sup> Михеев. В. Эволюция социально-экономической модели развития Китая. ж. «Общество и экономика», №3-4, 2000г. – с.179.

<sup>82</sup> Ibid, - P.179.

growth in this sector of the economy and have become the locomotive of the economic development in the country. Meanwhile, introduction of the economic reforms in the same sector of the economy in Kyrgyzstan resulted in a sharp decline in the volume of the agricultural products. This brings up the question: why did the agricultural reform in Kyrgyzstan result in a deep transformational decline, and in China this decline did not happen? We think that the answer, no matter how paradoxical it may sound, lies in the underdevelopment of this sector of the economy. The fact is that manual labor was the material and technical base of agriculture in China before the reforms began. Agrarian reform allowed Chinese families to take land on lease terms. Economic transformations have not changed the essence of the production facilities and resources: manual labor was the material resource of the earlier collective farms; meanwhile, manual labor was also the basis of the material resources in the new contractual formations. Other ways of saying, the facilities and resources of the pre-reform and post-reform associations was the same. The situation in Kyrgyzstan was quite different. The facilities and resources of our agrarian economy were more developed before reforms initiation. Domestic agricultural production was not automated, however it was mechanized. Thus, complexes for 3,000, 5,000 and 10,000 heads of cattle were the basis of livestock breeding. The processes of feeding, cleaning, milking operations in these complexes were mechanized. The main stages of production in the agricultural sectors of the Republic were also mechanized. The simultaneous destruction of the state and collective farms and the formation of family-operated farms on their basis through the distribution of land, livestock, and

agricultural equipment changed the facilities and resources of agriculture: instead of mechanized agricultural production, it became manual. The situation could not be different, since the new farms did not have small equipment that could work on small land plots or with small amount of cattle, and the old equipment was naturally not enough for all. Other ways of saying, the level of the agricultural facilities and resources in Kyrgyzstan from mechanized turned into manual. Undoubtedly, this negatively affected the labor capacity: for objective reasons, it became lower. The reforms of this sector of the economy have not changed the agricultural facilities and resources of China. It was manual and remained the same. First, there was only a new catalyst for development - private interest. Second, the character of the property relations transformation is the most important advantage of evolutionary development in China. A.I. Belchuk, a Professor of the All-Russian Academy of Foreign Trade, noted “It (the private sector - the author’s note) developed in China through independent growth and self-development of the private sector rather than through privatization of the state enterprises, as in the post-Soviet Republics and Eastern Europe countries. The authorities created favorable conditions for its development in the required sectors and regions. Meanwhile, denationalization was mainly limited to the small enterprises, and the issue of the large state-owned enterprises privatization was first seriously raised only two decades upon reforms initiation”<sup>83</sup>.

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<sup>83</sup> Бельчук А.И. Вновь об оценке реформ в Китае. МэиМО, 2005, №4, - с.87.

The strategy of carrying out an open foreign economic policy is among the “great initiatives” of China. This policy helped the country in solving such acute problems as lack of financial resources, low technical level of production, lack of qualified personnel, lack of experience in organizing and managing under the conditions of the market economy. In these conditions, the focus on an open foreign policy and the creation of special economic zones allowed China to liberalize the investment climate in the country, create the necessary infrastructure, and expand the powers of local authorities, etc., i.e., a set of measures aimed at attracting foreign capital, engineering and technology in these cities. Gu Mu<sup>84</sup> writes, “Based on the experience of an open foreign economic policy carried out in recent years, it can be confirmed to play an important positive role in addressing such issues as the concentration of efforts in the key areas of capital construction, accelerating scientific and technological progress, development of the new types of production, increase of the employment, settlement of proportions and acceleration of development of the national economic complex”<sup>85</sup>.

The Chinese “open direction” is realized through creation and development of the investment zones. This direction is extremely important for the foreign investors receiving favorable

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<sup>84</sup> Гу Му. Теория реформы хозяйственной системы: Установка ЦК КПК на проведение открытой внешнеэкономической политики отвечает чаяниям всего народа. Программа реформы хозяйственной системы в Китае. В кн. «Реформа хозяйственной системы в КНР»: Пер. с кит/Науч. ред. А.И. Денисов. – М.: Экономика, 1989, - с.149.

<sup>85</sup> Ibid. - p.149.

terms for conducting their business, and for the Chinese entrepreneurs studying a new economic mechanism. A complex structure and the specific development goals for almost every Chinese investment zone is their specific feature. The largest zones are the so-called **special economic zones**. They include several large cities located in the south of the country: Shenzhen, Xiamen, Hainan, Shantou and Zhuhai. Each of these zones has its own legislation. The governments of the zones are independent in the issues related to the funds borrowing in the world and domestic credit markets. A corporate profit tax rate is significantly reduced down to 15% in these zones; meanwhile, the national rate is 33%. Each zone has “development companies” engaged in the overall management of capital construction and coordination of negotiations between the Chinese and foreign partners. Some of these zones have internal structural units created to concentrate efforts for solving specific problems. The customs zones (free trade zones), being outside the customs border of the PRC, are formed in the special economic zones. A special authorization shall be given to import the goods into the country.

The so-called “open cities” are the next type of investment zones. They include 14 cities on the eastern seacoast with rather developed business infrastructure and focused on serving as a gateway to the interior of China. The up-to-date technologies with involvement of foreign capital are developed here. Production in these zones is export-oriented. China Window Consulting Group informed that enormous monetary funds were spent to arrange these territories, approximately USD 15-17 million per each hectare of the zone. “Open cities” provide more than 40% of

exports and almost 100% of the sea ports goods turnover. The production output here is 2/3 higher than the average level in China<sup>86</sup>.

Unlike other investment zones, the **Economic and Technological Development Zones** specialize in development of the intensive technologies. They are located almost in all main cities of the northern part of the country. They have their own rules governing economic activity: tax preferences for investments and the rate of profit tax, similar to other zones. The **High Technology Development Zones** grant tax privileges to the foreign investors specializing in the sphere of high technologies. There are also **Free Trade Zones** (bonded areas) in China located along the eastern seacoast, in or near large ports. The main activity of such zones is connected with warehousing and export of goods. The entrepreneurs operating in these zones are exempt from export and import duties, and can make payments, both in Yuan and in foreign currency. There are **Private Investment Zones** in the country. They are called “investment parks”, “investment cities”. These are joint Chinese-foreign projects. Large land plots are provided for lease. The local government is the authority regulating the activities of such zones. The experts of the consulting group noted that the majority of the investment zones offered similar conditions with respect to tax preferences. They are likely to differ in the quality of infrastructure, proximity to the clients, the airports, the iron and automobile airports, the opportunity of labor hiring, and the land price. Meanwhile, some of them offer special benefits for

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<sup>86</sup> Зона инвестирования. ж.НИ-НАО.ру. март-апрель 2007г., - с.24 (24-25)

certain types of activities, such as pharmaceuticals, agriculture, and information technology<sup>87</sup>.

One of the important features of the Chinese reforms is that it is the only country to realize a mixed economy using the principles of a planned and market economy. In Kyrgyzstan, in particular, this principle could hardly work: economic reforms represented the process of a sequential oncoming and destruction of the socialist economy. The Chinese scientists note that “natural economy rather than planned economy is the direct opposite of the commodity-based economy”<sup>88</sup>. Moreover, they believe that economic reforms in the transition economies are implemented by partial improvement of the traditional system or relying on the market mechanism<sup>89</sup>. Liu Guoguang said, “The desire to organically combine the market mechanism with a planned economy is another method to focus on the law of value”<sup>90</sup>.

The unique and successful nature of the pricing policy in China should be emphasized with regard to macroeconomic policy. The essence of this policy was that the state departments established directive planned prices for a certain number of particularly important and scarce products. Over-plan products

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<sup>87</sup> Зона инвестирования. ж.НИ-НАО.ру. март-апрель 2007г., - с.25 (24-25)

<sup>88</sup> Ма Хун. Исследование товарного хозяйства в Китае при социализме. В кн. «Реформа хозяйственной системы в КНР». Москва. «Экономика». 1989. – с. 21.

<sup>89</sup> Лю Гогунан. Преобразовать модель хозяйственной системы, совершенствовать социалистический строй. В кн. «Реформа хозяйственной системы в КНР». Москва. «Экономика». 1989. – с. 46.

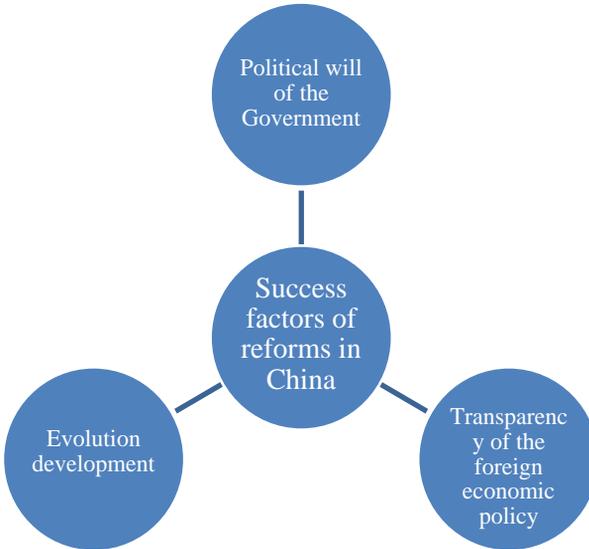
<sup>90</sup> Ibid.

could be sold at the negotiated prices. This policy was called the system of parallel prices. The so-called “reference prices” were established for the ordinary goods with the supply completely satisfying market demand. This means that the enterprises could change the prices for their goods within certain limits based on changes in the market demand and supply. Meanwhile, the laws of the market were fully applied to a large number of small goods with the supply completely satisfying demand thereof.

The system of parallel prices was active in the early years of reforms (1984-1992). Since 1993, the prices for many goods were established by the enterprises themselves and were regulated by the market. By the year of 2000, 85% of the prices for the production resources and 95% of the prices for the consumer goods were regulated by the market. Meanwhile, the Chinese Government keeps its pricing policy in focus: anti-dumping regulation is carried out in the country, too high and too low prices are balanced. This country managed to avoid cataclysms and sharp drops in prices due to such reasonable and smart pricing policy; however, the other countries that chose the liberal path of reforms could not avoid such cataclysms.

If we try to formulate the key factors for the success of the Chinese reforms, they are as follows:

Chart 5.2. Success Factors for the Reforms in China



The authors believe that the main factor of the Chinese reforms success is the strong political will of the Chinese Government, which managed to develop a smart and balanced strategy for the evolution development in the country taking into account the features of historical, political and socio-economic development. A number of more successful solutions can be found upon detailed study of the Chinese reforms, however, in general, the country managed to achieve remarkable results due to the approach to choosing a coherent, reasonable and integrated way to achieve reform goals.

We put the choice of the evolutionary way of development as the second important factor. The peculiarity of the reforms in China is that they have created a new system on the basis of coexisting different economic mechanisms and the gradual

formation of a new market mechanism rather than on the fragments of the old basis or through the one-time destruction of the former economic system, on the example of many post-Soviet countries. It is very difficult to theoretically imagine coexistence of two different, moreover, antagonistic economic mechanisms - a centrally planned and market economy. The reforms of China were unique because they managed to implement it.

The open foreign economic course and the development of a multi-level approach to the free economic zones is the third factor of success in the Chinese reforms.

Currently, the analysis of the economic situation helped the Chinese Government to identify the main problems in the country such as “overheating” of the economy, the underdevelopment of the agricultural structure, the issues of the people’s welfare, the situation with the decrease in the number of the energy carriers and the reduction of harmful emissions into the atmosphere<sup>91</sup>. Strict control over the money supply is primarily among the measures to prevent an aggravation and to solve these problems. A new concept of the economic development, called the “transition from quantity to quality” was adopted at the Central Economic Work Conference held in December 2007<sup>92</sup>. In 2008, export trade is also supposed to be implemented under the slogan “to win by quality”. The Chinese Government believes that the time has come, when the rates of economic growth must be restrained, while increasing its effectiveness. President of China, Hu Jintao, said at the 17th

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<sup>91</sup> Китайская экономика: от количества к качеству. ж. Китай, №1(27). январь 2008г., - с.23.

<sup>92</sup> Ibid.

Congress of the Chinese Communist Party held in 2007 that, by the year of 2020, China intended to increase the average gross domestic product per capita fourfold compared to 2000. China is supposed to be the “main world market” by the year of 2050. Let us try to formulate the main directions of the social and economic development in China:

- Creation of the “innovative economy”.
- Weakening of the social antagonisms.
- Enhancing the international role of China.

Creation of the innovative economy is the main direction of the future economic development. It implies<sup>93</sup>:

- Formation of the state system of innovations being based on the enterprises and combining the industrial organizations, universities and research institutes with the focus on the market.
- Concentration of innovative components in the enterprises.
- Stimulating the transformation of the scientific and technological achievements into the real productive powers.
- Optimization of the scientific and technical resources allocation.

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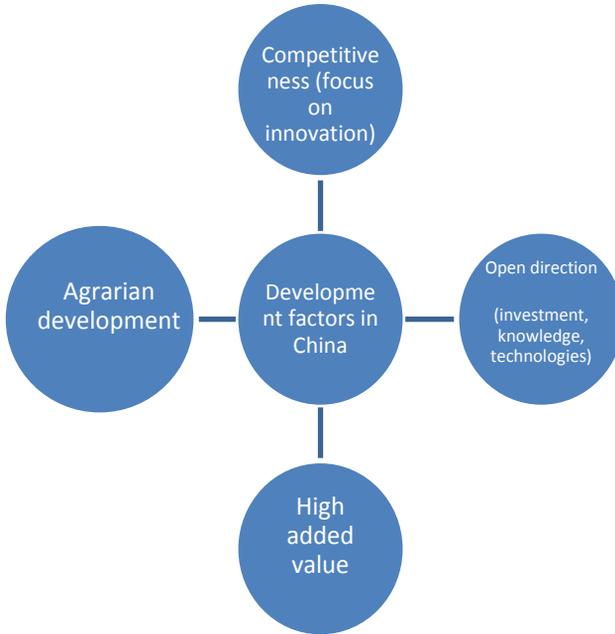
<sup>93</sup> Михеев. В. «Иновационная экономика», «социалистическая демократия», «глобальная ответственность» (к итогам 17-го съезда КПК, октябрь 2007г.). ж. «Общество и экономика», №9-10, 2007г. – с.13. (с. 5-19).

- Development of the “intellectual property strategy”, aimed at a significant increase in the number of the Chinese world-class scientists.

China developed the “three steps” strategy in the development of science and technology as far back as 90’s. The task to increase the level of competitiveness of the Chinese products in the world market up to 35% of the world level was proclaimed as the “first step” (2000). The “second step” (2001-2010) is bringing the level of the high technology industry to the world level. The goal to “stand in one line” with the world’s leading scientific and technical powers was set for 2011-2050.

If we try to formulate the main factors of the China’s economic development, the main factor is the focus on the competitiveness of domestic products with the main direction of creating an innovative economy. The agrarian development is the second equally important factor in the development of the Chinese economy. The main components of the agrarian development are as follows: first, the increase of farmers’ interest in the final results of their labor, and second, creation and development of the “township and village enterprises”, that is, the focus on the comprehensive development of the processing industry in the village or the enterprises with higher added value. The third, equally important factor of the economic development in China is the “open direction”, which is an effective form of attracting foreign direct investment into the domestic economy, sharing progressive knowledge and skills, progressive technologies and equipment from around the world.

Chart 5.3. Factors of Economic Development in China



Studying the course of reforms in China, we can say the following: this country managed to achieve astonishing results in economic development, which has not yet been reached by any post-Soviet economy. This development can be rightly called a “Chinese Miracle”. We can say that the long-term plans are likely to be executed due to development of the consistent and progressive steps in the reforms on the basis of the socio-economic peculiarities of development in the country. Naturally, this country cannot develop rapidly for a long time; therefore, the rates of its development are likely to decrease as time passes. However, China can gradually claim the role of a superpower; anyway it has good reasons for it. The process of society democratization is only real problem that may arise along this path. Currently, no one can

foresee the final form of this process in China. The country can face cataclysms and the consequences thereof can be more dangerous than a “cultural revolution” or a transformational decline. Meanwhile, there is a possibility that the country can suffer evolution. Time will tell.

### **Economic Reforms in Ghana following Independence**

Now let us take the experience of development in another country being used as an unsuccessful example in the world practice. This is the economy of Ghana. However, the country now owns and produces gold (in 2015, it produced 95.1 tons), diamonds (308,679 carats), manganese ore (360,000 tons), and bauxites (370,000 tons). Nowadays, Ghana is among the countries with the lowest living standards of the population. In 1999, according to the Human Development Index, it was the 119<sup>th</sup> among 162 countries, according to the IMF for 2016, it was the 139<sup>th</sup> among 187 countries with GDP per capita of USD 3,839<sup>94</sup> taking into account the PPP. Slightly more than half of exports are accounted for cocoa and cocoa products manufactured in the country, the rest - for mining products. Other ways of saying, Ghana is a country fabulously rich in agricultural lands and natural resources, however, its people failed to take advantage of these resources and therefore live in poverty.

However, the situation was different earlier. By the end of the 50's, this country had a strong national currency (cedi) and a good GDP growth (4% annually). Civil services, transport, and communications were rather well developed. The situation with electricity generation was the best in the region (excluding South

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<sup>94</sup> Human Development Report 2016, UNDP.

Africa). The income per capita was twice as high as in South Korea during that period.

Probably, the beginning of the economic deterioration in this country can be attributed to the time when it, the colony of England (which established its rule in 1901), first among the African countries established independence in 1957. Unlike other countries being able to find their own way of economic development, Ghana failed to do so. What are the reasons for the economic collapse in the country?

The experts<sup>95</sup> believe that the reason is the economic policy of the Government. The Government's goal was to consistently implement the policy of the "country industrialization" through import substitution during the initial and subsequent periods of development. The country tried to become economically independent (as she understood it) of the supply of goods from other countries. It was implemented through regulation of foreign trade and import licensing. In 1960, only 11 types of goods of 43 most important import items were produced in Ghana, however, in 1970, the country produced 33 types of goods. This fact could be considered as a positive phenomenon, if their production was determined by the presence of comparative advantages. Such results were unfortunately not observed. The second factor is a financial policy. The Government tried to solve the problems of the budget deficit by means of inflationary funds, which resulted in negative consequences. The issue of money was the first consequence. 60% of the country's budget deficit was covered by this factor. High taxation was the second consequence. The

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<sup>95</sup> Hogendorn J., *Economic Development/ Second Edition*, Harper Collins, 1992. P. 79-82.

Government of Ghana decided to impose taxes on the production of their main agricultural product - cocoa beans. Finally, there was a sharp decline in the production of this product. Thus, in 1965 the production of cocoa made only 41% of the previous year volume, in 1970, only 37%, 1983-1984 - 34%.

J. Hogendorn thought that the high proportion of state property was another negative factor for this country. State property was characteristic of many new enterprises in the country; inefficiency was its negative side. This form of ownership conditions hidden unemployment, the absence of bankruptcies, and non-use of production capacities. Only one third thereof was used.

The state price control policy was a factor having a negative result. The country tried to control prices to achieve greater equity in income distribution between the rich and poor people. However, the studies conducted by the international organizations show that this measure can hardly reach its goal. The data show that 2/3 of the population, and particularly the villagers, did not actually have access to controlled prices. Moreover, the studies show, it is difficult to argue that controlled prices helped the poor. However, they opened the way for bribes. In 1983, the World Bank published the data that Ghana was the country with the greatest distortions in prices.

Experts say that the economic policy using the carrot and stick was among the main reasons for the economic failures in the country. Political instability is a characteristic of Ghana. The policy of “rewarding” those who supported the Government and opponent punishment was actually widespread due to fragile position of the Government.

## Reasons for Economic Reforms Failure in Asian countries

It is extremely important for the developing economies to study and understand the experience of developing successful countries to take into account and use the achievements and failures of other countries to form their own development strategy.

In this respect, the written works of the researchers of economic reforms in Asian countries attract interest, namely, Joe Studwell<sup>96</sup>, who scrupulously studied the economic development of East Asia countries for 20 years and was able to prepare a study that was widely accepted among the specialists and a wide range readers, and Sagandyk Satybaldiyevich Satubaldin<sup>97</sup>, an academician and a scientist of Kazakhstan, who also lived and worked in this region for many years.

Both researchers divide the Asian countries into two parts. The first part comprises the successful countries of East Asia being able to achieve the “Economic Miracle”: South Korea, Taiwan, Hong Kong<sup>98</sup>, Singapore, and the People’s Republic of China<sup>99</sup>. The economically less successful countries, which, nevertheless, quite purposefully followed the same path, however, could not achieve the same success: Thailand, Malaysia, Indonesia and the Philippines.

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<sup>96</sup> Стадвелл Д. Азиатская модель управления: Удачи и провалы самого динамичного региона в мире/ Джо Стадвелл, Пер. с англ. – М: Альпина Паблицер, 2017. – 536с.

<sup>97</sup> Сатубалдин С.С. «Драконы» и «тигры» Азии: сможет ли казахстанский «барс» пройти их тропами? - Алматы, 1998-600с.

<sup>98</sup> Today it is a part of P.R. China.

<sup>99</sup> Studwell refers these countries to Northeastern Asia, as for Satubaldin – to Eastern Asia.

We think that these studies attract special interest because they provide detailed rationale for the success of some countries, however justify the reasons for the failures of other Asian countries, which used the same development factors. We think that it is actually extremely important for the underdeveloped countries that would like to achieve the “Economic Miracle” to study the experience of the economic reforms in the successful countries, and it may be even more important to understand the reasons for the failures of the countries that followed the same path, however did not achieve results. We think, it is important to know what are the vectors of achieving economic successes and to have the ability to achieve them, as well as to be provided with consistency and perseverance in achieving goals, the ability to understand the socio-economic characteristics of development in one’s own country, to find and understand the levers to solve the problems that can be effective to form your own development strategy.

In this respect, the experience of Southeast Asia countries such as the Philippines, Indonesia, Malaysia, Thailand, which failed to achieve the same success as their more successful neighbors, attract great interest.

What were the obstacles for these countries? According to Joe Studwell, when the main resources of the country are concentrated in agriculture, the development of this particular industry provides rapid increase of production output in the poor countries. The main factor of agrarian development is to provide available land directly to the workers. The governments of the countries such as Southeast Asia, the Philippines, Indonesia, Malaysia and Thailand set this task but failed to implement it in practice. In particular, the reform was to be implemented in the

Philippines where the land at that time belonged mainly to large landowners, upon this reform the excess landlords' land was subject to expropriation (initially, the area of permitted minimum of land in the property constituted 300 hectares, upon reforms this area must be reduced down to 75 hectares). The excess land should have been transferred to the local population in order to provide workers with accessible land; however, this task was not fully realized. Other ways of saying, the workers were not provided with accessible land. Indonesia was not consistently and purposeful in implementing this task. Finally, by 1960, 60% of the rural population of this country remained landless.

A different situation is typical for Malaysia. It is among the countries that did not experience a shortage of farmland. However, during the recession of 1980, the peasants could not develop an optimal structure, did not have the necessary infrastructure, knowledge of marketing and management, finally, many of the family farms could not withstand competition and have collapsed. As a result, thousands of hectares of cultivated land were abandoned<sup>100</sup>. The same situation occurred in Thailand. The researchers in Thailand write as follows: “The Government has not provided any support for the rice economy development besides laying the main drainage channels. The developed territories turned into a region with the most technically underdeveloped, low-intensive and low-productivity regime in Asia being provided with the most primitive technologies and having no access to

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<sup>100</sup> Стадвелл Д. Азиатская модель управления: Удачи и провалы самого динамичного региона в мире/ Джо Стадвелл, Пер. с англ. – М: Альпина Паблицер, 2017, - с.114.

capital”<sup>101</sup>. What conclusion can be drawn from the experience of the agrarian reforms in Malaysia and Thailand? The conclusion is very important - it is necessary to form and implement an effective state policy of supporting the farm households, rather than provide the farmers with land.

Studwell believes that if the countries of Southeast Asia failed to implement the first stage of the agrarian reforms, they failed to succeed in implementing the subsequent reforms, i.e. to ensure the transition to the larger farms, which could increase the level of specialization and mechanization in the farms, to increase the productivity and profitability of agricultural production.

Concerning industrial policy, Studwell argues that “there were no any successful cases of economic development in Southeast Asia to be used as an example to follow”<sup>102</sup>. In supporting the author’s view that it is not possible to implement successful policy of supporting and developing the processing industry of these countries, nevertheless, we believe that these countries have the successful examples of using economic instruments that gave a positive effect and therefore can be used in the development strategy of other countries in appropriate conditions.

Thus, we gave the examples of some countries and tried to consider the factors that helped some countries to succeed, and provided the reasons for failures of other countries. Is it possible to

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<sup>101</sup> Pasuk Phogpachit and Chris Baker, Nhailand: Economy and Politics. Kuala Lumpur and New York: Oxford University Press, second edition, 2002, p.45.

<sup>102</sup> Стадвелл Д. Азиатская модель управления: Удачи и провалы самого динамичного региона в мире/ Джо Стадвелл, Пер. с англ. – М: Альпина Паблшер, 2017, - с.214.

conclude that we should act only as the countries of Northeast Asia, for example, like South Korea, and it is absolutely impossible to follow the path of Ghana, the Philippines, etc.? The answer is negative. Each country is surely to have features that can dictate the need to use those factors that can result in failures in another country. However, it is necessary to study carefully the experience of the development in other countries, try to understand the patterns of process development and their possible consequences. We can reduce the search for our own path to economic growth and development through researching the world experience and understanding the causes of phenomena.

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## **CHAPTER 6. ASIAN MODEL OF ECONOMIC REFORMS IN KYRGYZSTAN AND ITS FUTURE DEVELOPMENT PATH<sup>103</sup>**

### **Peculiarities of Economic Reforms in Kyrgyzstan**

The transformation process from a centrally-planned to a market economy can be divided into several stages:

- The first stage is the destruction of the old economic system and the beginning of the formation of a new economic mechanism.
- The second stage is the formation of market-based management mechanisms.
- The third stage - the beginning of sustainable economic growth and development.

The first stage is characterized by the old economic mechanism destruction, liberalization policy implementation, macroeconomic policy stabilization, onset of the new economic entities formation. High inflation rates, decrease in production output, and rise in unemployment are the distinctive features of this period. Moreover, the depth of the transformational recession in different countries experiencing a transition period is in direct correlation with the scale and depth of the transformation processes.

The second stage is characterized by a gradual formation of new economic entities and market mechanisms of economic

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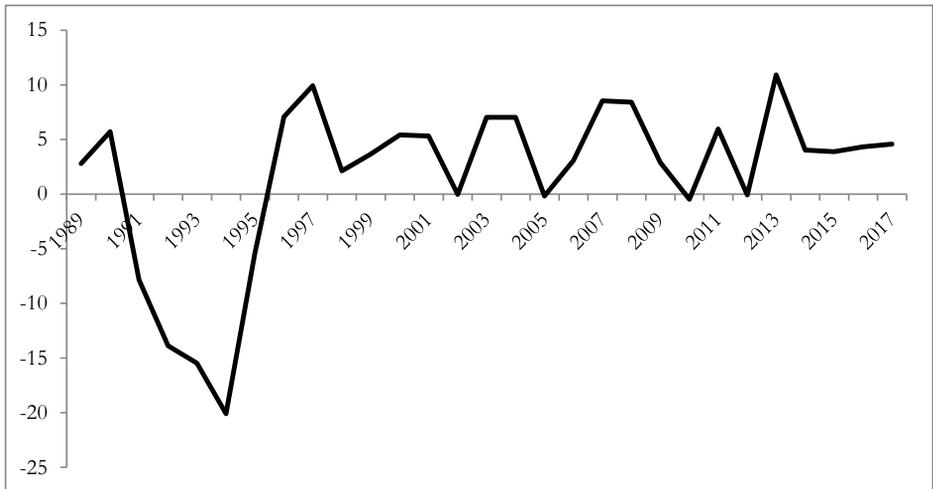
<sup>103</sup> The materials in this section are a generalization and development of the ideas outlined in previously published papers.

management. Newly formed business entities make their way. The experience of the post-socialist countries shows that this way is very thorny. The duration and complexity of this stage are directly related to the expertise and best practices of market-based economic management possessed or acquired by a country. The countries adjacent to the countries with developed market economies (Poland) and experiencing market economy in their past (the Baltic countries) pass this stage quickly and less painfully. Poland passed this period within approximately three years. The countries have a great deal of difficulty in establishing new organizational forms and market mechanisms without experience of market development period in their past. Kyrgyzstan is among such countries.

So far, very small number of countries has succeeded in reaching the third stage. Poland, Slovenia, the Czech Republic, Hungary, the Republic of Slovakia, and Estonia are among these countries. The various duration of this period is the peculiarity of this stage. Preliminary conclusions can be drawn. The analysis of statistical data contributes to making preliminary conclusion that the countries that have chosen the path of cardinal and rapid reforms (Poland) are more likely to achieve economic recovery in relatively short timeframes compared to the countries that have chosen the path of gradual reforms (Hungary). However, the practice of reforming individual countries disclaims this conclusion. Namely, such situation is applicable to Kyrgyzstan, which has chosen the path of large-scale and cardinal reforms, however fails to achieve its goals on time.

Currently, Kyrgyzstan today is experiencing difficult times of transformation from a centrally planned to a market economy. Our country has chosen the path of large-scale and profound reforms on the way to the market, the payment for which is a deeper transformational recession and a decline in the people’s living standards. The transition economy in Kyrgyzstan is characterized by a transformation decline in 1991-1994, a reduction in the rate of production output decline and slight stabilization in 1994-1995, and since 1995 till the present period - the trend to a gradual increase in the rate of their growth, which, unfortunately, is still unsustainable (see Chart 6.1).

**Chart 6.1. Gross Domestic Product (Left), and Gross Domestic Product per Capita (Right) in Kyrgyzstan**



It is very important to understand the features of the historical and cultural development of the Kyrgyz people for the purpose of understanding the laws of social and economic development of

present-day Kyrgyzstan. The Kyrgyz country is first mentioned in the Chinese history in 201 B.C.<sup>104</sup> The description of the people is very poor and contradictory. The early feudal state was established in the IV-V centuries A.D., the Kyrgyz people lived at that time to the north-east of the present territory of the Kyrgyz Republic. In 840 A.D., a hundred-thousand-strong army led by the Kyrgyz attacked the ancient Uyghur capital Ordu-Balyk (the territory of present-day Mongolia), seized and destroyed it. The Kyrgyz Khaganate was established on the site of the Great Uyghur State. The Khaganate stretched from the Lake Baikal to the Irtysh River, from present-day Krasnoyarsk to the Great Wall of China. The empire did not last long: the Kyrgyz people had returned to the Yenisei basin by the tenth century. The habitat of various Kyrgyz tribes stretched from western Mongolia to eastern Turkestan. The native land of the present-day Kyrgyz nation is considered to be the territory covered by the Central Tian-Shan region, the Chui valley and the south-east of the Ferghana region. The population of the region (Saks, Usuns, Huns and Turks) was assimilated by the newcomers (the Kyrgyz). The current Kyrgyz nation was completely formed within the borders of present-day Kyrgyzstan by the XVI century. The Kyrgyz tribes were gradually incorporated into the Russian Empire from the middle of the XIX century. Several separate tribes entered the empire voluntarily, the rest were joined by force.

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<sup>104</sup> Материалы по истории Кыргызов и Кыргызстана: Т. 2. Отв. редактор К. Джусуев – Б. 2003. – с. 7.

A new stage of the economic and cultural life of the Kyrgyz people began after the October Revolution of 1917. The territory of the present-day Kyrgyz Republic was a part of the Turkestan Autonomous Soviet Socialist Republic. The republics of Central Asian were delimited in 1924, and the Kara-Kirghiz Autonomous Region was created on this territory being administratively a part of the Russian Federation. In 1926, it was transformed into the Kyrgyz Autonomous Soviet Socialist Republic being a part of the RSFSR.

The agricultural sector was the main sector of the economy of Kyrgyzstan in the pre-Soviet period. The industry was in its infancy. The industrial enterprises were based on primitive equipment and manual labor. The activity of these enterprises was focused on the processing of cotton, leather, wool, grain, milk, etc. In 1913, 96% of the production output in the country fell on the agricultural sector. The share of industry constituted only 2-3% of the total production output. Non-monetary relations dominated the country's economy. Exchange relations covered at least one-third of the produced gross product.

The rates of economic development in the Kyrgyz Republic were rapid and they outran the USSR economic growth during the Soviet period. The volume of agricultural production in Kyrgyzstan had increased by 8.4 times during this period (an increase by more than two times compared to the USSR). The growth of industrial production in the Republic was 58 times higher than the growth of agricultural production. The industry to agriculture ratio in terms of the national income was 1.4:1.

Kyrgyzstan turned into a relatively developed industrial and agricultural Republic in the Soviet era.

The failures of the centrally planned economy of Eastern Europe were evident already in the 1950's of the last century. A gradual slowdown of economic development in Russia, Belarus and Ukraine was observed by the 70's – 80's. Thus, the annual growth of the national income during the first post-war five-year period in the USSR (1946-1950) amounted to 12.8%, however, during the eighth five-year period (1966-1970) - 8.2%, during the ninth (1971-1980) - 5.6%, during the tenth (1976-1980) - 4.2%, the eleventh (1981-1985) - 3.3%, and the twelfth (1986-1990) - 1.3%<sup>105</sup>. Gradually increase of the total production deficit in the country indicated that the economic system of socialism failed. The new ways of development to result in systemic reforms were searched for in these countries and republics.

The economic development of the Kyrgyz Republic during the Soviet period was rapid and outran that of the USSR period due to the lower starting level of development (see Table 6.1). The Republic continued developing by inertia at the beginning of reforms (1985-1990), therefore, the reformist mood had not yet been formed by this time.

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<sup>105</sup>Народное хозяйство СССР за соответствующие периоды. Статистический ежегодник/Госкомстата СССР – М.: Финансы и статистика.

**Table 6.1. Rates of Economic Growth in the Kyrgyz Republic during the Soviet Period (1913-1)<sup>106</sup>**

	<b>1940</b>	<b>1960</b>	<b>1970</b>	<b>1980</b>	<b>1987</b>
USSR industrial production	7.7	40	92	163	213
Kyrgyz Republic	9.9	61	188	362	487
USSR agricultural production	¼	2.2	3.1	3.4	4.0
Kyrgyz Republic	2.0	3.6	5.7	7.2	8/4
USSR fixed production assets (1960-1)	-	1	2.2	4.5	6.7
Kyrgyz Republic	-	1	3.0	6.6	9.9
USSR investment (1940-1)	1	6.3	12.3	20.1	27.0
Kyrgyz Republic	1	7.1	17.0	23.6	31.1

This is the first distinctive feature of the reforms in the Republic. Undoubtedly, the country would understand the need for reforms due to inefficiency of a centrally planned system, however it would happen later.

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<sup>106</sup> Статистические сборники «Народное хозяйство СССР» и «Народное хозяйство КР» за соответствующие периоды.

A distinctive feature of Kyrgyzstan is the fact that our country is among the countries of Central Asia (the former republics of Central Asia), which, unlike Western and Eastern Europe came to socialism “bypassing capitalism”, i.e. they did not have the market stage in their past and were located far from the countries with developed market economies. The experience of the reforms in Kyrgyzstan, as well as other former republics of Central Asia, defined by the author as an “Asian model” of reforms, demonstrates that the duration and complexity of the transformation process are directly related to the degree to which a country possesses or has acquired expertise and experience of the market economy. Today we come to an understanding of what in the very beginning of the 1990’s was written by the famous scientist Douglass North, who in 1991, introduced the term “Path dependence”<sup>107</sup>, i.e., the dependence of the present on the previous development pathway. Currently, we are trying to understand that the process of transition to a market economy by the inexperienced countries without any market mechanism of economic management predetermined the need for a long-lasting adaptation accompanied by a gradual process of cognition and adaptation to the new economic conditions.

The political and scientific elite being not ready for new processes was another distinctive feature to influence the course of events in the Republic. The complexity of the situation in Kyrgyzstan is aggravated by the fact that Kyrgyzstan has become an independent country after the collapse of the USSR. Consequently, the elite inexperienced in the nation-building could not yet emerge in the country.

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<sup>107</sup> Douglass C. North. *Understanding the Process of Economic Change*, 2005.

Ongoing incomplete formation of the Kyrgyz nation is a distinctive feature of the country. We think that H. Nezhoglu<sup>108</sup> is absolutely right to believe that the Kyrgyz people have not yet formed a “national self-identification”. He believes that it is more legitimate to talk about “tribal self-identification”. The aforementioned facts prevent the people from focusing on achieving common goals, diffuse and weaken the efforts of the Kyrgyz people.

Kyrgyzstan became known to many as an “island of democracy” due to its commitment to liberal reforms at the very beginning of the perestroika process. The world learned about the rallies that surprised many people after some events occurred in 2005 and 2010. So what kind of people are the inhabitants of Kyrgyzstan? The answer to this question is sure to concern primarily us, the population of Kyrgyzstan. We are also concerned about the answers to the questions about the causes of events occurring in our country.

Today, naturally, one can argue about the key factor in choosing the cardinal liberal reforms in Kyrgyzstan to result in the extreme shocks. We think that there are several reasons for this interaction: first, the lack of experience and knowledge about possible ways of reforms, because the most difficult problem on the way of transformation from a plan to a market was that, having substantiated this need, the economic theory could not provide the structure and sequence of the transformation processes. There is no

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<sup>108</sup> Незихоглу, Халим. Кыргыздардын уруулук (кландык) идентитүүлүгү алардын саясий концептуализациясынын негизи катары. Вестник Кыргызского государственного университета им. Арабаева. 2012, № 3, с. 186-196.

surprise in it since the understanding of the necessity (with the exception of certain individuals) of fundamental changes formed simultaneously with the onset of transformation processes.

One can agree with the statement of the scientists such as A. A. Porokhovskiy and K. A. Khubiev from the Moscow State University that “The theory of transitions from some social and economic systems to others was broadly represented within the framework of political economy. ... Neoclassical theory being the basis of the mainstream, - they write, reflected the functional ties of formed market economy in the most developed countries. ... Neither the contents of the recipes themselves, nor the content of the theory being the basis of these recipes reflected the essence and specific nature of the object for these recommendations application. One can definitely state that the transformations in Russia did not have an adequate scientific justification and support”<sup>109</sup>. And only nowadays, we can make the first conclusions about the general laws of the transformation process after a certain period of time, having got an endless number of “lumps” and “grazes” and having an expertise in the post-Soviet countries reform.

Second, 12% of the budget in the Kyrgyz Republic was formed at the expense of All-Union funds under the conditions of a centrally planned economy. This source was eliminated upon the USSR collapse, and the country faced the most urgent need to find the funds. At that time, the international financial institutions rendered effective assistance by providing the necessary funds;

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<sup>109</sup> Пороховский А.А., Хубиев К.А. Формирование российской модели социальной рыночной экономики. Вестник МГУ. Серия 6. Экономика. 2005, №4, стр. 6.

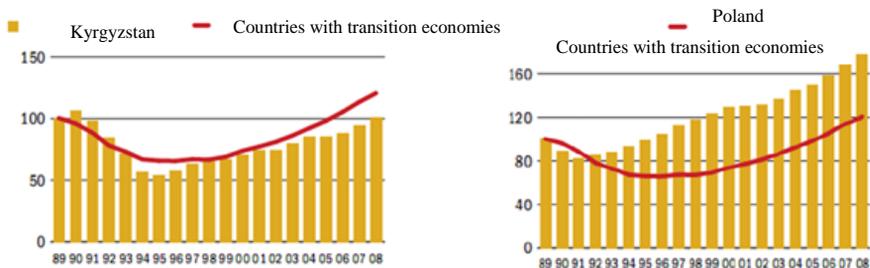
however, this assistance was rendered provided that the recommendations of the western experts were followed in implementing economic reforms known in the literature as the “Washington Consensus”.

Third, the experience of reforms in Kyrgyzstan is interesting because, on the one hand, it is an example of a country without a market stage in its past and being far from the countries with developed market economies. On the other hand, the notion “democratic freedoms” is an important socially significant value for the people of this country. The formation of democratic aspirations is conditioned by the socio-economic, cultural and historical peculiarities in development of the Kyrgyz people. First of all, it is a nomadic way of life, a practice to constantly change the habitat, to meet new people on their way, to learn new traditions and customs. All this could not but affect the formation of the freedom-loving spirit of the people, tolerance, adaptability to the perception of changed place of residence, to meeting of new people, a new culture. This apparently positive quality played a negative role in choosing the ways of transformation. The progressive aspirations of the people predetermined the choice of radical economic reforms. However, the lack of the necessary conditions to ensure the success of the large-scale and cardinal economic transformations, the lack of experience and knowledge resulted practically to collapse in the country.

Unlike Kyrgyzstan, the countries of Eastern Europe, namely Poland, are an example of the countries provided with the conditions for liberal reforms (a market-based economic mechanism in the past, close proximity to the developed market

economies). We think that it explains the difference in the results of reforms (see Chart 6.2).

**Chart 6.2. Real GDP (1989=100)**<sup>110</sup>



We see that the decrease of GDP in Kyrgyzstan in the 1990's - early 2000 is more significant compared to other countries with transition economy, and the growth in the next period is behind other countries.

**Agricultural Policy of the Transition Economy in Kyrgyzstan**

Agriculture is among the most important components in the structure of the economy in any country. The role of this industry is determined by provision of the country with vital products, which the people need first.

The need for food is the first-order need for an individual in the well-known table of Abraham Maslow where the priorities of human needs are defined. The agriculture is considered to be a strategically important sector of any economy taking into account that agricultural production provides the individuals with food and

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<sup>110</sup> Based on EBRD, and World Bank database.

raw materials for production, satisfying their most important needs. Meanwhile, the share of this sector in the country's economy is of no importance. Agriculture is a strategic sector, regardless of its share in the country's economy. This sector makes no difference also for the countries where the share thereof is significant (such countries are usually called agricultural or agro-industrial) and for industrially developed countries where the share thereof is less significant. Thus, this sector is among the strategically important sectors of the economy in any country and it is the first sector all reforms are initiated from.

Taking into account the strategic position of the industry, it becomes clear why economic reforms are initiated precisely from the agriculture, and therefore the results of reforms largely depend on the success of reforms in this sector of the economy. Therefore, economic reforms in Kyrgyzstan are initiated from transformations in agriculture as in the countries of Northeast Asia.

The most important goal of economic reforms, regardless of belonging to one or another industry, is the formation of an interested private producer to replace the state agricultural enterprises – the state farms and collective farms. The formation of a new economic entity in agriculture begins with the land reform. The question is as follows: agricultural products will be produced by the one who will receive the right to work on land. The reform of the agro-food policy in the country is among the most important goals of economic transformations. The regulatory process in the new economy is based on fundamentally different principles compared to the planned economy.

Thus, the main objectives of the reforms can be formulated as follows: 1) land reform, 2) establishment of new economic

entities in this sector of the economy, and 3) formation of a market state agro-food policy.

In Kyrgyzstan, the social forms of agricultural production organization prevailed at the beginning of the economic reform: 96.4 percent of the sown area fell on the collective and state owned farms and only 3.6 percent was occupied by farm households. Collective farms and state owned farms, in the amount of 468, were very large farms. Approximately 26 thousand ha of farmland, including 3.1 thousand ha of plough land, 1,060 average annual workers accounted for one collective farm; 18.4 thousand, 2.3 thousand, 722 (engaged in the main production)<sup>111</sup>, respectively accounted for one state farm.

At that time, there were two approaches to understanding agrarian reforms. The essence of the first of them was that the social forms of production organization discredited themselves and therefore it was necessary to abandon them and focus on their reorganization to form the farm households and enterprises and cooperatives. The followers of a different position, the dominant part of domestic scientists were among them, in particular, the largest agricultural scientist, A.U. Oruzbaev, a young scientist Zh.S. Jailov and many others, believed that it was impossible to destroy existing economic entities, that the development of new forms should be ensured through their transformation rather than through destruction of the old ones. In particular, the author of this study belonged to the second group of scientists. He wrote in the

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<sup>111</sup> Хозяйствующий субъект и диалектика развития его экономического механизма хозяйствования. В книге «Теория и практика экономики переходного периода». – Бишкек: Илим, 2008 - с.273.

article as follows: “The market like a pagan deity requires victims. Can we provide it?” - in the newspaper “Slovo Kyrgyzstana” as of June 24, 1992. “The total destruction of collective farms - is this better than violent collectivization? Unfortunately, agriculture suffered great losses due to incompetence of the decisions made. Specialists believe that even according to the most conservative estimates, the livestock population in the Republic has decreased twice. True reform cannot bear any relation to destruction”<sup>112</sup>.

Nevertheless, no one respected the scientists’ feedback. Finally, the collective and state owned farms were transformed, other ways of saying, they were disestablished. According to the National Statistical Committee, there were 60,720 farm businesses in the agricultural sector, the majority thereof – 60,111 were small farm households by 1999.

The old economic management mechanism, the infrastructure system, together with the corresponding enterprises, the system of interconnections among economic entities has disappeared accompanied by the collective and state owned farms. There were few economic entities which managed to survive in the absence of a system that would service new farms, supply them with the necessary equipment, fuel, seeds, sell their products, give advice on production technology, specific measures to protect crops, etc., i.e. all that is called infrastructure. By historical standards, one-time destruction of the state business units being partially effective, however, generally meeting the requirements of the country resulted in a catastrophe - the agricultural economy of

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<sup>112</sup> В книге «Теория и практика экономики переходного периода». – Бишкек: Илим, 2008 - с.398.

the country experienced an unprecedented transformational decline (see Chart 6.3)<sup>113</sup>. We see that the volume of agricultural production fell sharply by 1995.

There is no subjunctive mood in the economy and the history. Large collective farms have been transformed into a large number of small farm households; the old system of infrastructure has disappeared. The transformations have become irreversible, a new stage of reforms began, and it was connected with the prospects for the development of small farm households, the need for the formation of a market infrastructure, the state policy of regulation by the newly formed economic entities. The share of agricultural production gross output in the public sector was 2% of its total volume, in private farms - 98%, moreover: in collective farms - 11.7%, in farm households - 37.8% and in personal households - 48.5%. In the total value of the fixed assets of the agricultural sector, the share of state value was KGS 4.7 billion (23%), private value – KGS 15.7 billion (77%)<sup>114</sup>.

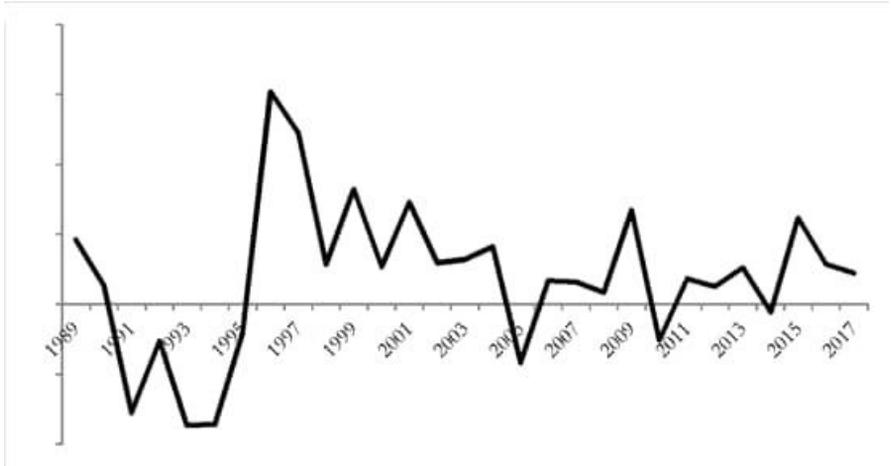
Since 1996, the newly formed economic entities have been demonstrating growth in their indicators. In 1996, the growth rate of gross agricultural production was 15.3%, in 1997 - 12.2%. In subsequent years, this indicator also had a positive value (see Chart 6.3).

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<sup>113</sup> По данным проекта Всемирного банка «Кыргызская Республика: Развитие частного сектора в сельской местности». 2000г. В книге «Теория и практика экономики переходного периода». – Бишкек: Илим, 2008, с.190.

<sup>114</sup> По данным проекта Всемирного банка «Кыргызская Республика: Развитие частного сектора в сельской местности». 2000г. В книге «Теория и практика экономики переходного периода». – Бишкек: Илим, 2008, с.190.

**Chart 6.3. Value added growth rates in agriculture (in % to the previous year)**



The farm households were assumed to grow up and gradually acquire the necessary knowledge and experience to become the main producers of the agricultural products. Other ways of saying, the private interest of the new economic entities was the main driver of development in this sector of the economy in the first years of reforms in rural areas. Therefore, the agriculture of the country managed to achieve a recovery of the pre-perestroika level of production much earlier compared to other sectors of the economy. The things being focused on, i.e. the interest of the private producer in the final results of their labor, demonstrated their results. Something happened that should have happened: the initial signs of the private stimulus effect gradually appeared. This explains the fact that the period of stagnation in the economy of agriculture has ended and the private sector, the first among other sectors of the economy, has reached the production level equal to

the level before the beginning of the transition period, the highest growth rates were mainly observed in the agricultural sector during the first years of reforms.

During the first years of existence, the new economic entities in the rural areas did not have enough expertise to produce finished products, because each worker actually performed separate operations (tractor driver, milkmaid, etc.) under the conditions of collective and state owned farms and objectively necessary specialization. Now life demanded knowledge of the whole process of production, however available knowledge was insufficient. The owners of the private farm holdings were provided with sufficient knowledge, for example, in 1996, such holdings produced the largest share of all agricultural products (57% of GDP), i.e. more than all state, collective farms and farm holdings combined together. Therefore, it was too early to speak of the establishment and strengthening of the private sector of the economy in the agricultural sector.

The private stimulus factor has exhausted itself over time. Further growth of the agricultural economy required the dynamics of the processes such as technology modernization, cooperation, state support of new producers, etc., however unfortunately these processes were not properly developed. The full growth potential of the private sector was not disclosed due to low productivity resulted from a number of reasons at the micro and macro levels. The main reason is that new economic entities have difficulties on the way of formation and development and therefore cannot achieve high indicators in their activities.

Unfortunately, the real experience of reforms in the agricultural economy of our country indicates that this is an extremely complex process, and it requires a much longer period of time than we expected.

If we try to generalize and derive the most difficult problems in the agricultural sector of the economy, then this is the lack of expertise and knowledge of the market mechanism of economic management. What is meant by this? The results of studying the private sector development in the rural areas under the World Bank project, which was completed in 2000 under the direct supervision of the author of this article, can be the answer to this question. 82 agricultural enterprises and farm holdings, 148 agro-industrial enterprises and agro-business services in the private sector of the Republic's economy were the objects of the project study. Four regions were chosen as the basic ones for different regions of the Republic: Issyk-Ata district of Chui region, Kara-Suu district of Osh region, Talas district of Talas region and Djety-Oguz district of Issyk-Kul region. More than 20 agricultural enterprises and farm households, more than 35 processing enterprises and agro-business services were studied in each district. The results of the study showed that the lack of expertise for the market mechanism of economic management is the main obstacle in the development of new business entities. Where is it evident?

The results of study showed that the transformation of property relations for some of them still has a formal character. Some newly established private business entities have acquired a new system of motivation and interest in effective work due to the established psychological stereotype. Insufficient knowledge of the

rural private producers is evident in underdeveloped marketing service. New business entities are experiencing difficulties in the course of their development and therefore need support. Meanwhile, the local authorities and ayil okmotu (village councils) do not support new formations. The farmers are not able to process their own products and bring it to the urban consumer, since it requires a significant additional cost. Heady transportation costs and commercial expenses are the obstacles for the sale of products produced by the small- and medium-sized farms. They are forced to sell such products to the intermediaries at low prices during the harvest period, when the supply is much higher than the current demand. Delivery of materials necessary for the production of primarily fuels and lubricant, mineral fertilizers, seeds, etc. is another problem for the agricultural producer. The problem consists in excessively high prices for production materials rather than in the lack thereof.

Currently, one of the most difficult problems in the development of agro-industrial production in Kyrgyzstan is related to the fact that new economic entities exist only at the grassroots level - at the level of the direct producer. Production systems forming a single chain of interconnected and coordinated enterprises (from the field to the consumer table), which would include all the necessary units for processing, supply, maintenance, sales, etc., are at the stage of formation. Currently, the stages of production and sales have developed. The stages of processing, maintenance, and supply need support. Many enterprises are not operating at full capacity, the condition of their equipment and the provision of spare parts are unsatisfactory. They do not have

modern packaging materials. Denationalization and privatization of the food and processing industry enterprises have not improved their production activities. Some enterprises take measures to upgrade their production; however most of them cannot afford it. Reduced demand and non-competitiveness of products, as well as a lack of own working capital are the main reasons restraining their production.

Underdevelopment, namely, backwardness of the service enterprises is among the main reasons restraining the growth and development of agricultural production.

In the context of globalization, the laboratories for products standardization and certification are the most important elements of the infrastructure. Exports of domestic products make no sense without compliance with certain standards and norms. Meanwhile, the domestic market of the country is very small and the only hope of our farm households consists in exports of their products outside the country. However, it is not possible in the absence of modern laboratories for standardization and certification.

Thus, we think that the most important problems faced by the agro-industrial complex of our country are as follows:

1. Small-scale agricultural production.
2. Underdevelopment of the technologies for growing crops, raising livestock, and processing agricultural products.
3. Lack of processing enterprises.
4. Underdevelopment of the wholesale-purchasing, supply enterprises and the laboratories for product standardization and certification.

Small-scale agricultural production is among the economic problems being differently solved by different countries and in different epochs. The enlargement of small farms through joining various associations, cooperation and integration is the primary solution for this problem, according to the best practices. The problem is as old as time and it is necessary to take into account the achievements and failures of other countries, as well as its own previous path not to be caught in the same trap and to justify the most effective ways in development of the cooperative movement.

We should first clarify some terms to analyze this problem. The terms such as “social division of labor, coordination, cooperation, and combination<sup>115</sup>” are the key notions in our research topic. These notions are important because they characterize the different level of social production enlargement<sup>116</sup>.

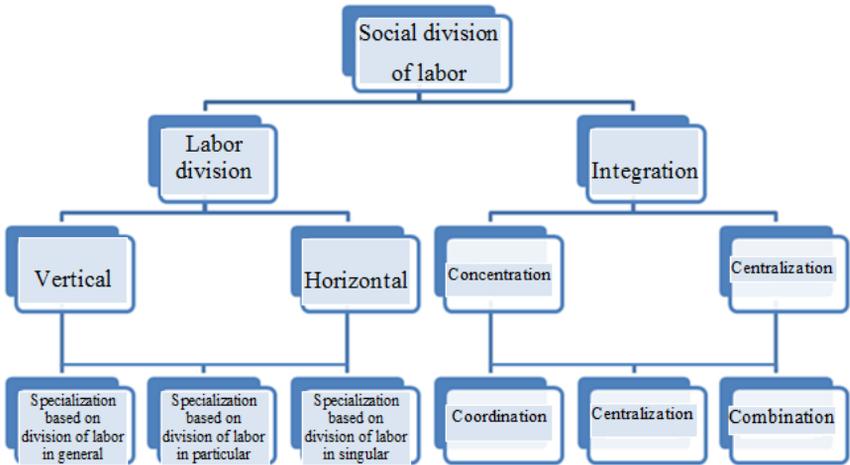
We think that the scheme of the labor social division can be represented, on the one hand, as a process of labor division, specialization of production being integrated into systems at another level, without which social production is impossible. Meanwhile, the processes of coordination, cooperation, and combining are the opposite sides of the labor division.

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<sup>115</sup> Более подробно данная идея изложена в материалах докторского исследования автора «Хозяйствующий субъект и диалектика развития его экономического механизма хозяйствования (на примере АПК КР)» в кн. «Теория и практика экономики переходного периода». Бишкек. Изд-во Илим, 2008 - с. 253-255.

<sup>116</sup> In Soviet science, instead of the concept of "enlarging production", scientists used the term "socialization of production."

**Chart 6.4. Social Division of Labor**



In our case, we are interested in the process of expansion (integration), that is, the right side of the chart. Coordination is understood as coordination of the production divisions' proportions somehow interacting with each other. This is the simplest and most widespread form of communication between units (in our case, these are farm households) without losing independence by the interacting parties.

Cooperation involves a closer form of communication between the interacting parties. This form includes coordination of the proportions and certain cooperation of the interacting parties to create a joint, more efficient production. For example, these are construction of a joint warehouse, processing plant, etc. This form also involves independence of the interacting parties, with the exception of the part that is a component of the joint production.

Combination is a fundamentally different form of relationship between the interacting parties. This is a complete merger (joining)

of independent farm households (state owned farms and collective farms in the Soviet era) on the basis of stepwise specialization to increase production efficiency<sup>117</sup>.

The experience of the national economic complex of the Soviet Union indicates that the effectiveness of the cooperative movement was adopted. However, it was implemented by the means and tools peculiar for the centrally planned economy, which nullified the effectiveness of the cooperative movement.

Excessively centralized economy formed a system where decisions were made by the ministries and departments, focusing on the end result and stimulating more complex forms of cooperation in the agro-industrial production by the legislative methods, rather than by the producers themselves. Finally, the really existing and constantly developing process of specialization and concentration of agro-industrial production received distorted forms of expression. The process of developing the social division of labor was understood as a process of systematically increasing volume of production, in agriculture the predominant focus was on the formation and support of complex production systems. Starting from the 1970's, the economic entities such as agro-industrial associations, inter-farm entities, scientific and industrial associations, agro-firms, agro-enterprises, etc., were widespread in the economic practice of the Republic<sup>118</sup>.

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<sup>117</sup> «Хозяйствующий субъект и диалектика развития его экономического механизма хозяйствования (на примере АПК КР)» в книге «Теория и практика экономики переходного периода». Бишкек. Илим. 2008 - с. 254.

<sup>118</sup>Ibid, - P. 257.

The practice of the agro-industrial production cooperation in Bulgaria, being studied by the author during the internship (1985-86), resulted in the following conclusion: “The level of development of the production forces in the country, the material and technical base of agro-industrial production were not yet ready for the transition to a new level of production socialization. In this context, we can speak about the form outrunning the content: specific forms of the agricultural production organization have outstripped the real process of production socialization. The practice (of Bulgaria) showed that production thereof turned out to be unmanageable. Downsizing of farms was a necessity, and it was carried out (in a given country)”<sup>119</sup>.

Currently, it is necessary to understand the reason for the inefficient co-operative forms of agricultural production organization in the economy of Kyrgyzstan and Bulgaria of the Soviet era. It is important for us not to repeat our mistakes under the conditions of modern economy.

The choice of concrete forms and methods of enlargement (socialization) of agricultural production depends on many circumstances. Among the most important ones is the need to take into account the characteristics of the psychology of the farmers, their dual nature - the worker and the owner. In this context, the voluntary participation in cooperatives, gradual and consistent implementation of cooperation during transition from the simplest

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<sup>119</sup> «Опыт развития АПК Болгарии и возможности его применения в Киргизской ССР», ж. "Известия АН Кирг. ССР", серия "Общественные науки" № 1, 1988г. Фрунзе, - с. 16.

forms of cooperation to more complex ones are the main principles of farmers' cooperation<sup>120</sup>.

Currently, the experience of developed and developing countries indicates that the most common forms of cooperation in agricultural production are the simplest forms that do not result in lost economic independence of the farm households.

For example, nine farmers in the Douglas county of Kansas state (USA)<sup>121</sup>, each having about 500 hectares of plough land, organized a service - Farmland Cooperative, 3 employees thereof are engaged in providing the farmers with all they need for a small fee (due to farmers' contributions). First of all, this is provision of the innovations in the technology of growing corn (the farmers of this district are mainly engaged in corn cultivation). The process of providing technology is organized as follows. The US government allocates funds to the Agricultural Experiment Station and Kansas State University for technologies development. Further, the university donates its innovations to the farmers through the employees of Farmland Cooperative. The co-operative employees are engaged in supplying the farmers with all necessary things (seeds, fertilizers, etc.), organizing and delivering farmers' products to the procuring, processing enterprises, providing veterinary services to their farms, repairing agricultural machinery, etc. Consequently, nine farmers, without losing their self-

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<sup>120</sup> Роль межхозяйственной кооперации в повышении эффективности и интенсификации сельскохозяйственного производства. В кн. «Интенсификация сельскохозяйственного производства в условиях научно-технического прогресса». - Фрунзе, Труды КиргНИИЭОСХП, выпуск I, 1982г. - с.58-59.

<sup>121</sup> Research study was done under Fulbright fellowship in 1995-1996.

sufficiency, organized an infrastructure unit to provide them with the necessary amount of infrastructure services.

The experience of studying the cooperative movement in Sweden<sup>122</sup> shows that the structure of the agricultural production organization is slightly different there. The infrastructure organizations are extremely specialized (some deal with seeds, others with fertilizers, the others with machinery repairs, etc.) in this country. Each farmer, whose land area is much smaller than that of the American farmers, is also a participant of approximately 4 extremely specialized cooperatives.

Such an organization is called an association in the countries of Southeast Asia. When establishing an association, the Taiwanese farmers<sup>123</sup> use the well-proven Japanese system “One town-one product”. For example, in Taiwan, a few dozen farmers whose land area ranges from 0.5 to 1 hectare employ the workers to organize the provision of supply and procurement services, as well as other infrastructure services.

We can see that despite the external difference between the above systems of agricultural production organization, they are the same: agricultural producers unite their efforts and create units (or participate) to organize the provision of infrastructure functions.

The practice of studying the farm households<sup>124</sup> shows that the farmers are not able to process their own products and bring

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<sup>122</sup> Мартынов В.Д. Кооперативное движение в Швеции. Опыт развития кооперативного движения в СССР. – М.: АН СССР, 1991 - с.201.

<sup>123</sup> The author has no chance to see this practice in Japan, however, she has seen it in practice in Taiwan.

<sup>124</sup> По проекту Всемирного Банка «Кыргызская Республика: Развитие частного сектора в сельской местности» в 1999-2000гг.

thereof to the end user. New economic entities exist only at the grassroots level - at the level of the direct producer. Production systems comprising a single chain of interconnected and coordinated enterprises (from the field to the consumer table), which would include all necessary units for processing, supply, servicing, sales, etc., are in the forming stage<sup>125</sup>. Unfortunately, we have to state that this conclusion is still relevant for the late 1990's and for the present.

Thus, the need to take into account the specific features of the farmers' psychology, adherence to the principles of voluntary entry into cooperatives, and finally the positive experience of the cooperative movement in many countries, indicate that such forms of cooperation where the farm households do not lose their independence should be comprehensively promoted.

A predominantly agrarian country cannot resolve the problem of farms without settling the problems of agribusiness under the market conditions, especially in Kyrgyzstan.

As the practice of managing new economic entities of our country has shown, these problems have not been yet resolved to date. A reduction in the volume of gross output and productivity of agricultural production is the confirmation of this phenomenon. For example, if one cow gave at least 3 thousand tons of milk per year in the pre-reform period, currently, this figure has decreased down to the level of 1,500-2,000 tons of milk. Meanwhile, this indicator is at the level of 7 thousand tons or more in the developed countries. Therefore, the gross production output of agriculture

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<sup>125</sup> Мусаева Д. и др. «Кыргызская Республика: Развитие частного сектора в сельской местности» в кн. «Теория и практика экономики переходного периода». - Бишкек. Илим, 2008 - с.211.

during the first two years was characterized by the significant upward trend, however, a sharp slowdown was observed during the following years.

Currently, the agricultural production in the Republic is known to have been slightly stabilized. However, it is impossible to raise prices for agricultural products, to reduce the cost of its production and improve its quality without improving the work of servicing farms.

### **Formation of Industrial Policy in Kyrgyzstan in the Age of Globalization**

The experience of Asian countries shows that an effective industrial policy is the most important factor in the economic development of the countries. The concept “effective” includes such components as the development of an economic mechanism to increase the competitiveness of products with a high share of added value, an active policy to promote the export of domestic products.

The practice of economic reforms begins with institutional transformations. It is primarily necessary to form the main character of the new mechanism - the private sector and the institutions that are necessary for its normal operation. Institutional transformations are the basis for market economy development. The market economy cannot function without developed entrepreneurship and market infrastructure institutions, such as the commercial banks, investment funds, stock exchanges, brokerage offices, and audit services. The formation of the markets system for goods and services, factors of production, and financial markets is an important element of the market infrastructure. The change in the role of the state is an element of the most important

institutional transformations. Its functions in the transitional period are to form a legal (legislative) basis for a new system of management, to implement a transition to market-based methods of regulation by the economy. The institutional transformations also include updating the training system for working in the new conditions. All these institutions are fundamentally new by nature, they do not exist and cannot develop in the depth of the planned economy, and therefore their formation requires a much longer period of time against previous expectations. The experience of the post-Soviet countries shows that the most difficult problem of transformation processes is the formation of the institutional basis of a market economy.

Thus, the institutional transformations consist of the following components:

- Formation and development of private entrepreneurship;
- Formation of the markets system for goods and services, factors of production, financial markets;
- Establishment of the market infrastructure institutions such as the commercial banks, stock exchanges, investment services, etc.;
- Change in the role of the state.

Practical implementation of economic reforms begins with the destruction of the former economic mechanism and the simultaneous formation of the foundations for a new mechanism. As previously stated, the feature of the new economic mechanism is its fundamental difference from the previous one. The market mechanism is an antipode of the planned system and therefore, it involves the destruction of the old mechanism as a first step in the

reforms. In these conditions, the economic basis of the new economic mechanism has to be almost new created. In this regard, the peculiarity of the transformation process from a plan to a market is the need to form and develop almost all elements of the market mechanism.

The practice of the transformation processes of the post-Soviet countries showed, that the process of destruction of the planned mechanism has occurred almost simultaneously in the context of historical proportions. Few in the USSR supposed that such complex and gigantic mechanism as a centrally planned economy could collapse in such a short time and cease to function. Currently, as time has gone on, awareness of the real causes of this process is gradually coming to light. To make decisions, the center must collect information on the production capabilities and needs of all economic entities of the country. The Economic center, as far as possible, tries to develop the most optimal variant of mutual provision and interrelations between economic entities. This center can make a decision only if it receives all the information necessary for decision-making. The ongoing process of economic liberalization results in withdrawal of the newly formed economic entities (the private sector) from this system and cease thereof to be participants in the universal process of collecting and processing the data for the preparation of the national economic plan. The center cannot fulfill its function of economic regulation when the system fails and ceases to operate in any of its individual parts. The practice of the post-Soviet reforms has shown that it collapses like a house of cards in these conditions.

Thus, economic reforms are practically initiated in the post-Soviet countries with the destruction of the old economic

mechanism. The economy of the former Soviet Union was a complex system, the units of which were organized and interacted with each other in a certain way. The national economy of the country was divided into large national economic complexes (transport, energy, heavy engineering, etc.), industries, various kinds of associations (production, research and production, etc.), and individual enterprises. The relationship between them was implemented through a single economic center.

The economy cannot function effectively if its components and units do not act in concert, in a definitely regulated, interacting single system. The former production and economic interrelationships of the partner entities start collapsing amid destroyed former economic mechanism. Finally, there are failures in the sale of products, in the receipt of the necessary components supplied by the partners to continue production. The malfunction is observed in the mechanism of communication between the partner entities, it inevitably results in a decrease in the efficiency of production.

The process of losing the sales markets between the partner entities is aggravated by the political disintegration of the country. The appearance of the independent countries on the map as a consequence of the USSR collapse results in the introduction of customs restrictions and the destruction of a single economic space. It's one thing when the partners work according to the rules of one country and it's quite another when they interact according to the rules of different countries. The destruction of the common economic space and the establishment of the customs restrictions had a negative impact on the economic and production ties of the partner entities. The economic relations between the partners

currently located in different countries have become unprofitable. First of all, this concerns such small countries as Kyrgyzstan, which were forced to cross several customs barriers on their way to their partners. Customs restrictions, bribery at the borders resulted in the destruction of old economic relationships with the partners.

Liberalization of the economy contributed to open borders and the producers in the post-Soviet countries experienced competition from the foreign companies. Finally, many Soviet goods could not stand competition and became uncompetitive.

Thus, the reasons for the disintegration of the old economic ties between the partner entities begin with the following processes:

- Destruction of the old economic mechanism;
- Destruction of the common economic space and introduction of customs restrictions;
- Loss of the sales markets;
- Non-competitiveness of the products.

All these difficulties could be foreseen. The following was supposed to be done in the course of the reforms: the economic reform was supposed to allow the formation of a new class of producers, which, due to the private interest, would be effective producers to be able to overcome the weaknesses of the state enterprises and would be able to ensure the economic recovery. However, it did not happen, or did not happen within the timeframe expected by the authors of perestroika.

The real process of the economic transformation in Kyrgyzstan was started in 1992 after the Republic gained independence as a result of the Soviet Union disintegration (1991).

By that time, the Government had developed and began to implement a program of economic reform, the first stage of which was designed for two years. The essence of the activities of this program was the most drastic changes in the direction towards a market economy. Its main components were as follows: the program of state property privatization and the program of anti-crisis measures. Inflation, a decline in production, a decrease in the standard of living of the population, an increase in unemployment rate are all typical features of the crisis that the Republic had to experience and much of which it continues to experience.

A state property fund to deal with privatization issues was formed in the Republic. In December 1993, the first stage of the privatization program was completed. Approximately 35% of the state property was privatized for two years of its activity. Over 40% of this amount is in industry, 23% - in housing, more than 93% - in consumer services, more than 72% - in trade and public catering, 34% - in agriculture, 56% - in construction and more than 18% - in transport. Various forms of privatization were used: rent with subsequent redemption of the state property, share ownership of property, sale on a competitive basis, redemption in collective ownership.

You can see that significant results were achieved. However, this process had its own weak points. Less than 1% of GDP accounted for the private ownership (excluding the housing sector, where the private ownership constituted more than 12%) in the national economy.

Several measures to stabilize the economy are among the anti-crisis measures. They primarily included a tight credit and financial policy and a number of government measures to

strengthen social protection of the population. The introduction of own national currency – Kyrgyz som is among the main components of the new financial policy.

The structural adjustment program, intended for three years (1994-1997), is the next stage of economic reforms.

Basic principles of the new phase are as follows:

- open economy, its orientation to integration with the economies of other countries;
- development of competition as an important factor in stimulating economic activity;
- introduction of the “bankruptcy” mechanism, a consistent reorganization of loss-making and inefficient enterprises;
- reducing the budget deficit, which will reduce the burden of taxes, the level of interest rates to recover business activities;
- further improvement of the banking system, financial structures and development of the financial infrastructure, oriented to work with small businesses.

Creation of the investment funds and other financial organizations;

- providing guarantees for foreign investors and supporting the ties of the “national small business” with the foreign business communities.

In November 1995, it was stated at the meeting held by the Government of the Republic, that certain results had been achieved in the implementation of the Comprehensive Program. As of August 1, 1995, 5,631 state facilities were privatized (56.3% of their total number); 86 closed joint-stock companies were transformed into the opened joint-stock companies. The rate of

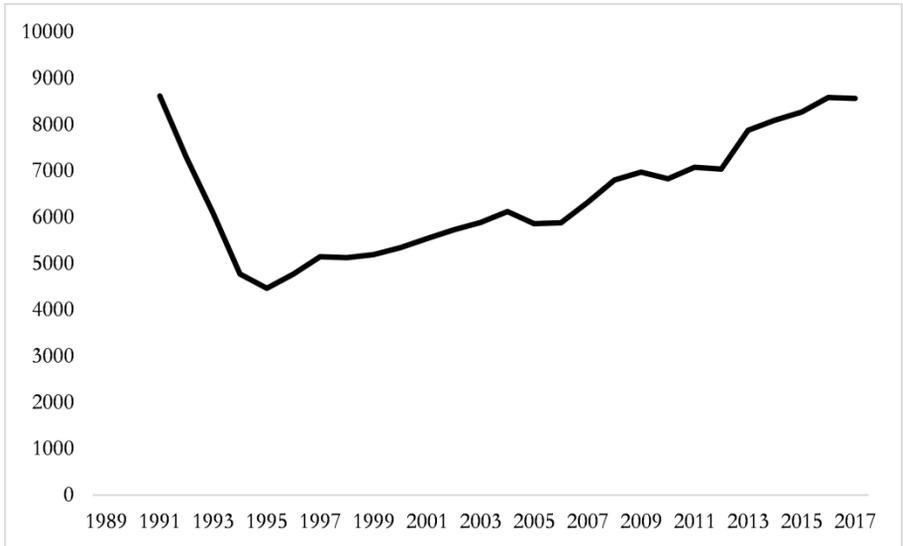
inflation since March 1995 did not exceed 1.5%, and in June it was 0.4%, the national currency rate was stable.

The pace of diagnosing enterprises under the PESAC program accelerated, the implementation of the AREAS program was launched in cooperation with the International Development Agency (MAP), this program involves de-monopolization and privatization of the state enterprises in the processing industries of the agro-industrial complex.

And yet a lot has not been done. It was noted at the meeting of the Government of the Kyrgyz Republic held in January 1996 and devoted to the analysis of the results of 1995 that even the enterprises that changed the form of ownership could not get out of the crisis. Among the reasons were as follows: low product competitiveness, weak market knowledge, and inefficient management.

Anyway, during this period it is already possible to say that a private producer is the main economic subject of the economy. However, the results showed that there was no significant improvement in the production efficiency of the country's economy, despite the growth in the share of the private sector. Thus, GDP per one employed person in the country's economy (see Chart 6.5) has not yet reached the level of 1991 within the entire post-reform period.

Chart 6.5 GDP per One Employed Person (USD for 2011 according to the PPP)<sup>126</sup>



We can say that the main goal of the reforms - the formation of an effective private producer - has not been achieved yet. Many large and medium-sized enterprises being the basis of the economy have not fundamentally become the effective private producers. The forms of privatization were chosen in our Republic that resulted in transformation of the large state-owned enterprises into the joint-stock companies where the majority stock holding remained in the hands of the state. The term “denationalization” was chosen for this form of privatization. It meant the transformation of a state-owned enterprise into a joint-stock company, while preserving state ownership of the entire stock holding, i.e. transformation into a joint-stock company where the majority stock holding remained in the hands of the state. Namely, 217 plants and factories (77.5%)

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<sup>126</sup> World Bank database.

of the 280 privatized enterprises were transformed into the joint-stock companies, 31 industrial enterprises were completely transferred to the labor collectives<sup>127</sup> at the end of the first stage of the state privatization plan (1992-1993). What does it mean to transfer the enterprises to the hands of the labor collectives? It practically means that the owners of the enterprises become managers of these enterprises. The term “red directors” is usually used to characterize this category of managers. First, they are specialists in the planned economy and do not have current management expertise to work in the market economy. The negative side of this privatization form is that the business leaders are not interested in management replacement, i.e. they cannot dismiss themselves and find effective managers for their enterprise. Moreover, they generally do not have their own funds and do not know how to attract donors for investing in their enterprise for structural reorganization and modernization of production. Consequently, they do not have real opportunities to improve production efficiency.

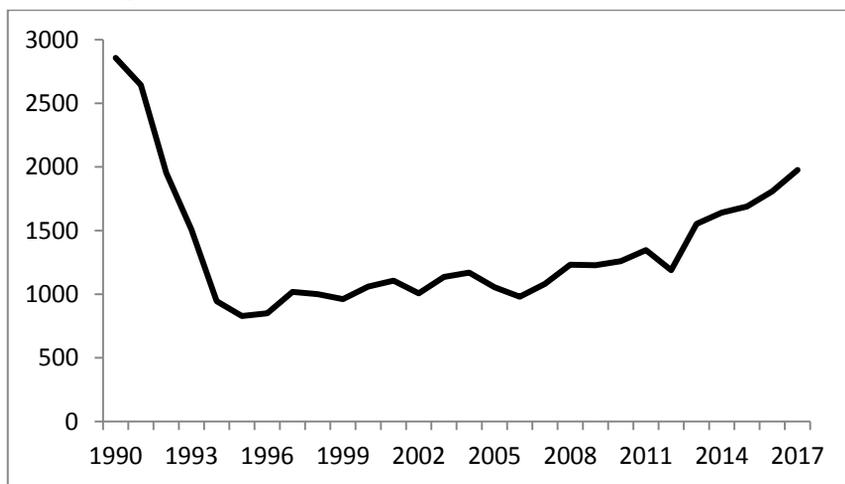
Generally, we can conclude that the economy of the country was in a crisis state during the first years of perestroika and the Government implemented actions to provide survival. One can agree with the conclusion of the domestic researcher S. Yermekbayeva that: “The economic crisis caused the main damage to industrial production during the first years of independence of the Kyrgyz Republic. In 1995, the volume of industrial production was only 27% of the level achieved in 1990. The country turned into the agrarian and raw materials producing country from the

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<sup>127</sup> Marek Dabrowski. Working paper. Economic Reforms in Kyrgyzstan. CASE. p.12.

agrarian-industrial one”<sup>128</sup>. The situation in the industrial sector of the economy was even worse. Chart 6.6 shows that the level of GDP in industry in 2017 has not yet reached the level of 1990. Steady development was not observed in many sectors of the industrial complex in the Kyrgyz Republic. Development was unstable and impulsive in many industries; an increase in the production outputs was replaced by a decrease thereof. In 1990, the share of manufacturing industries (including processing ones) was 81.6%. However, in 2002, this indicator decreased down to 30.8%. The change in the structure of production indicates that there is a sharp reduction in the share of manufacturing industry and an increase in the share of the mining industry. This trend is characteristic of underdeveloped countries.

**Chart 6.6. GDP Dynamics in the Industry of Kyrgyzstan**<sup>129</sup>  
(including construction, constant 2010US\$, mln.)



<sup>128</sup> Ермекбаева С. Промышленность Кыргызской Республики и экономический рост. ж. «Экономика Центральной Азии». с.496.

<sup>129</sup> World Bank database, 2018.

In 2016, the structure of industrial production by forms of ownership (in percent) is as follows:

**Table 6.2. Industrial Production Output and Number of Workers by Forms of Ownership, 2016 (in % to the Final Result)<sup>130</sup>**

	Share		
	In the total number of enterprises	In the total industrial output	In the total number of workers
Whole industry	100	100	100
Including by forms of ownership:			
State-owned	7.4	1.8	9.6
Private	92.7	98.2	90.5

We can see that the industry of Kyrgyzstan is almost totally represented by the private sector; however the current economic results of this sector do not satisfy anyone in the country. What happened to this branch of the economy?

Underdeveloped private sector was unlikely to be the reason for the former economy weakness. In modern conditions, developing private sector cannot become an effective producer due

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<sup>130</sup> Промышленность Кыргызской Республики 2012-2016. - Б.:Нацстатком Кырг. Респ., 2017. – 330с.

to the objective and subjective reasons. The economic situation in the country is practically the same as in other countries of Central Asia, which did not have a market stage of development in their past and could not learn from their neighbors (they were not in the neighborhood with the countries with developed market economies). However, unlike the countries with the same level of development as China, Kyrgyzstan was unable to form an effective strategy of action that would transform the policy of supporting the domestic enterprises into a national idea. Finally, the enterprises that were quite competitive under the conditions of the Soviet economy turned into uncompetitive ones in the conditions of opening the borders. Finally, the domestic producers lost their markets for the products of such industries as defense industry, electrotechnical (electric bulbs), electronics (silicon semiconductors), engineering (pickup baler), professional equipment, and light industry. The north of Russia, where the domestic producers could sell fresh and canned fruit and vegetable products, also became inaccessible, and a new competitive production, with the products to bring the country to the world market, was not developed. It is not a surprise that the country from the importing economy turned into the exporting one.

Unfortunately, the experience of economic reforms in our country shows that it is an extremely complex process, and it requires a much longer period of time than we expected. The most difficult problem of the economy is the lack of expertise and skills to conduct production in a competitive environment.

Lack of expertise refers to the microlevel, i.e. the level of the economic entity, and to the macrolevel, i.e. the level of government agencies involved in regulation of the transition

economy. The ministries and departments of the country have not yet learned how to regulate the economy due to lack of expertise, they believe that the private commodity producers do not need their affairs to be interfered in, dealing with tactical tasks. Finally, they do not take into account the main thing - the solution of strategic tasks, i.e. the solution of the most important problems the economy faces.

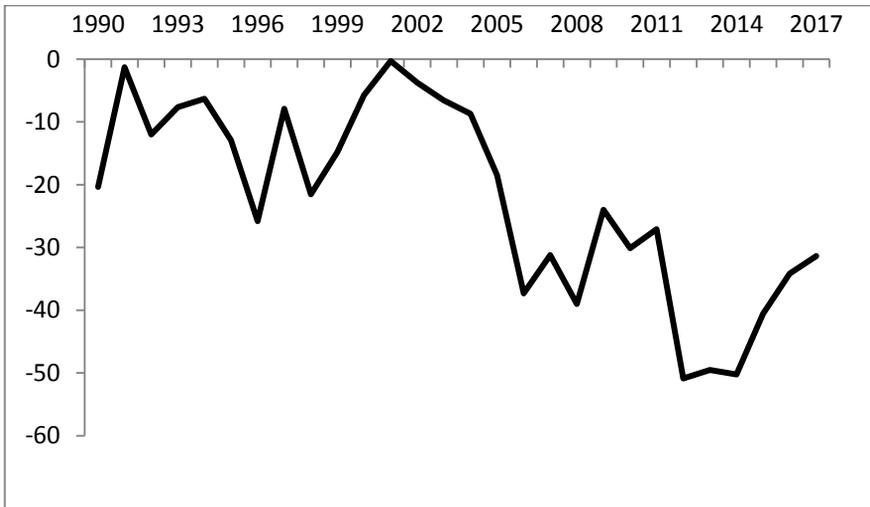
The second, equally important problem of the domestic economy, which in its turn results from the first, is the negative consequences of the phenomenon “open economy”.

Development of the world economic relations and formation of the world economy is an objective law and the improvement of the people’s welfare in the countries participating in this process is generally the result of this phenomenon. The thesis that the smaller the size of a country’s economy is, the more benefits it receives from involvement in the world economy is among the statements of the modern economic theory. Unfortunately, the transition economy of our country, due to the lack of expertise to function in the market economy, could not take advantage of participation in the world economic relations and aggravated the situation of the country after liberalization of the foreign economic relations. The experience of Kyrgyzstan shows that the countries without developed market relations, where the economies are not able to produce competitive products, experience the negative effect of borders opening.

Involvement in the world economy is implemented in the form of developing the following world economic relations: the international movement of goods and services, the international movement of production factors (international capital flows, international labor migration, international technology transfer, and international economic integration).

The international movement of goods and services means that each country participating in the process of global economic relations expands the market to sell its products and services at the expense of the world market, and has the opportunity not to produce what it is more profitable to buy in other countries. However, due to a lack of expertise, our economy was not able to produce competitive products and finally could not find its niche in the world market. On December 20, 1998, the Kyrgyz Republic became a member of the WTO. Having received assistance and support of the international organizations, our country, due to its non-competitiveness, could not export its goods abroad and gave a significant part of its domestic market to other countries. The results of this process are most clearly seen in Chart 6.7, where the picture of foreign balance of trade in Kyrgyzstan is given.

**Chart 6.7. Foreign Trade Surplus (in % to GDP)<sup>131</sup>**



<sup>131</sup> World Bank database, 2018.

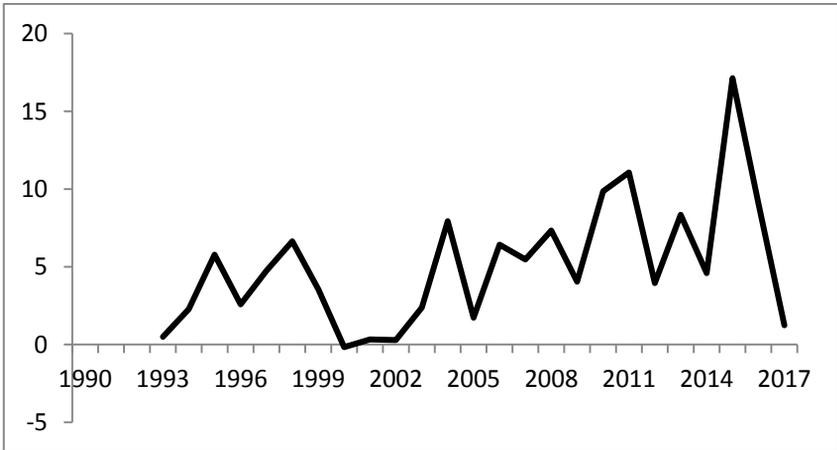
The chart shows that the foreign trade surplus of Kyrgyzstan is negative, i.e. the country's imports exceed exports.

The next form of the world economic relations is the international movement of capital. The best practice shows that many countries (European countries after World War II, Japan, Taiwan, China, etc.) have achieved economic growth of the national economy by attracting foreign investment.

The international corporations export their funds to other countries to use capital more effectively abroad. Foreign investment is primarily additional investment for the host countries. Moreover, it is an opportunity to use advanced technologies, modern management and marketing. Therefore, the use of foreign capital (especially in the form of foreign direct investment) is, with some exceptions, a factor that stimulates the economic development of the host country.

In the transition economy of Kyrgyzstan, this form of international capital flow was developed at the beginning of the transformation process mainly in the form of grants and loans to finance economic transformations. Foreign direct investment has not been developed up to the present day. The dynamics of the FDI net inflow is given in Chart 6.8. The reason is quite trivial - the economy of Kyrgyzstan has not yet created the most favorable conditions for direct foreign investment, without which the transnational companies will not come to the economy.

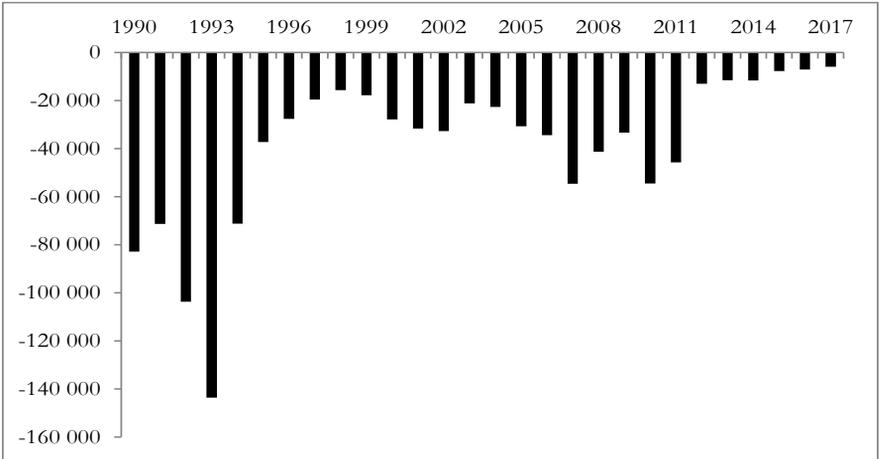
**Chart 6.8. Net Inflow of FDI to GDP (%)**



Migration of the labor force, being a natural consequence of liberalization of the world economic ties, has various consequences for different countries. Developed countries receive an additional factor of economic growth in the form of the possibility of attracting a highly skilled workforce from underdeveloped countries without spending money for training thereof, the so-called “brain drain”: highly qualified specialists seek a more profitable application for their knowledge and experience, which is sure to be higher in the developed countries.

Chart 6.9 shows that this process was developed in our country - a large outflow of labor from the Kyrgyz Republic is characteristic of the 1990's. During this period the representatives of the German, Jewish, Russian, Kyrgyz nationality, etc., who had a higher educational qualification, left the country.

**Chart 6.9. Migration Outflow (-) of the Population<sup>132</sup>**



A massive outflow of the titular nation began in the 2000's because the country was unable to improve the economic situation, to save the old and create new jobs. Many of the leaving migrants, as practice shows, do not have the necessary qualifications and education and therefore the process of their adaptation in other countries is much more complicated. Finally, Kyrgyzstan, by spending money on specialists training (teachers, doctors, engineers, nurses, etc.), is experiencing an acute shortage of specialists.

The international transfer of technology is generally understood as the interstate transfer of scientific and technological achievements. This factor of economic growth is among the advanced factors of production in modern conditions. The best practice shows that the differences in the level of production technology predetermine the differences in the level of economic development.

<sup>132</sup> As per National Statistical Committee of the Kyrgyz Republic database.

Kyrgyzstan is among the countries where, according to A. Kireev, the level of general technological development may be an obstacle to its transfer. Social, cultural differences and gaps in the general educational level between the countries that prevent the workers from less developed countries from mastering and applying the latest technology, the differences in approaches to the management and implementation of the technologies can also be an obstacle for progressing to the international level<sup>133</sup>. The low technical level of Kyrgyzstan does not allow the economy of the country to ensure the production of competitive products.

Liberalization of the world economic relations results in development of the international economic integration. The goal of the integration processes development is to take an advantage of the united market, to create favorable external conditions for the development of the country, and to support the domestic real sector of the economy. Unfortunately, the foreign economic integration processes in Kyrgyzstan cannot be characterized as a factor contributing to the economic development of the country. The economy of the country was an integral part of the unified national economic complex of the USSR in the pre-perestroika period. Kyrgyzstan had close economic relations with Russia and neighboring Central Asia countries.

The existing economic ties broke due to the transformation processes, which naturally resulted in an economic recession in all countries. In subsequent years, these ties were not restored, moreover, the level of integration relations with neighboring Central Asia countries even decreased, thereby contributing to the economic development of the partner countries.

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<sup>133</sup> Киреев А.П. Международная экономика. В 2-х ч. – Ч.І. Международная микроэкономика: движение товаров и факторов производства. – М.: 416с., стр.357.

The country's entering the World Trade Organization was a new phenomenon in the foreign economic relations of Kyrgyzstan. However, the domestic producers until now cannot compete with the producers of other countries, cannot integrate, find their niche in the world economy and are gradually climbing down. Such situation primarily affected the products of industry and agriculture. The domestic products turned out to be unable to compete with the foreign analogues even in the domestic market. It is not a simple task to find one's place in the international differentiation of labor, and, therefore, to find a niche in the world market.

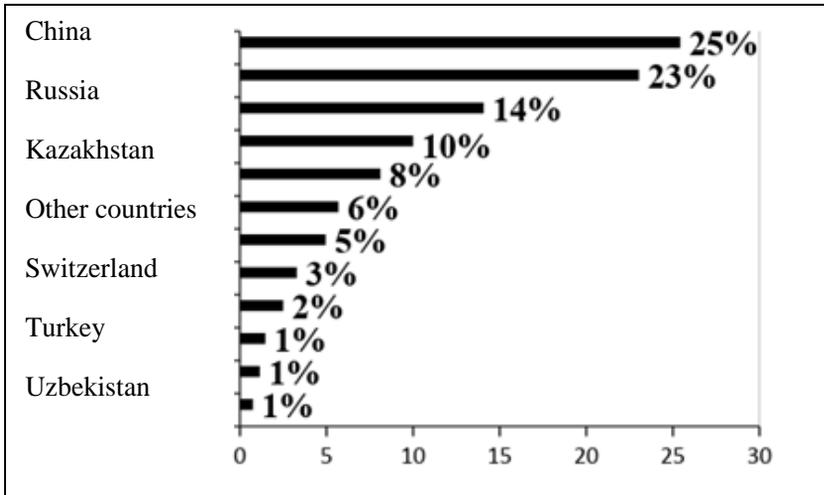
Thus, the transition economy of Kyrgyzstan could not take advantage of the opportunities offered by the process of involvement in the world economy, and therefore was in retreat almost in all areas of global economic relations due to the lack of knowledge and inability to function in the conditions of the market mechanism of management, i.e. due to objective conditions.

Globalization of the world economy stimulates development of the integration processes. The geographical, cultural, historical, socio-economic and political prerequisites are among the driving forces of integration processes. There is a certain fading of integration ties with the former and the establishment of ties with the new partners due to involvement of Kyrgyzstan in the integration processes, establishment and strengthening of the new economic relations with the foreign countries. The question about the nature of the integration processes corresponding to our national interests naturally arises in these conditions.

The economic science claims, and the world practice confirms that development and strengthening of the relations with neighboring countries is the priority of integration ties for any country. Priority for our country is the strengthening and development of the foreign economic relations with our strategic

partners. The countries of the Customs Union, which account for the bulk of the trade turnover of the Kyrgyz Republic - 39%, are such partners for our country<sup>134</sup>.

**Chart 6.10. Country-Specific Foreign Trade Turnover of the Kyrgyz Republic in 2017 (in % to the Final Result)<sup>135</sup>**



Strengthening and development of the world economic relations with the new partners, the foreign economic relations with which have been developed (thanks to entering the WTO) in the recent years, is the priority for our country. This group of countries includes China (25%), Switzerland (8%), Turkey (6%), etc.

We believe that Kyrgyzstan should continue strengthening and developing the integration ties with Central Asia countries and with the Customs Union countries, its strategic partner, continue developing relations with the new partners having a significant role in the trade turnover. Restriction of the foreign economic relations in any of these areas will do an irreparable damage to the interests of the country.

<sup>134</sup> Based on UN Comtrade Database, 2018.

<sup>135</sup> Ibid.

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## **CHAPTER 7. FORMATION OF THE ECONOMIC DEVELOPMENT STRATEGY UNDER THE GLOBALIZATION CONDITIONS**

### **Main Components and Economic Mechanism of Development Strategies in the Developing Countries**

Each government of the country having come into power starts from developing an action program to provide success. A study of the economic recovery programs of the governments in many countries and of several governments in our country shows that most of them develop the strategies or the development programs consisting of many components where everything is apparently correctly stated, however, they do not result in the desired goal. What's the reason for it?

World practice shows that very few countries succeed in achieving their goal. In this regard, we can draw a logical conclusion: this is an extremely complicated issue and therefore requires a special concentration of effort and knowledge.

A strategy is understood as a general, not detailed plan for any complicated goal, covering a long period of time when there are not enough available resources to achieve it. The essence of the strategy lies in the effective use of available resources to achieve the main goal.

The strategy does not replace the program for economic development in the country. It is a plan to achieve a specific complex task requiring a lot of resources and efforts. Other way of saying, it helps to achieve the desired goal with minimal effort. The solution of this task requires concentration of efforts and determination of the most rational, effective ways of achieving the set goal.

So, the first step in developing a strategy is to determine the goal that is expected to be achieved. The goal here should be

qualitatively and quantitatively determined to be able to determine the degree of its achievability.

The next component of the strategy is the definition of development factors contributing to realization of the set goal. The economies that consistently and steadily, despite the difficulties standing in their way, rely on the current factors of economic development defined in Chapter 4 of this study succeed in achieving their goals. Studying the economic management practice in the underdeveloped countries shows that they often do not fully understand the significance and role of modern factors of economic development and therefore do not give all their power and energy to realization thereof. Many of them believe that it is initially necessary to support traditional sectors and industries, to start with what the economy has resources and skills for, and thereafter to set higher goals. We think that this is the main mistake, as following the traditional economic principles results in slowdown of economic development compared to other countries.

An example of the German economy after the World War II can serve as a confirmation of this idea. The plants and factories destroyed during the bombing represented the post-war economy of this country. The German government faced with the issue of whether to rebuild bombed enterprises or build new ones and rebuild old ones, focusing on the introduction of new, advanced technologies. The government of the country chose the second way and, as the course of history showed, it made the right choice. This decision allowed the economy of country to restore and to become competitive again and, moreover, to outrun the western economies in development.

A study of the Global Competitiveness Index 2016-2017<sup>136</sup> published by the analytical group of the World Economic Forum

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<sup>136</sup> The Global Competitiveness Index 2016–2017, World Economic Forum, 2016.

(WEF), indicates that the underdeveloped countries are at the end of this list; they failed to provide production of competitive goods and are engaged in the production of goods with a lower level of added value.

Many developing countries, having failed to implement agrarian reforms, rely on industry, and, generally, on mining industry, since this is much easier. The study of the economic management practice in the underdeveloped countries shows that it is very difficult to achieve successful steps in the economic recovery without successful agrarian reforms, since the majority of the population, i.e. its poorest part, in these countries resides in the countryside and it is not possible to improve the overall living standard of the population in the country without progressive changes in the rural areas.

The choice of the industry (mining or processing) is in fact of great importance for economic growth and structural changes, since technological opportunities in different sectors are significantly different. Diversification of the economy in favor of the manufacturing sector contributes to achieving high growth rates, longer periods of growth and lower volatility thereby supporting growth in the long term. Meanwhile, many underdeveloped countries rely on the mining industry, on the development of such traditional industries as trade. The United Nations Industrial Development Organization (UNIDO) with the function to promote industrial development and international industrial cooperation, in its report for 2016 states that: “Premature deindustrialization suppresses the potential for economic development by limiting the use of technology in production and resulting in low labor efficiency and the development of the informal services sphere, while deindustrialization at the mature

stage of the processing industry often results in the development of a dynamic service sector based on high technologies”<sup>137</sup>.

The economic and financial instruments are the important components of the goal achieving mechanism.

**Chart 7.1. Main Components of the Development Strategy**



The most difficult process in development strategy formation is generation of a mechanism and specific tools for achievement thereof. The specific types of support for implementation of the goals set are identified, and the necessary financial means are allocated for it in the course of any strategy development. The

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<sup>137</sup> Отчет ЮНИДО о промышленном развитии, Роль технологий и инноваций во всеохватывающем и устойчивом промышленном развитии, Обзор – 2016.

most important principles of the strategy implementation mechanism should be as follows:

- the specificity and targeting of any type of support,
- personal responsibility of the participants,
- transparency and control at all levels of strategy implementation.

The experience of successful countries shows that among the economic instruments for strategy implementation are as follows:

- software development
- project financing
- transparency at all stages of strategy implementation.

**Software development.** As noted above, the goal of the strategy is a complex task that requires significant efforts and resources. When implementing the strategy, this goal should be broken down into several specific clearly defined target programs, to provide conditions for identifying executors, possible forms of support for its implementation, and calculating the amount of necessary financial resources. For example, if the goal of the strategy is to increase the competitiveness of the domestic economy, the specific programs for its implementation can be as follows:

- Support of domestic producers manufacturing competitive products.
- Attraction of foreign direct investment (FDI) aimed at introduction of the innovative technologies.
- Support of activities for standardization and certification of products, etc.

**Project financing.** Project financing is a new section of finance that has been widely used in the west in recent years. This term is generally understood as the financing of investment projects, when

the cash flows generated by the project are used as the source of debt service, this is a method of attracting long-term debt financing through financial engineering.

The design is generally understood as a system, where the state institutions, organizations, and business structures formulate the projects to implement the programs and to allocate necessary funds for implementation thereof. The authorities administering these programs organize an open competition, where the executors' teams take part on a competitive basis. The goal of the system is to develop the projects being necessary for the implementation of the strategy, and to attract the executors who have the best opportunities for implementation of each project. Targeting, personal responsibility, and transparency are the important components of project financing, since executors have to report for each invested financial unit.

To implement, for example, the program "Support for Standardization and Product Certification Activities", two projects can be proposed (as they are performed by different executors):

- Project "Support of Activities for Preparation of Regulatory and Legal Acts for Products Standardization and Certification".
- Project "Support of Activities of the Enterprises involved in standardization and certification of products".

The contest organizers must possess knowledge about the types of support and the amount of funds, in addition to the executors' own funds, necessary for the projects implementation to allocate funds for each project.

**Transparency and control** at all levels of strategy implementation are provided through the use of project financing. The executors and administrators of structure projects (specialists) report on each of their actions, including movement of the financial resources related to the project, and therefore this system is much more effective than the distribution among the existing systems.

**Financial instruments.** Implementation of the development strategy requires significant investment of financial resources. Underdeveloped countries are not sufficiently provided with such funds. Moreover, the business entities are not interested in implementing strategies, since this is associated with significant risks the commercial organizations will not take. Under these conditions, it is necessary to regulate the financial system by the government for mobilization of all available funds and to create the conditions for such funds involvement in the development economy. The state support (allocation of funds by the state to the development economy), support of the financial commercial organizations with their participation in the development strategy (the state assumes payment of interest on such loans), etc. are the most important financial instruments of the development strategy. Formation of non-commercial investment funds with the involvement of private capital having a target value is among the important tools to mobilize funds for the development economy. The world practice shows that such funds render essential assistance to the economic recovery in the country. The attraction of commercial financial institutions to work with domestic producers is one of the important tools to support competitive production. Creation of the friendly environment for foreign direct investment and various types of venture funds is an important form of attracting foreign investment funds.

## Main Stages for Development Strategy Generation

We will try to consider possible steps based on the example of the economy in Kyrgyzstan to assist in strategy generation for the economic growth of a developing country.

Thus, the strategy generation begins with the identification of the goal and objectives to achieve it. Economic security provision can be such strategy for the developing countries, which became independence less than three decades ago and have still been experiencing establishment difficulties. Many developing countries define sustainable development as a development strategy in order to improve the population's welfare. Taking into account the importance of competitiveness in the present-day world, a number of countries often determine the achievement of competitiveness by the domestic products as a strategic development goal. Let us take one of the goals as an example and try to determine further steps to develop it for the purpose of understanding the possible steps to implement the development strategy. Let us define the following as a goal: **“Sustainable economic development to improve the population welfare is a strategic goal of the economic development in Kyrgyzstan”**.

Development of economic growth points in accordance with the factors of economic development is the next stage in the strategy formation. The strategy developers must determine the points of economic growth and have their own vision of promising directions, the implementation of which should ensure sustainable economic development, before rendering support to any manufacturers using the available economic and financial instruments. The strategy developers should justify scientifically grounded directions of the development in the domestic economy to ensure, first, an increase in the level of competitiveness of goods

and services with high added value, and second, to substantiate and determine the main directions for solving the problems being faced on the way to achieving these tasks.

The solution of the first task, being defined by us as the development of promising directions, which should ensure sustainable economic development upon implementation thereof, in our opinion, represents the most difficult problem that underdeveloped countries cannot identify and therefore lose competitive struggle with more developed countries. The essence of the problem is that underdeveloped countries do not fully understand the need to define a target for the production of competitive products as a strategic goal and focus on the types of production that have traditionally been produced and for which there are resources, however, having realized the need to search for new products to be focused on under the conditions of globalization, they do not know how to do it, because underdeveloped countries do not generally have the means and opportunities to develop new technologies, to prepare highly qualified specialists who could develop new types of products to be of a great demand in the domestic and global markets. The results of the latest researches in this direction can assist the specialists in these conditions. As the world practice shows, the countries, with the experts constantly working to improve their skills, succeed in achieving their goals, they know and can realize the latest achievements of modern economic science. In our opinion, the results of multi-year research carried out by the scientists Ricardo Hausmann (Harvard University) and Cesar Hidalgo (Massachusetts Institute of Technology) are among the

modern researches that can provide effective assistance in solving this problem.

The scientists have published a number of articles<sup>138</sup> where they qualitatively and quantitatively substantiate the theory of choosing the types of goods that provide the developing and successful economies with comparative advantages, enable the countries to acquire new production opportunities. According to their point of view, the countries producing the same set of goods stop growing. Only the countries that do not produce the same set of goods can develop, and as the country develops economically, it introduces changes in the set of goods.

The authors introduce the concept of complexity of production and of the production system of the country as a whole. Namely, rarer products requiring high technological and material investments have a higher index of economic complexity. Accordingly, a country with a large share of exports consisting of highly complex products has a high index of economic complexity, and vice versa. Thus, they ranged 5,107 types of products and 124 countries over a 50-year period and determined that economic complexity “explains” 75% of the difference in income between countries. They also state that this indicator is an effective tool for forecasting the dynamics of future economic growth.

Moreover, they offer a unique method for determining new types of products, taking into account the complexity and

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<sup>138</sup> Hausmann R., Hidalgo C., et al., *The Atlas of Economic Complexity: Mapping Paths to Prosperity*, 2011;

Hausmann R., Hidalgo C., *The building blocks of economic complexity*, PNAS June 30, 2009.

production capabilities of the country, which will allow achieving accelerated rates of economic growth. The idea is to offer new kinds of products that require similar or close production knowledge and skills that countries already possess. Having analyzed the production structures of different countries over a long period, they grouped the goods according to the probability of joint production and admitted that certain groups of goods require certain skills and knowledge. In accordance with this approach, it is possible to calculate a group of types of goods that diversify exports and stimulate the production of goods ensuring sustainable economic growth.

It is interesting to justify the strategy of export growth and diversification of the countries<sup>139</sup>. There are export strategies for the regional and global markets depending on the specific features of the country's limiting factors, as well as the realities and needs of the importing markets themselves. For example, the analysis of the strategy of entering the foreign markets for Rwanda is presented in Chart 7.2. The main constraints for Rwanda are as follows: small-scale agricultural production due to the lack of land; weak infrastructure and very low production knowledge. Thus, the objective of the export strategy is to increase the economic complexity of the country, taking into account these constraints.

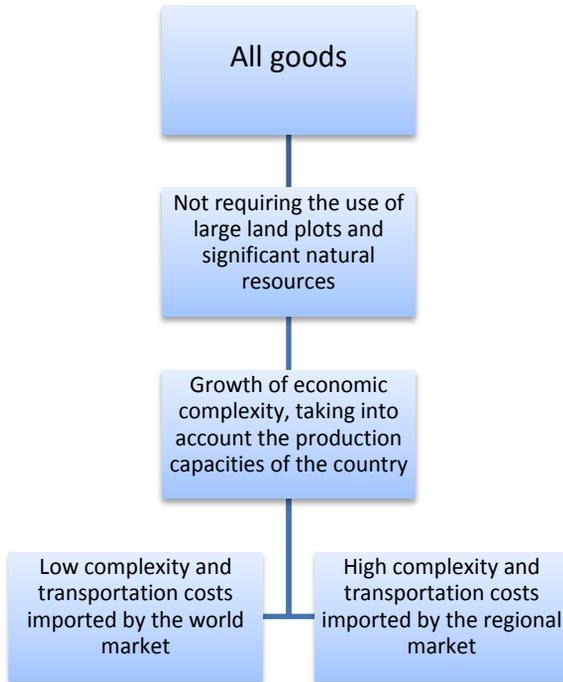
The strategy for entering the world market for Rwanda consists in offering the goods with relatively low economic complexity and low transportation costs due to long distances and the lack of current advantages in the production of goods with high

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<sup>139</sup> Hausmann R. & Chauvin J., *Moving to the Adjacent Possible: Discovering Paths for Export Diversification in Rwanda*, 2015.

complexity. At the same time, the neighboring countries of Rwanda are the strong importers of more complex products, so Rwanda can become a supplier of more complex goods demanding relatively high transportation costs to the regional market.

**Chart 7.2. Strategy of Export Growth and Diversification for Rwanda<sup>140</sup>**



Kyrgyzstan is the 64<sup>th</sup> among 126 countries in terms of economic complexity with an index of -0.046<sup>141</sup>, so the main export items of Kyrgyzstan have a negative complexity. Kyrgyzstan has a comparative advantage in 142 positions out of 704 export

<sup>140</sup> Там же, - с. 14.

<sup>141</sup> The Observatory of Economic Complexity of MIT, data for 2016.

positions<sup>142</sup>. The main categories of goods with a high comparative advantage are as follows: minerals, agricultural products, rocks and glassware, textile and accessories, the total share thereof is 70% in the total exports of Kyrgyzstan.

**Table 7.1. Export of Kyrgyzstan According to the Revealed Comparative Advantages (RCA) by Sectors (Level of Disaggregation - FEACN Commodity Items), 2016**

No	Sector	RCA number	Sector RCA	Share of RCA products in the sector	Export	Share in the total export
1	Minerals	11	109	98	199,806,528	19
2	Textile and accessories	26	5.1	63	57,713,044	5
3	Vegetables, food products and timber	46	3.3	88	130,775,088	12
4	Rocks and glassware**	12	3	99	351,425,760	33
5	Vehicles	4	1.3	8	89,922,000	8
6	Metals	14	1.1	7	71,265,584	7
7	Chemical products, plastic	15	0.6	4	37,240,108	3
8	Mechanical equipment, devices and reactors	10	0.6	6	65,163,968	6
9	Electronics	4	0.4	2	23,460,672	2

<sup>142</sup> Based on World Integrated Trade Solution (WITS) of the World Bank database.

We see that Kyrgyzstan has a comparative advantage in the production of goods with low level of complexity. We think that this is the main problem of the domestic economy with the low incomes of the workers and employees, entrepreneurs, and the state being a natural consequence of it.

Modern studies show<sup>143</sup> that the small countries exporting goods with low added value or low economic complexity fall into the trap of a lower commodity. That is, it is extremely difficult for such countries to reach a new technological level in the context of globalization and tough global competition; they “preserve” their position as resource providers for more developed countries. Of course, in this situation we need to use the methods of R. Hausmann and S. Hidalgo, and to determine the sets of goods that will allow our country to reach a new level of economic complexity. This objective is priority for the authors of this study, who plan to publish the results of calculations using this technique in the next article.

One of the important factors affecting the economic development of the country’s economy is its involvement in integration processes. As noted earlier, the effect of this process on the underdeveloped economies can be very different. In the globalized world economy, the truth of life lies in the fact that underdeveloped economies feel the influence of this process from participation and from refusal to participate in the integration process. For example, if Kyrgyzstan refused to join the EAEU, most of the commodity flows coming from China to our country

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<sup>143</sup> Felipe et al., How rich countries became rich and why poor countries remain poor: It’s the economic structure...duh!, 2014.

and being the source of income for a significant part of the population would be lost for our economy, since Kyrgyzstan was the only transit country for these goods. Does it make sense for Kyrgyzstan not to join the regional integration association and take on the economy re-export model? Definitely no. This development model had no future. As soon as China no longer has the advantage of “low prices” and begins to reduce exports, re-export of goods for our country will become ineffective. Consequently, until this happens, we should not cling to this model, we should start developing our own production and export of goods.

The entry of small economies into regional integration associations during the initial period generally has negative consequences for the economies of these countries due to the lower competitiveness of products of small economies, the shortage of STEM category specialists, the limited funds for the development of fundamental and applied research. The effectiveness of such regional associations depends only on whether its participants, especially the larger economies, will be able to understand that a synergistic effect, that is, the effect of increasing the effectiveness of the overall activity as a result of joint efforts of all member countries of the EAEU, will be able to provide a greater attention to small economies, application of the efforts to increase the competitiveness of their products. The participants in regional associations should understand that the overall result depends on how they manage to ensure the effectiveness of the processes of specialization and diversification of all participants in integration processes. Otherwise, larger economies will be able to have a small effect from a higher level of competitiveness of their products, however small economies without much attention to their interests

and needs will not be able to achieve great success; therefore a synergetic effect will not be achieved.

As noted above, Western researchers share export strategies for the regional and global markets, and for the less developed participants in regional associations, the regional market is a priority, because they cannot compete in the global market at the initial stage of their development.

Analysis of the production sector is among the weaknesses of the Hausmann's and Hidalgo's methods, they do not affect the service sector. Meanwhile, the service sector is of great importance for many underdeveloped countries; in particular, this refers to the transitional economy of Kyrgyzstan.

What can the small economy of small Kyrgyzstan give to the Eurasian Economic Union and the world market? We believe that we have something to offer. Kyrgyzstan has a variety of mineral resources. Industrial reserves of such minerals as antimony, mercury, gold, silver, tin, rare earth elements, bismuth, tungsten, copper, iron, aluminum, various non-metallic construction materials have been found on the territory of the country. There are industrial reserves of silver, tin, mercury, antimony, aluminum, molybdenum, beryllium, bismuth, etc. in the Republic. There are rare-earth metals and their compounds (lanthanum, cerium, praseodymium, gadolinium, terbium, etc.). Rare earth metals enable the production of new types of crystals that are used to create new electronic devices, lasers, and are used in the manufacture of jewelry. We think that one of the most important directions of the country's economic development is the development of the manufacturing industry based on the use of the country's minerals and raw materials resources, especially rare-

earth metals. In the Soviet period “The development of machine-building enterprises was a special direction. The course was taken to create enterprises of labor-intensive, low-capacity and science-intensive production, i.e. it concerned the development of electronics, electrical engineering and instrumentation. The plants of physical instruments, electronic computers, control and measuring devices, electrovacuum plant “Setun” for the production of electronic instrumentation with a network of branches throughout the country, a special design bureau with the production of products for space, etc. were built and put into operation”. We believe that the specialization in the direction of the development of modern labor-intensive, low-capacity and high-tech industrial production today would be the most profitable specialization of the manufacturing industry in Kyrgyzstan.

Kyrgyzstan refers to the unique regions of the world due to the diversity and richness of recreational conditions and resources, including the pearl of our country – the Lake Issyk-Kul. Attractiveness of the natural landscape - semi-desert foothill plains, mountain - forest, subalpine and alpine regions, and permanent snow - serves as an object of study of the scientists and acquaintance of those who are interested in nature, tourism, and mountaineering, etc. Given the small size of the country’s territory, it becomes clear that the development of mass tourism, which is typical for France, Italy, Turkey and other countries, is simply impossible for us. Therefore, it makes sense for us to develop elite types of tourism. In contrast to the mass, elitist tourism brings much more income. However, it requires improving the quality of the goods and services offered, that is, we need to improve the skills of our doctors and staff, equip sanatoriums and rest homes with the necessary equipment to restore health and provide

complete recreation for the tourists. It should be noted that much has already been done to develop and spread tourism in Kyrgyzstan. This is, first of all, the organization of the World Nomadic Games. In our opinion, this is a serious advance towards increasing the tourist image of our country.

Huge massifs of natural pastures (fallow, hayfields and pastures make more than 86% of the country's agricultural lands) conditioned the development of livestock breeding (sheep breeding, horse breeding, cattle breeding, yak breeding, etc.). The products from organic meat are among the most important export items, which already started developing. We have only to think about its processing in order to issue meat products with high added value for export.

The presence of fodder provides a perspective for the development of dairy cattle breeding. It seems to us that it makes sense for Kyrgyzstan to train this skill in the cheese producers by the real craftsmen abroad and start producing cheese for export. At present, cheese is produced in the country; however its quality cannot be compared to the best world standards.

One of the important directions of development in the Soviet period was the production and processing of fruit and vegetable products, which our Republic exported to the northern regions of Russia. The production of fruit and vegetable products is still an important production item of many northern regions of our country. If we manage to preserve the environmentally friendly production of this and other types of agricultural products, and no less important, be able to organize their processing in accordance with the current needs of the consumers, then we are provided with a niche for our goods in the world market.

The largest massifs of walnut forests on the planet - Arslanbob are also located in Kyrgyzstan. One of the most popular types of dried fruits in the countries of the former Soviet Union was the dried Batken apricot - dried apricots, which is now sold in far-abroad countries.

The flora of Kyrgyzstan includes up to 200 species of medicinal plants, 80 of which are used in folk, scientific and industrial medicine. On the basis of these plants it is possible to create small pharmaceutical enterprises for the production of medicines.

At present, sewing production has developed in our country. Moreover, the population of the CIS countries is already familiar with the brand “Made in Kyrgyzstan” and this product is even popular in certain segments of the population. Nevertheless, in our opinion, this direction does not have many chances to become a competitive product in the world market. The reason is quite simple - we could not create a modern cluster for the production of this product, without which there is no real opportunity to compete equally with the same products from Turkey, Southeast Asia, China, because our economy does not have its own production of fabrics and accessories, and that less important, our sewing companies do not have modern sewing equipment, without which they will not be able to meet the needs of the modern consumer at the required level of quality. We think that in sewing production we have already started to develop a direction that, according to experts, is becoming more and more widespread in the world market - it is about the production of exclusive clothing, which often requires fabrics and accessories of individual, that is, manual production. Equally to choosing elite

rather than mass tourism, and in choosing the production of exclusive clothing, our manufacturers, having ceased to be dependent on the import of fabrics and accessories, will be able to compete with the world producers of these products, providing themselves with a relatively higher income.

One of the most promising areas of economic development can be the export of education. Diplomas of our country are recognized in many countries of Asia. Since studying and living in our country is much cheaper than in many other countries and our education is provided in the international languages, including English, the number of those who wish to receive education in our country, especially in the direction of training specialists in the field of medicine, is constantly growing. If we make efforts to make the important specialties for the economic development of our country such as information technology as popular as medicine among foreign students, it would help in creating new jobs and in increasing the incomes of employed people.

Kyrgyzstan has large potential resources of renewable energy sources (sun, wind, geothermal sources, biomass, small water flows), according to the estimates, the volume of which is 840 million tons of conversional fuel annually. Many regions of the country are in hard-to-reach places due to the landscape of the territory. In these conditions, the most effective is the provision of these territories with renewable energy sources. After all, a little time will pass and few of the representatives of the new generation will agree to live and work in the mountainous terrain, not having modern conditions for satisfying their needs.

As we can see, Kyrgyzstan has a great potential in the development of many branches of the economy. These include:

- Elite tourism.
- Development of metal-intensive and knowledge-intensive processing industry.
- Production of modern products based on the processing of rare earth metals.
- Deeply processed organic livestock products, fruits and vegetables.
- Production of high-quality cheese.
- Dried fruits
- Manufacture of exclusive clothes.
- Export of education (medicine, IT).
- Development of pharmaceutical enterprises producing medicines based on medicinal plants.
- Development of renewable energy sources.

Thus, our economy has great potential for the successful development of many areas. If we manage to make efforts and make sure that any of the above becomes our competitive advantage in the regional market of the Eurasian Economic Union, we can achieve sustainable economic development. We also believe that the new economic organizations of this integration association will be able to calculate more promising types of specialization and diversification of the participating countries that will provide a synergistic effect in the future.

To determine specific tasks and development programs, it is necessary to analyze the country's economy, in general, and its individual branches, in order to identify problems that, from the

point of view of modern development factors, do not allow the country's economy to ensure its sustainable development.

As the experience of successful Asian countries shows, economic transformations begin in the agricultural sector of the economy. In our country, they also began in this sector of the economy with land reform, when collective farm forms were unilaterally destroyed and farm households were formed.

The destruction of collective farms resulted in a sharp decline of gross added value in this sector of the economy. Despite the negative consequences of cardinal changes, the formation of a private producer, interested in the final results of its production, could prevent a food disaster in the country. The private sector began to produce an effect - the growth rates of production in this sector of the economy were as follows: in 1996 - 15.3%, in 1997 - 12.2%, 1998 - 4.1%, 1999 - 8.7 %.

Over time, the private stimulus factor has exhausted itself. Further growth of the agricultural economy required the dynamics of such processes as technology modernization, cooperation, state support of new producers, etc., but unfortunately they did not receive proper development. The full growth potential of the private sector was not disclosed due to low productivity and to a number of reasons at the micro and macro levels. The main reason is that new economic entities have difficulties on the way of formation and development and therefore cannot achieve high performance in their activities.

Unfortunately, the real experience of reforms in our country's agricultural economy shows that this is an extremely complex process, and it requires a much longer period of time than we expected. One of the most difficult problems in the

development of agro-industrial production in Kyrgyzstan at the present stage is related to the fact that new economic entities exist only at the grassroots level - at the level of the direct producer. Production systems that form a single production chain of interconnected and coordinated enterprises (from the field to the consumer table), which would include all the necessary units for processing, supply, maintenance, sales, etc., are at the stage of formation. Currently, the stages of production and sales have developed. The stages of processing, maintenance, supply need support. Many enterprises are not operating at full capacity, the condition of their equipment and the provision of spare parts are unsatisfactory. They do not have modern packaging materials. Denationalization and privatization of food and processing industry enterprises did not bring revival into their production activities. Some enterprises are taking measures to modernize their production, but most of them cannot afford it. Reduced demand and non-competitiveness of products, as well as a lack of own working capital, are the main reasons restraining their production.

As a result, they are forced to sell produced non-processed products, which makes it less competitive and with low added value. Further, the low incomes of the farmers are explained by low yields. If last year the potato yield in the EU countries averaged 33.7 tons per hectare, in our country - 16.6 percent per hectare, the grain yield in the EU - 5.94 tons per hectare, then we have 3.0 tons per hectare. Third, as a result of small-scale production and the lack of a developed network of infrastructure services, agricultural producers either have to sell their products themselves, for which they do not have enough time and skills, or sell it at low prices to resellers. As the authors of one of the research projects in India have calculated, the trade mark-up of

intermediaries on agricultural products in the underdeveloped countries reaches 300-350% of the price.

Underdevelopment, more precisely, weakness of service enterprises is among the main reasons restraining the growth and development of agricultural production. The laboratories for standardization and certification of products are the most important elements of the infrastructure in the context of globalization. Exports of domestic products make no sense without compliance with certain standards and norms. Meanwhile, the domestic market of the country is very small and the main hope of our farm households is the export of their products outside the country. It is not possible to do this in the absence of modern laboratories for standardization and certification. Thus, farm households were left alone with their products.

What conclusions should be drawn from the study of the state of affairs in the agricultural sector of the economy? We think that the primary objectives of the agricultural development of our country are as follows: search for highly competitive, high-value agricultural products that can be successfully sold in the external and domestic markets, solution of the problem of small-scale agricultural production, provision of producers with advanced high-yield technologies for the production of agricultural crops, underdevelopment of wholesale-purchasing, supply enterprises, laboratories for standardization and certification of products.

Let us try to draw up a matrix in which the problems of the development of the agricultural economy would be determined, in this connection formulation of the development programs and the criteria for achieving the ultimate goals are the objectives that need to be addressed.

**Table 7.2. Matrix for Agricultural Economy Development in Kyrgyzstan**

No.	Problems	Objectives	Development programs	Assessment criteria
1.	Low product competitiveness	Invitation of foreign experts to search for the types and technologies for production of competitive goods with gross value added (GVA).	1) Scientific and practical seminars (with invitation of the foreign specialists) 2)“Kyrgyzstan is my second home”	Number and volume of competitive goods with GVA.
2.	Low level of added value.			
3.	Small-scale production	1) Dissemination of experience “One Village - One Product”. 2) Support for the creation of production chains.	1) Introduction of the system “One Village - One Product”. 2) Support for the formation of production chains for manufacturing the competitive products with GVA.	1) The number of associations formed and the volume of goods produced by them. 2) The number of chains formed and the volume of goods produced by them.
4.	Underdevelopment of production technology	1) State support for the activities of the Research Institute under the Ministry of Agriculture, the Agrarian Academy.	1) Study and dissemination of advanced technologies manufacture of agricultural products.	1) The number of technologies introduced into production. The effect obtained.

		2) Study, introduction of progressive foreign technologies. Development of technologies to increase the yield and efficiency of agricultural products.	2) Development of technologies to increase the yield and efficiency of agricultural products.	2) The number of technologies developed. The expected effect.
5.	Underdevelopment of infrastructure units	Development of infrastructure, serving agrarian enterprises.	Support for the activities of infrastructure units.	

The task of selecting highly competitive products with high added value for the domestic producers to provide the population of the country with a high level of wages is among the most difficult tasks for underdeveloped economies. This is applied to the entire economy of the country rather than to the agricultural sector. The selection of specialization and diversification of the economy in the Kyrgyz Republic to ensure sustainable development in the context of the globalization of the world economy and the involvement of our country in the regional integration processes is a very complicated process. Under these conditions, when generating a development strategy, it is necessary to take into account the interests and needs of the domestic producers, and moreover to search for and find those types of products and services in which consumers are interested in the EAEU market and in the world market for the purposes of the selection of specialization and diversification of production.

The problem is as follows: 1) the underdeveloped economy does not generally have STEM specialists who could offer products for the domestic producers that have a high demand rating for the consumers in the world and in the domestic markets; 2) weak research base for the

fundamental and applied studies does not allow specialists of underdeveloped countries to develop new technologies for production of modern highly competitive products. Other ways of saying, the weak level of productive knowledge of the country’s population is the brake that prevents many countries from starting the path to successful economic development. It is no surprise that the underdeveloped countries that managed to achieve the “Economic Miracle”, all without exception, began their way to success with reforming the quality of their education. They put a lot of effort and attention, especially at the initial stages of development, to attract world-class foreign experts of the STEM category to participate in the development strategy generation. It is customary procedure to invite the experts in finance and economics as foreign consultants to our country. Meanwhile, we extremely need the STEM category specialists, who could advise our producers to manufacture the goods being in demand in the world market, taking into account our natural, climatic and labor resources.

**Table 7.3. Matrix for Productive Knowledge Improvement**

No	Problems	Objectives	Development programs	Assessment criteria
1.	Absence of the experts in the “Star scientists” class who can offer the types and technologies for manufacturing highly competitive goods with GVA.	Invitation of the foreign experts to search for the types and technologies for manufacturing competitive goods with GVA.	1) Scientific and practical seminars (with the invitation of foreign experts) 2) “Kyrgyzstan is my second home” (invitation of foreign specialists for work).	Number of species and volume of competitive goods with GVA.

2.	Lack of STEM specialists	<p>1) Support for the projects aimed at training STEM specialists.</p> <p>2) Support for the programs on invitation of the domestic specialists who received knowledge and work experience abroad to our country.</p>	<p>1) The project “Zhash Adister”</p> <p>2) The project “New staff”</p>	<p>1) The share and number of STEM specialists .</p> <p>2) The number of young professionals who returned to work at home.</p>
3.	Low level of education quality	<p>1) State support for the initiatives to improve the quality of education.</p> <p>2) State support of new programs and teaching methods that increase the level of students’ knowledge at schools, vocational schools, universities.</p>	<p>1) The program for support of vocational schools and higher educational institutions, which, together with the specialists from other countries, will train personnel for the developing branches of the economy.</p> <p>2) Support for the new programs and teaching methods to improve the quality of education.</p>	<p>1) The number of programs and trained persons.</p> <p>2) The number of developed training programs and techniques, the number of trained persons.</p>

The following can be recommended as specific development programs for sustainable development:

- Development and implementation of innovative and progressive technologies.
- Support of domestic producers manufacturing competitive goods.
- Support for the sectors with high added value.
- Creating a friendly environment for foreign direct investment and venture capital funds.
- Support for standardization and certification of products.
- Overcoming small-scale agricultural production, underdevelopment of units for the provision of services (procurement, supply, etc.).
- Training of the personnel for innovative development.
- Allocation of quotas for education in the world centers of education in the STEM specialties.
- Attraction of highly qualified foreign experts and specialists.
- Attraction of national personnel who have received quality education abroad and have practical work experience.
- Formation of a non-profit public-state development fund.
- State support of commercial structures that finance the development strategy.

One of the mandatory components of the development strategy is the problem of providing financial resources. First, the lack of investment funds for the entrepreneurship and for the state is peculiar for the developing countries. Second, the lack of interest to invest funds in the development economy on the part of the commercial financial institutions in the developing countries due to the high risk of their funds non-repayment.

Our banking system cannot increase credit portfolios due to the lack of financial literacy and low public confidence in the commercial banks; therefore many banks have excess liquidity. In this regard, the banking services market is constantly shifting from the traditional sources of income, such as lending, to non-traditional activities, earning by means of fees, servicing accounts and other types of non-interest income. In 2003, non-interest income of the domestic banking system was 60%, however, in 2015, it increased up to 72%. The banks are known to go to non-interest income when the interest spread is too low<sup>144</sup>. Meanwhile, real sector loans constitute approximately 80% of the incomes in the developed countries of the West.

It is practically impossible under these conditions to achieve the desired results without investment support for the development strategy being generated. The experience of the successful developing countries shows that mobilizing financial

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<sup>144</sup> Мукарапов А. Автореферат диссертации на соискание ученой степени кандидата экономических наук по теме «Влияние рынка банковских услуг на экономический рост страны». Бишкек. 2017 - с.11.

resources through their regulation is a vital factor in the development strategy. Financial instruments are a hematopoietic system of the development strategy. The experience of Southeast Asia shows, particularly South Korea's experience, formation of non-commercial funds at the expense of the state and business structures which understand their responsibility for the future of their country is the world's most effective source of funds. The world practice shows that such funds provide substantial assistance to the economic recovery of the country. When selecting program participants the priority should be given to business structures, enterprises, and organizations that provide production of competitive goods, cluster development, and integrated economic growth (support of enterprises and organizations of all regions of the country).

The attraction of the commercial financial institutions to work with domestic producers is also among the important tools for supporting competitive production. The support of the financial commercial organizations plays a big role in stimulating the attraction of investments, when the government takes an obligation on payment of interest on loans issued for the development strategy implementation. Creation of a friendly environment for the foreign direct investment and venture funds is among the most important forms of attracting foreign investment funds.

**Table 7.4. Matrix for Developed Economic Strategy Financing**

N o.	Problems	Objectives	Development programs	Assessment criteria
1.	Non-participation of the commercial sector in the development economy	Formation of a non-profit fund for development strategy investment	Formation of a non-profit development fund	Number of the projects providing support for competitive production. The effect obtained.
2.	State support for the commercial entities financing the development strategy	Payment of interest on the commercial entities' loans issued for the development strategy	State support for the commercial entities	Number of projects providing support for the competitive production. The effect obtained.
3.	The lack of interest of the foreign businessmen and venture organizations in investing in our economy	Creating a friendly environment for the foreign direct investment and venture funds	Program to support FDI, venture organizations.	The volume of FDI, the volume of production, funded by venture capital.

An attempt to analyze possible growth points for different sectors of the economy is made in this section. Some of the problems of different sectors, as we see, can be repeated, because they are the result of the same reasons.

The combination of growth points in a single matrix to enable us to see the strategy as a whole is the next stage in the development strategy formation. The main components of the strategy can be assembled in the following matrix.

The option developed by the authors should not obligatorily be used as a strategy, since it reveals through the charts the main components and economic mechanism of the development strategy. The efforts of many experts and specialists who must carefully think through and calculate each element of the strategy should be united to develop a strategy that could be used in practice. Nevertheless, the authors believe that the generalization of world experience in the development and substantiation of the main components and economic mechanism of the development strategy is an important step towards achievement of sustainable development in the transitional economy of Kyrgyzstan.

**Table 7.5. Stable Economic Development for Improvement of the Peoples' Welfare**

N°	Problems	Objectives	Development programs	Assessment criteria	Source of financing
1.	<p>Support of domestic manufacturers producing competitive goods</p> <p>Attraction of FDI aimed at the introduction of innovative technologies</p> <p>Support of activity on standardization and certification of goods</p> <p>Low economic competitiveness</p>	<p>Support of domestic manufacturers producing competitive goods</p> <p>Attraction of FDI aimed at the introduction of innovative technologies</p> <p>Support of activity on standardization and certification of goods</p>	<p>Project "Support of domestic producers producing competitive products"</p> <p>Providing guarantees to foreign investors in case of force majeure</p> <p>1) The project of "Support activities to prepare regulatory and legal acts for standardization and certification of</p>	<p>Number of supported manufacturers of competitive products</p>	<p>Non-commercial development fund</p> <p>Non-commercial development fund</p> <p>Non-commercial development fund</p>

			products" 2) The project "Support to the activities of enterprises involved in standardization and certification of products."			
2.	Low level of value added	Support for the industries with high added value	The project "Support of industries with high added value"	Number of industries with high added value	Non-commercial development fund	
3.	Production technology backwardness	Development and implementation of innovative and progressive technologies  Study, introduction of progressive foreign technologies	Project "Development and implementation of innovative and progressive technologies" The project of "Introduction of progressive technologies"	Number of developed technologies and implementations.  Number of technologies introduced into production. The effect obtained.	Non-commercial development fund	

4.	Absence of experts, such as "Star scientists" who can offer the types and technologies of production of highly competitive products with high value added.	Invitation of foreign experts to search for types and technologies of production of competitive products with high value added.	<p>1) Scientific and practical seminars (with the invitation of foreign experts)</p> <p>2) "Kyrgyzstan is my second home" (invitation of foreign specialists for work).</p>	Number of types and volumes of competitive products with high value added.	Non-commercial development fund
5.	Lack of STEM specialists	<p>1) Support of projects aimed at training STEM specialists.</p> <p>2) Support of programs by invitation to the country of domestic specialists who received knowledge and work experience abroad.</p>	<p>1) The project "Zhash Adister"</p> <p>2) The Project "New Talents"</p>	<p>1) The number and number of STEM specialists.</p> <p>2) The number of young professionals who returned to work at home.</p>	Public investments

6.	<p>Low level of quality education</p>	<p>1) State support for initiatives to improve the quality of education.</p> <p>2) State support of new programs and teaching methods that increase the level of knowledge of students in schools, vocational schools, universities.</p>	<p>1) The program of support of vocational schools and universities, which together with leading universities of other countries will train personnel for developing industries.</p> <p>2) Support of new programs and teaching methods for improving the quality of education.</p>	<p>1) The number of programs and the number of trainees.</p> <p>2) The number of developed training programs and techniques, the number of trained by them.</p>	Public investments
7.	<p>Small-scale production of agricultural production</p>	<p>Overcoming of small-scale agricultural production</p>	<p>1) Introduction of the system "One Village - One Product".</p> <p>2) Support the</p>	<p>1) The number of associations formed and the volume of products produced by them.</p>	Non-commercial development fund

			formation of production chains for the production of competitive products with high VA.	2) The number of chains formed and the volume of products produced by them.	
8.	Underdevelopment of the processing industry, units providing services to agricultural producers	Supporting the activities of productions for the provision of agricultural services	Project "Support of the activities of specialized industrial zones".	Number of supported production (industrial zone), the volume of services performed by them	Non-commercial development fund
9.	Lack of financial resources for the implementation of the strategy	Formation of a non-profit public-state development fund Involvement of venture capital in the economy of the country	The project "Public-State Commercial Investment Fund"	The volume of investment funds collected for the implementation of the development strategy	Public investments, private sector investments

10.	Non-participation of the commercial sector in the development economy	State support of commercial structures financing the development strategy	Payment of interest on commercial credits for the development strategy	The volume of investment funds credited by the commercial structures of the development economy	Investments for strategy development realization
11.	The lack of interest of foreign businessmen and venture organizations in investing in the country's economy	Creating an enabling environment for foreign investment and venture funds	The program for supporting FDI, venture organizations.	The volume of FDI, the volume of production, funded by venture capital.	Investments for strategy development realization

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