«Green» finance as a factor in improving the use of labor potential in rural areas

Gulmira Nurzhanova1*, Zubirash Smagulova1, Tamara Dzholdosheva2, Meerim Abykeeva2, Anar Kurmanalina3, Bagdad Bissenbayev2, and Akmaral Niyazbekova2

1 Astana International University, 010000 Astana, Republic of Kazakhstan
2 Musa Ryskulbekov Kyrgyz Economic University, 720033 Bishkek, Kyrgyzstan
3 Karaganda Buketov University, 100026 Karaganda, Republic of Kazakhstan

Abstract. The article considers «green» financing as a factor of increasing the efficiency of the labor potential of rural areas, taking into account the coverage of organic agriculture in the conditions of interesting, several global crises: food, climate, financial. The author considers the organic direction of food production and connects it with the labor potential of the village. A brief overview of Program – the concept of «green finance» in Kazakhstan is made. The level of financing of agricultural enterprises located in rural areas is analyzed, the types of financing for rural areas of entrepreneurial activity are also shown. «Green» financing can be widely used in science, public life, the political system, agriculture and other spheres of society. Orientation to the «green» economy means updating the dynamics of agricultural enterprises, combining science and rural entrepreneurs. Green economy technology in agriculture is expected to become a priority for both public and private companies.

1 Introduction

Many works of domestic and foreign scientists reflect the issues of "green" financing as a factor in improving the use of labor potential in rural areas [1–18]. In Kazakhstan, as key groups in the formation of organic production in the «green» economy, we recognize public and international organizations and projects that specialize in environmental issues and environmental protection.

The first environmental organization, which in the early 2000s began to work systematically towards the development of the organic market, was the Foundation for the Integration of Ecological Culture (FIEC), Kazakhstan has yet to develop a full–fledged system to reliably label its financial assets as truly sustainable.

In such a system, the role of bank supervisors should not be to facilitate or "direct" bank lending to finance «green» agriculture, but to ensure that banks reliably manage the risks associated with organic production.
In general, labor potential is formed under the influence of certain factors. One of these factors is the «green» economy. The methodological and practical value of the study is presented below.

2 Materials and methods of research

In modern conditions it is especially important to increase the efficiency of the use of labor potential in providing a high level of employment of the rural population on the basis of the agrarian labor market.

Stimulating the flow of credit to rural regions with more environmentally friendly industries can encourage more rapid labor development. To do so, banks must reflect risk in their lending rates.

The banking sector plays a profound role in financing the transition to a green economy. Financial institutions can stimulate the flow of funds into green economic activity and also indirectly promote transparency by requiring agricultural enterprises and households to report and disclose green/brown investments.

As countries develop climate strategies, the expansion of green finance through banking reform appears to be a critical factor and tool that can truly shift the balance toward green, sustainable economic activity.

Work on organic production, allowed the country to integrate into the world system of organic agricultural production and take its rightful place in the organic market [19-25].

Land and climatic resources, folk traditions of growing crops and livestock farming with maximum use of natural factors predetermine huge opportunities for the development of this segment of the agricultural economy.

The world produces a small amount of organic products and it is concentrated mainly in Western Europe, North America, China, etc., i.e. in countries with high levels of environmental pollution, especially soils, chemical fertilizers, pesticides, industrial technology, with a high level of income and consumer demand. Its purpose is, first, to meet consumer demand for high quality products; second, to ensure the preservation of ecological systems and reproduction of soil fertility; third, to use the benefits of organic farming for the redistribution of income in favor of organic farms.

«Pandemic» crisis, manifested in 2020, which mankind has not faced before, can both delay the solution of a number of environmental problems, including «green» economy, due to the reorientation of financial resources for sanitary and epidemiological measures of the society of rural areas, or vice versa a healthy environment and healthy food will be perceived as preventive measures of pandemic prevention and gaining by people as sustainable immunity against it.

3 Results

FAO is already warning of a possible shift to «less diverse diets», that «declining incomes and uncertainty are forcing people to spend less and leading to reduced demand», for many, crisis levels become an acute form of food insecurity.

For many decades, the natural environment has faced unprecedented impact of anthropogenic factors of agricultural production. According to the UN FAO, agriculture accounts for more than 13% of the total anthropogenic greenhouse gas emissions, so the greening of the agricultural sector is the most important direction of development in order to protect nature and provide people with environmentally friendly products, which requires changes in its system of functioning.
One of the strategic tasks of the government to solve this problem is to increase the efficiency of the use of labor potential of rural areas in ensuring environmental security and a favorable environment through the use of eco-innovations and "green" technologies. Organic agriculture is one of the new trends in the global agricultural economy, including Kazakhstan. World practice confirms that it creates significant social, economic and environmental benefits for the labor potential of rural areas [26-29].

One of the priorities of the state agrarian policy of Kazakhstan, today is the provision of small loans to households (those who have an average income from subsistence farming). Microloans allow the rural population to engage in private or family business, increase the number of self-employed in rural areas. Currently, the issue of "green" financing is being considered by the JSC «Fund for Financial Support of Agriculture» (Table 1).

Table 1. Lending programs of JSC «Fund for Financial Support of Agriculture»

<table>
<thead>
<tr>
<th>Lending program</th>
<th>Program objective</th>
</tr>
</thead>
</table>
| «Ihilik» Program | – acquisition of cattle, cattle, horses, camels, other farm animals, birds and honey bees;  
– purchase of fodder not exceeding 25% of the loan amount |
| «Sybaga» Program | – acquisition of breeding stock of cattle for reproduction of young beef breeds;  
– acquisition of property, plant and equipment;  
– working capital;  
– acquisition of cattle |
| «Kasipker» Program | Organization and expansion of non-agricultural and agricultural businesses  
Creation and development of intensive apple orchards  
Creation of complexes of intensive apple orchards and their leasing |
| «Eginzhai» Program | Replenishment of working capital for spring field work and harvesting |
| «Yntymak» Program | Creation and development of service and processing cooperatives |
| SME lending in rural areas | «Regional product» |
| «Birlik» loan program | Rural business expansion |
| «Рegional product» | Milk collection centers |
| «Yrys» Program | Acquisition of breeding breeding stock and creation/expansion of dairy farms |

Note: Compiled from source data [30-33].

Directed program of agro-industrial complex development for 2017-2021 of the agricultural sector and provides significant support to agribusinesses, as well as farmers (peasant) farms and household farms in the modernization and digitalization of the country’s economy, as well as in the "green" economy [34-38].

4 Discussion
The main objectives of the Concept of transition of the Republic of Kazakhstan to a green economy.

Let's name the main green areas of the Program:

- In the water sector, it is planned to eliminate water scarcity at the national level by 2050;
- In the agricultural sector – to increase productivity three times by 2020 and increase crop yields by 2030, as well as reduce irrigation costs. (Figure 2)

Fig. 2. Key indicators of the Concept of transition of the Republic of Kazakhstan to a green economy

- In agriculture - to increase labor productivity by 3 times
- In the field of energy efficiency to reduce the energy intensity of GDP
- In the electricity sector - to increase the share of alternative energy sources
- In the field of air pollution, to reach the European level of sulfur oxides and nitrogen emissions into the environment

Target indicators

- Quality of life of rural population
- Further development of infrastructure
- Resource saving
- Security in general
- Objectives of the Concept
Let's pay attention to other areas in organic farming. We can see these directions in Figure 3.

Fig. 3. Directions of organic farming

In the birth of organic production in the "green" economy, were public and international organizations and projects specializing in environmental issues and environmental protection [39-43]. The first environmental organization, which in the early 2000s began systematic work to improve organics, was the intergrated Foundation for Ecological Culture (FIEC), which formed the Organic Center of the country as part of a project of the European Union.

Currently, the amount of funding, the number of loans issued exceeds in rural areas, compared to mono and small towns, as well as cities, according to JSC «Fund for financial support of agriculture» in 2020, compared to 2017 (Table 3), which allows to make positive results in job creation in rural areas.

From 2017 to 2020, 11,813 microcredits were allocated in cities and single-industry towns, with a volume of credit/microcredit of 56.6 billion tenge. Predominantly 91.5% (51,843 million tenge) of the funds were allocated for the implementation of projects in livestock farming (45,953 million tenge, or 81%), crop farming (5,889 million tenge, or 10%) [44-49].

Table 3. Information on loans/microcredits of the financial operator JSC «Fund for Financial Support of Agriculture» in rural areas, mono and small towns, as well as in cities for the period 2017–2021
<table>
<thead>
<tr>
<th>Loan amount, mln. tenge</th>
<th>10 876.7</th>
<th>22 631.1</th>
<th>2 737.6</th>
<th>26 562.8</th>
<th>4 173.7</th>
<th>19 271.4</th>
<th>1 602.6</th>
<th>4 227.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of loans/microcredits issued</td>
<td>4 397</td>
<td>8 022</td>
<td>622</td>
<td>11 932</td>
<td>990</td>
<td>8 308</td>
<td>399</td>
<td>2 304</td>
</tr>
<tr>
<td>to finance a start-up business</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of jobs created</td>
<td>4 904</td>
<td>9 968</td>
<td>846</td>
<td>14 382</td>
<td>1 369</td>
<td>10 303</td>
<td>570</td>
<td>3 054</td>
</tr>
</tbody>
</table>

Note – Compiled by the authors

In the JSC "Fund for Financial Support of Agriculture" financing was carried out at the expense of the state. The main features contributing to the formation and development of labor potential as an integral part of social and labor relations are:

- the fourth scientific and technological revolution, the introduction of new technologies in all sectors of the economy, including the rapid development of information and communication technologies;
- "green" financing of rural businesses.

Fig. 4. «Green» financing in rural areas

Thanks to the development of new economic relations, the effective use of labor potential in rural areas will be possible through various categories of farms in rural areas, i.e. agricultural enterprises with "green" financing, farmers and households, social and professional corporations, and public works (Figure 4).

Such opportunities are a prerequisite for the use of labor potential, as they ensure the pace of economic and social growth through the effective use of «green» finance.

A special place in the solutions of "green" financing of production and social problems is given to the optimal organization of labor potential of urban and rural areas.

In recent years, there has been a general trend of economic growth, which is mainly based on natural resources and raw materials and the share of agriculture and manufacturing in GDP; despite the overall improvement in living standards in the country, income inequality...
5 Conclusion

The main priorities of the concept were the efficient use of water, land, biological resources, minimizing environmental damage through fertilizers and plant protection products. However, the concept itself did not mention organic farming, but in the subsequent activities for its implementation such a task was set.

In our opinion, the prerequisites of «green» financing as a factor in increasing the efficiency of labor potential use are:

- ecological and geographical (natural and climatic conditions, level of environmental pollution, location of the region, natural resource potential);
- socio-demographic (natural population increase, decrease, growth rate, age and gender structure);
- labor market, level of employment by branches of economy, socio-productive conditions, distribution of population by living standards, consumption structure;

Thus, «green finance» will allow rural producers to expand not only in agriculture, but also in the production of organic products, thereby the agricultural sector will achieve significant technical progress in the «green» economy.

References

5. A. Yerzhanov et al., Transportation Research Procedia 63, 1481–1488 (2022) https://doi.org/10.1016/j.trpro.2022.06.159
6. O. Fokina, A. Mottaeva, E3S Web of Conferences 371, 05055 (2023)
7. A. Fedyaeva, A. Mottaeva, T. Larinina, Lecture Notes in Networks and Systems 575, 87–96 (2023)


