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THE GREEN ECONOMY DEVELOPMENT PATH: OVERVIEW OF ECONOMIC POLICY PRIORITIES

Nazym Dabyltayeva, Gani Rakhymzhan

Kazakh National University named after al-Farabi, Avenue Al-Farabi, 71, Almaty, The Republic of Kazakhstan
E-mail: nazym62@mail.ru (corresponding author)

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Abstract. The green economy is one of the important tools to ensure the sustainable development of any country. Green economy is defined as an economy with a high level of quality of life of the population, careful and rational use of natural resources in the interests of present and future generations and in accordance with the country's international environmental obligations. The paper tackles a case of Kazakhstan. New policy towards green economy, as it is claimed, provides the basis for deep systemic reforms to improve the welfare, quality of life of the population of Kazakhstan and the country's entry into a list of the 50 most developed countries in the world. In modern conditions, the relationship of economic development with changes in the environment, the impact on many forms of international economic relations is an important feature of the globalization of the economy. One of the most pressing issues among the international community is the issue of introducing a green economy, which is a reliable driving force of economic growth in emerging markets, providing new opportunities of overcoming the economic crisis. The paper analyzes efforts of Kazakhstan trough its active economic policy to transform its economy into green one.

Keywords: green economy; quality of life; population; countries; resources; methods; methods; tools; mechanism; growth; Kazakhstan

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1. Introduction

The increasingly closely interrelated development of the economy with changes in the environment, the influence on many forms of international economic relations is now an important feature of the globalization of the economy. In recent years, one of the pressing issues among the international community is the issue of introducing a "green economy" in countries across all continents (Xie et al. 2016; Dechezlepretre, Misato 2017; Monni et al. 2018; Tvaronavičienė 2018; Tvaronavičienė et al. 2018; Androniceanu et al. 2018; Atari et al. 2019; Lavrinenko et al. 2019; Eddelani et al. 2019; Smaliukiene, Monni 2019; Faridi, Sulphey 2019).

At the present stage of development, Kazakhstan is actively involved in the implementation of the "green economy" too (The Astana Time 2018; UNECE Press Releases 2017; Newell, M. 2018; European Commission, Supporting Kazakhstan's transtition to a Green Economy model). One of the reliable methods of maintaining growth in emerging markets is the introduction of a "green economy" by the world's civilization, which also provides opportunities for emerging countries to overcome the economic crisis. "Green economy" is one of the important tools to ensure the sustainable development of the country. It lays the foundations for deep systemic transformations with a view to transition to a "green economy" by increasing the welfare, quality of life of the population of Kazakhstan and joining the country among the 50 most developed countries of the world while minimizing the burden on the environment and the degradation of natural resources.

2. Methods of research

Over the past decades, most developed and developing countries have prioritized the sustainability of economic growth, the expansion of opportunities for the use of resources and the reduction of the harmful effects on the environment **(**Sevost'yanova 2011; Pavolová et al. 2019; Cherchyk et al. 2019; Proshchalykina et al. 2019).

The concept of "green growth", which aims to achieve sustainable growth through the efficient and responsible use of natural resources, has become integral part of economic policy for numerous governments since its introduction in the late 2000s (OECD 2009). Despite the fact that rapid economic growth can be achieved through aggressive consumption of limited resources, through ignoring pollution indicators environmental and environmental costs, or because of the implementation of other non-rational methods, ultimately such expansion is doomed to failure, eliminating any positive progress or achievements, as evidenced by numerous examples from around the world (IMF 2011). The concept of inclusive green growth goes beyond effective use of natural resources and environmental protection; this concept emphasizes the importance of balanced and large-scale growth as the only solution on the path to sustainable long-term development. Methods of research: critical review of literature including local sources; induction, generalization, interpretation of obtained results.

3. The discussion of the results

The economy of Kazakhstan has low diversification indicators, where oil and gas, mining and agriculture play a key role in economic growth (Shevyakova et al. 2019). At the same time, consumer goods and commodities comprise a significant share of Kazakhstan's exports.

In line with the global desire for inclusive and sustainable growth, Kazakhstan has adopted national and regulated development programs and strategies to create the prerequisites for sustainable development. Kazakhstan became the first state in Central Asia to create an institutional and legal framework for transition to "green growth" through the adoption of a number of legislative documents, including the Environmental Code of the Republic of Kazakhstan (2007), Law of The Republic Of Kazakhstan "About support of use of renewable energy resources" (2009), Concept for transition of the Republic of Kazakhstan to Green Economy (2013).

Since then effective relationships have been established with numerous international financial institutions and strategic partners in the promotion and development of renewable energy, clean technologies and infrastructure. Kazakhstan promotes international cooperation in the interests of sustainable development under the Green Bridge Partnership Program (GBPP) (Bayzakov, Mukhanov 2013). Kazakhstan faces structural imbalances, socio-economic and environmental problems, such as over-reliance on commodity exports, uneven distribution of wealth, low living standards and limitedaccess of the basic services, inefficient use of natural resources, high energy consumption (Gaifutdinova 2013).

The concept of sustainable development was adopted at the UN conference in Rio de Janeiro in 1992. Its continuation under the new conditions was the concept of sustainable development of the green economy. The main provisions of this concept are contained in the UNEP report "Green economy on the way to transition to sustainable development and poverty eradication", 2011, prepared for Rio + 20 (Barbier 2012). Innovative approaches and principles laid down in the concept of a green economy are aimed at solving the problems of modern multilateral crises. The United Nations Environment Program (UNEP) defines the term "green" economy in a broad economic, social, and environmental context: a "green" economy is an economy that improves human well-being and ensures social justice while significantly reducing environmental risks and its depletion. Other organizations, such as the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), define "green" growth as a political focus that relies on environmentally sustainable economic progress to stimulate low carbon and open to all social groups' development.

The green economy model is proposed to the world community as a way out of a multilateral global crisis. Consistent with the principles and main provisions of the concept of sustainable development, the concept of a green economy is characterized by focusing on the problems of structural transformation of the economy as a leading factor in the transition to sustainable development (Nagorniy 2013).

According to calculations, by 2050, transformations within the framework of the green economy will further increase GDP by 3%, create more than 500,000 new jobs, create new industries and services, and ensure high standards of quality of life for the population throughout the world. In general, the volume of investment required for the transition to a "green economy" will be about 1% of GDP annually, which is equivalent to $ 3-4 billion a year (Fava, Gavrilescu 2012).

"Green economy" is defined as an economy with a high level of quality of life of the population, careful and rational use of natural resources in the interests of present and future generations and in accordance with the country's international environmental obligations (Volobuyeva, 2012).

The concept of Kazakhstan's transition to a green economy will be implemented in three stages (Bayzakov, Mukhanov 2013): from 2013 to 2020 the main priority of the state will be to optimize the use of resources and increase the efficiency of environmental activities, as well as the creation of infrastructure for the functioning of the green economy; from 2020 to 2030 the transformation of the national economy, focused on the sustainable use of water, the promotion and stimulation of the development and widespread introduction of renewable energy technologies, as well as the construction of facilities based on high standards of environmental efficiency, will begin on the basis of the formed infrastructure; from 2030 to 2050, the transition of the national economy to environmental technologies will be implemented, requiring the use of natural resources, provided they are renewable and sustainable. The transition to a "green economy" will be based on the following basic principles (Bayzakov, Mukhanov 2013):

1. Improving resource productivity: resource productivity should be a central economic indicator, since this parameter measures the ability of our country to create value while minimizing the environmental load;

2. Responsibility for the use of resources: it is necessary to increase the responsibility at all levels of government, business and the population for monitoring and controlling sustainable resource consumption and the state of the environment;

3. Modernization of the economy using the most efficient technologies: Kazakhstan will increase the GDP, industrial production and the number of infrastructure in the next 20 years or so. These transformations open up the possibility of applying completely new solutions in the economy (new technologies).

It is the promotion of a "green" economy in Kazakhstan - this is the main way and the only way to preserve sustainable development. This is due to the fact that in Kazakhstan there are major environmental problems that other countries have not encountered. In particular, we are talking about the Semipalatinsk nuclear test site, which was closed as a result of the popular movement Nevada-Semipalatinsk, but the consequences of nuclear testing are still evident. In addition, there is a huge amount of industrial waste - over 23 billion tons, of which about 9 billion tons are man-made mineral formations. This also includes the problem of water, since Kazakhstan is dependent on border water sources. Experts and environmentalists argue that in the next 20-30 years, Kazakhstan may face the consequences of global climate change, such as water scarcity, aridity, desertification, and so on. The development of a "green" economy will allow reducing these risks and threats.

Kazakhstan has created all the prerequisites for an effective transition to a "green economy". The transition to a "green economy" is closely related to the development of innovation activities in Kazakhstan, since it is based on the introduction and use of new technologies in order to improve the efficiency of energy use.

An important role in the "green economy" is assigned to the process of waste management. We give an example

of the recycling of paper and cardboard waste. Residents of the Almaty region (v. Chundzha) are engaged in the manufacture of cardboard firewood using paper (cardboard) and water. The resulting material is used to replace firewood. This method brings a double positive economic effect: the preservation of the forest estate and the growth of savings of the population, which leads to an increase in the welfare of citizens. If this method is implemented and applied in all regions of Kazakhstan, then forest losses can be minimized.

Formation of the National Strategy for Sustainable Development will allow to move towards the creation of such a model, which is aimed at reducing poverty, improving people's lives, ensuring environmental safety, creating conditions for further transformation of the country's economy in the long term, that is, the model is closely linked "green" economy and sustainable development, defining a new development path for Kazakhstan. At the same time, ensuring close coordination of the economic, social, institutional and environmental components of sustainable development is one of the fundamental conditions for ensuring national security, as well as the most important aspect of protecting the vital interests of the state and society of the country.

Kazakhstan's initiatives as a transition to a green economy, the formation of a National Sustainable Development Strategy, the Green Bridge program and the international specialized exhibition EXPO-2017, the State Program on Water Resources Management for 2014–2040, undoubtedly, should be the most important steps towards implementation of a new way of development of Kazakhstan. "Green economy" is the economy of the future, which is aimed at preserving the ecosystem, increasing the well-being of the population and ensuring the efficient use of resources.

Green Growth has become the goal of many countries in the 21st century. The main leitmotif of this doctrine is - to achieve economic development and increase state capacity without harming the environment and natural resources.

The Kazakhstan initiative "Green Bridge" is a bridge between the Asia-Pacific and European regions, and is aimed at a transition to a green economy in a large space. The ideology of supporting Eurasian multilateral cooperation is at the center of Kazakhstan's initiative activities. The Green Bridge Initiative calls for the integration of environmental and economic policies for sustainable development.

The result of the expected Third Industrial Revolution in the world could be the development of a green economy in Kazakhstan. In 2013, the state Concept on the implementation of the principles of green economy was approved. A green economy is necessary to preserve natural capital, ecosystems and biodiversity, while at the same time ensuring income and employment growth.

Economic growth inevitably leads to large environmental losses, the largest economies in the world are trying to implement the concept of sustainable development and make the green economy a truly effective development model (Gouvea et al. 2013). In addition, Kazakhstan should strive if it wants to stand on a par with the best economies in the world.

The first state to adopt the idea of a green economy as a national strategy was South Korea. In less than 50 years, from a poor country in post-war devastation, Korea has risen to be one of the largest economies in the world. But the high rates of industrial development and urbanization led to an intensive increase in greenhouse gas emissions and pollution of the biosphere. At the beginning of the XXI century, it became obvious that the old strategies that led the country to success no longer work. In 2008, President Lee Myung-bak introduced the strategy of Low Carbon Green Growth (low-carbon green growth). Since then, about 2% of the country's GDP has been accounted for by green technology projects. The focus is on energy, "green" modes of transport, technologies for recycling and environmental research.

In June 2010, the Global Green Growth Institute (GGGI), a research and development center for developing countries, appeared in Seoul. Today GGGI is a partner of many international organizations and institutions.

The institute's members are 27 countries. Thanks to GGGI, investments in the development of a green economy in these countries in 2017 amounted to $ 524.6 million. In accordance with the decisions of the Rio + 20 UN Conference, food security, nutrition and sustainable agriculture are priority areas for the development of a green economy. Ensuring food security in terms of the physical and economic accessibility of high-quality food is in turn impossible without the sustainable development of the primary production base of agriculture (Patel 2013; Akhmetova et al. 2019).

In agriculture, Kazakhstan must adhere to the six principles of "green" agriculture, which will ensure the development of the sector and at the same time will allow preserving and improving the environment (table 1). The practical implementation of the above principles of agricultural development to be implemented as follows.

Table1. Principles of Green Agriculture

Principle	Description
Preventing land degradation and restoring degraded land	Introduce more efficient farming methods that minimize tillage, preserve organic matter and moisture in the soil, prevent soil erosion by wind and water, for example, by using equipment that provides zero tillage, and alternating crops
Preventing further overgrazing	Preservation of pasture land by increasing the availability of remote pastures and restoration of pasture land, strengthening of controlled pasture turnover and ensuring the conservation of moisture in the soil
Efficient use of water	Introduction of efficient use of water resources in agriculture, for example, drip irrigation, spray irrigation, discrete irrigation, use of greenhouses
Rational use of resources	Transition to the use of agrochemicals and fuels that protect users, minimize harm to the environment, reduce / prevent contamination of soil, air and water, for example, through the use of integrated plant protection from pests, the use of fertilizers based on the results of soil research and improved fuel efficiency of agricultural equipment
Waste minimization and reuse	Introduction of agricultural products processing methods that ensure maximum value added and waste minimization, including through the reuse of residual waste in production, for example, compost, biogas, etc.
Carbon dioxide capture	Planting permanent crops, such as agro-amelioration plants, tree crops, perennial crops, permanent crops that trap carbon dioxide and are resistant to soil salinization, as well as contributing to adaptation to climate change

The most important tasks facing the industry today are the production of high-quality and healthy food products, the maintenance and improvement of the viability of ecosystems, and the sustainable development of rural areas. These tasks are implemented within the framework of the already existing concept of organic agriculture.

In Kazakhstan, there are extremely favorable conditions for the development of organic agriculture: the area of agricultural land on which mineral fertilizers are used makes up 1.5-2% of the total area, herbicides are used on 3-4% of the total area, the cultivation of GMOs is prohibited.

The UK Food Standards Agency refers to organic products (organic products) as agricultural and food products manufactured without using (or with less use) synthetic pesticides, synthetic mineral fertilizers, growth regulators, artificial food additives, and without using genetically modified food products (Barbier 2012).

According to the International Federation of Organic Agriculture, organic agriculture is aimed at working with ecosystems, biogeochemical cycles of substances and elements, supports them and receives the effect of their optimization. Organic agriculture is obliged in the long term to support the health of both specific objects with which it deals (plants, animals, soil, man), and the entire planet (Barbier, 2012). The beginning of the twentieth century is considered the period of origin of organic agriculture In 1924, Rudolf Steiner gave a series of lectures on the "Agricultural Course", which became the concept of biodynamic farming.

The concept of organic agriculture was first introduced by an agricultural specialist at Oxford University by Lord Northbourne in the book Take Care of the Land, published by him in 1940. In the same period, a series of studies by Albert Howard on the negative effects of chemical fertilizers on the health of animals and plants and the experiments of Eva Balfour on comparison of conventional and organic agriculture appear. In the US, the most influential carrier of new ideas was Jerome Irving Rodale, who popularized the term "organic farming"

and in 1942 founded the magazine Organic Farming and Horticulture. In 1972, the International Federation of the Organic Agricultural Movement was founded in Versailles, whose mission is to spread information and introduce organic agriculture in all countries of the world (Cohen, Vandenbergh 2012).

In Kazakhstan, since 2015, the FAO - Food and Agriculture Organization of the United Nations has been developing the Project "Support for the Development of Organic Agriculture and Institutional Capacity Building in Kazakhstan"; a budget of $ 338,000 is provided.

Kazakhstan uses extensive farming methods for growing grain, leguminous crops, and in animal husbandry. The areas of agricultural land are extensive and quite fertile for farming and grazing, low temperatures in winter naturally disinfect the soil, distances and isolation do not contribute to the development of production systems dependent on synthetic components (nitrogen fertilizers, pesticides, herbicides, GMOs and funds obtained using nanotechnology). As a result, Kazakhstan is practicing organic agriculture, and the further transition to organic production is relatively uncomplicated.

Given the growing demand for organic products in European countries and the United States, organic agriculture can become one of the attractive sectors for Kazakhstan (OECD, 2015). Organic farming is regulated by the law " On production of organic products" ,. Kazakhstan has great potential in the development of organic agricultural production due to (1) the availability of significant land and natural resources, (2) traditional farming without the use of synthetic fertilizers and pesticides.

Currently there are no official data on the production of organic products and farms engaged in organic farming. However, according to the Food and Agriculture Organization of the United Nations (FAO). There are 29 manufacturers and 19 processing enterprises, mainly in Akmola, Almaty and Kostanay regions.In Kazakhstan, the lack of standardization, certification, management systems and labeling requirements currently limits the development of domestic and export markets for organic products. However, there are several operating international certification bodies on the market, and some private companies are also developing such systems.

The main advantages of the transition to organic farming in the country are the possibility of selling organic products at a higher price; increase competitiveness by improving quality; increase in export potential due to increasing demand for organic products from foreign markets; in the use of a wide range of legumes in crop rotations, which allows to solve the problem of feed and maintain the level of nitrogen in the soil; in increasing competition in the domestic market after joining the World Trade Organization. However, there are also difficulties in low access to financing; low sustainability of the agricultural sector due to the high level of debt burden on farms; lack of technology and lack of experience in the production and processing of organic products; psychological difficulties of transition to new farming methods.

Prospects for Kazakhstan are also in more rational use of labor and increase in profits of enterprises; in the care of the environment and health; high cost of mineral fertilizers and pesticides after years of practice in traditional agriculture. Due to the fact that organic farming is more complex than traditional agriculture, there is a high probability that the producer can make a mistake by significantly reducing the yield of agricultural crops, increasing morbidity, leading to infection by weeds and pests. In addition, the main food export groups of Kazakhstan - meat of animals grown in natural grazing, high-quality wheat - are in great demand in the global market for organic products, which opens up tremendous opportunities for further increase in exports.

It should be clarified that organic farming does not mean simply "the absence of synthetic components". Organic production involves the use of such an approach as crop rotation, which prevents the degradation of natural resources, and also contributes to the restoration of naturally depleted soils. Ecological benefits from organic farming systems, with reduced production costs and higher prices in the market for such products, are real benefits for Kazakhstani farmers who are switching to organic management.

The global demand for organic grains (both food and feed) exceeds the available supply. Last year, prices for

organic wheat increased by 17% on the world market. This positive trend is expected to continue over the next few years. Historically, the countries of Eastern Europe (first of all, Ukraine, Romania and Russia) met the global demand for organic grains. At the moment, organic food grains have doubled in price, and the rise in prices for feed grain crops was about 75% or more compared to grains grown by traditional methods, which is encouraging more and more farmers, for example in Australia, to switch to organic production (Mazurova 2008).

Kazakhstan can find a niche and position itself in the organic cereal market, provided that a credible organic production system is created, while Europe will be open for export to the market. "Green" technologies are used in agriculture, in the business environment. Kazakhstan has already implemented two projects that fully meet environmental criteria. In 2015, the Center for Green Technologies appeared near Astana. It develops 35 innovative projects in the field of organic farming, resource conservation. 168 houses in the village use drip irrigation, pyrolysis ovens are installed in 5 houses, a year-round greenhouse, where different sources of heating are combined. The first in Kazakhstan "green" business center Talan Towers, built in Astana, received an international certificate of LEED. Most of the "green" technologies used in its construction were introduced in Kazakhstan for the first time. Talan Towers uses energy-efficient elevators, special energy-efficient glazing, and solar panels.

An important role in the "green economy" is assigned to the process of waste management. An example of recycled paper and cardboard waste is the population engaged in the manufacture of cardboard firewood using paper (cardboard) and water in the village of Chundzha (Almaty region). The resulting material is used to replace firewood. This method brings a double positive economic effect: the preservation of the forest estate and the growth of savings of the population, which leads to an increase in the welfare of citizens. If this method is implemented and applied in all regions of Kazakhstan, then forest losses can be minimized.

Conclusion

The strategy "Kazakhstan-2050" and the new political course of the country are building clear guidelines for the formation of a sustainable and efficient economic model. Green economy is defined as an economy with a high level of quality of life of the population, careful and rational use of natural resources in the interests of present and future generations, in accordance with the country's international obligations. Today, the transition to a green economy is inevitable. Kazakhstan cannot remain aloof from the trends that are occurring in the world and the green economy is an urgent need for humanity in the 21st century. The rational use of natural resources, the development of a new paradigm based on the transition and the introduction of organic agriculture can be defined as targets in ensuring the sustainable economic growth of a country for functioning in the global economy.

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Nazym DABYLTAYEVA
https://orcid.org/0000-0002-5650-2785

Gani RAKHYMZHAN
https://orcid.org/0000-0002-3919-2017