

Environmental entrepreneurship: theoretical aspects, development prospects in organic agriculture

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Abstract — The importance of environmental entrepreneurship development is determined by the search for new ways of economic evolution in the face of increasing economic damage from pollution and depletion of the natural environment. The essence of entrepreneurship in economic science is widely disclosed, but the theory of environmental entrepreneurship is at the nascent stage. The paper analyzes the essence of environmental entrepreneurship, the theoretical prerequisites for its emergence. It is shown that theoretical approaches to the essence and origin of environmental entrepreneurship are interrelated and can be used in various combinations. The article highlights one of the most important trends in the development of environmental entrepreneurship - organic agricultural production. The concept and principles of organic agriculture in the interpretation of international organizations such as the Research Institute for Organic Agriculture (FiBL) and the International Federation of Organic Agriculture Movements (IFOAM) are studied. It is shown that the demand for organic products is growing every year throughout the world and Russia has great prospects in the development of the organic market, but today it is almost in its infancy. The article analyzes the reasons that restrain the development of organic products market such as non-compliance with the requirements of international certification, greenwashing and others. Directions for the development of organic agriculture in Russia are highlighted such as the improvement of legislation to regulate organic products market and mechanisms of preferences for producers.

Keywords - ecological entrepreneurship, organic agriculture, sustainable development, greenwashing

I. INTRODUCTION

Large-scale environmental problems of recent decades lead to the search for new ways of developing the economy that will help to maintain economic growth and to simultaneously reduce the burden on the environment.

To achieve this effect, it is necessary to develop new environment-friendly technologies, methods of extraction and use of resources, production of environmental goods, works

and services. A major role in this process is played by the environmental entrepreneurship that contributes to the achievement of simultaneous environmental and economic benefits. One of the priority areas of environmental entrepreneurship is the production of organic products.

II. PROBLEM STATEMENT

The theory of environmental entrepreneurship is in its infancy. It is required to systematize the concepts of environmental entrepreneurship, clarify the essence of the category and the prerequisites for its inception.

Recent studies of the world market show that the demand for ecological clean products is growing every year, but Russia's share in this market is negligible and makes 0.2 percent.

III. PURPOSE OF THE STUDY

The purpose of the study is to summarize the theoretical concepts of the essence and development of environmental entrepreneurship, identify factors that inhibit the development of organic agriculture in Russia and formulate recommendations for the development of the organic products market.

IV. OBJECTIVES OF THE RESEARCH

- To analyze academic literature on environmental entrepreneurship.
- To identify theoretical concepts that explain the origin and the nature of environmental entrepreneurship.
- To analyze data on the development of organic agricultural products in the world.
- To consider the nature and principles of organic agriculture.

- To determine the position of Russia in the world organic food market and the development degree of the internal organic market.
- To identify the factors that limit the development of national organic agriculture, make recommendations for the growth of organic products market.

V. RESEARCH METHODS

When writing the article, national and foreign literature was studied which reveals the essence of environmental entrepreneurship, its types and forms. For example, they are works by such authors as K.P. Arent, R. Issak, E. R. Chernyakhovsky, E. V. Chechunova, J. Ya. Yandyganov, A.A. Naumov, E.V. Varennikova, S.V. Vershinin and others.

Such methods of scientific research as the study of the regulatory and legal framework for organic agriculture, generalization of the data obtained, economic and statistical analysis and synthesis, analytical and comparative methods were applied.

VI. RESULTS AND DISCUSSION

In the theory of environmental entrepreneurship, modern economic research distinguishes different approaches [1]:

- the synthesis of two theories: the theory of market failures and the state, and the theory of entrepreneurship, according to which market failures and states that caused environmental problems are key factors that motivate entrepreneurs to use new entrepreneurial opportunities related to solving these problems [2,3,4]. For example, Dean and McMullen define environmental entrepreneurship as the one that combines environmental awareness with the business to shift to a “greener” development [3];

- the concept of environmental modernization [5,6,7]. Environmental modernization (as a package of political actions) is becoming increasingly important for the environmental policies and practices of industrialized countries motivates entrepreneurs to unite economic and environmental interests.

Beveridge and Guy determine environmental entrepreneurs as individuals or organizations that integrate the drive, way of thinking, and the actions of the ordinary entrepreneur with environmental care [5]. In the spirit of this approach there is the definition of environmental entrepreneurship suggested by E.V. Chechunova - all types of entrepreneurial activity whose purpose is to produce goods, provide work and services that ensure compliance with the environmental requirements established by the current legislation [8];

- environmental entrepreneurship in the context of sustainable development and innovation concepts presupposes the environmental responsibility of business as a prerequisite for ensuring sustainable development of society and an important component of corporate social responsibility [9,10,11,12]. The interconnection of entrepreneurship and

innovation creates competitive advantages when entering existing and new markets. The concept of sustainable development and the theory of innovation in many ways echoes with environmental modernization; in most studies, environmental entrepreneurship is seen as innovative and sustainable-oriented. Mitrofanova M.M. stresses that it is entrepreneurship that is called upon to materialize the concept of sustainable development through the formation and evolution of the market for ecological goods, works and services, and other economic and organizational measures that will help to reconcile economic and environmental interests and the needs of society [10];

- environmental entrepreneurship is a response to the emergence and development of environmental and economic interests and needs. [13, 14]. This approach was formed on the basis of J. Schumpeter’s economic development theory: “Needs are both the cause and the guiding principle of the economic behavior of the economic entity, represent its driving force” [15]. Naumov A.A. discloses the essence of environmental entrepreneurship in an interesting way. He views it as a form of entrepreneurial activity aimed at meeting environmental and economic needs through products whose environmental utility is of decisive importance in their overall utility, while components of the ecological system are mainly considered as factors that determine ecological and economic needs [13].

We agree with the authors who argue that despite the wide variety of different theoretical concepts of environmental entrepreneurship, they do not contradict each other and they can be used in various combinations [1]. Both externalities in the economy and tightening of environmental legislation can serve the stimulus to develop such areas of environmental entrepreneurship as the production of environment-friendly goods, various resource-saving technologies, including waste recycling and diverse types of alternative energy, environmental improvement. Thus, it can be said that the evolution of entrepreneurship in this case is due to the failures of the market and the state and the policy of ecological modernization. At the same time, the development of these areas of environmental entrepreneurship contributes to the sustainable development of society, which corresponds to the concept of the relationship between environmental entrepreneurship and the theory of sustainable development. The approach related to the development of entrepreneurship in response to the growing needs of people in organic food explains the dynamic involvement of the market for organic products and organic agriculture.

According to the World of Organic Agriculture, the survey presented in 2018 by the Research Institute of Organic Agriculture (FiBL) and the International Federation of Organic Agriculture Movements (IFOAM), the positive trend of recent years continues: consumer demand for organic products is growing. The world organic food market in 2016 reached 89.7 billion US dollars (more than 80 billion euros), the number of organic producers was 2.7 million, 178 countries are developing organic agriculture [16].

According to the definition of IFOAM General Assembly - Organics International, “organic farming is a production system that supports the health of soils, ecosystems and people. Such system is based on ecological processes, biological diversity and cycles adapted to local conditions. Organic agriculture combines tradition, innovation and science in the interests of the environment to promote fair relationships and a high quality of life for all participants” [17].

Organic products should be safe for humans and the environment at all stages of the agricultural cycle: production, processing, transportation and delivery to the consumer. The use of pesticides and mineral fertilizers, artificial products such as genetically modified organisms (GMOs), veterinary medicinal products is excluded.

The basis for the development of organic agriculture is made of four principles that reflect the opportunities that are opening up to the world through the introduction of organic farming. These principles are as follows:

- health: organic agriculture should support and improve the health of the soil, plants, animals, human-beings and planet as a single and indivisible whole. Within the framework of this principle, it is supposed to abandon the use of minerals that have an adverse effect on health.

- ecology: organic agriculture should be based on the principles of the existence of natural ecological systems and cycles, working, coexisting with them and supporting them. In accordance with this principle, the management of organic agriculture must be adapted to local conditions, expand the reuse, waste utilization and efficient management of resources in order to protect the environment.

- fairness: organic agriculture should be built on relationships that guarantee fairness in the light of the overall environment and life opportunities. This principle emphasizes that the processes of production, distribution and trade must be open, equitable, taking into account real environmental and social costs, promote the growth of food sovereignty and overcome the poverty of countries.

- care: the management of organic agriculture should be of a precautionary and responsible nature to protect the health and well-being of present and future generations and the environment. The principle is based on the synthesis of scientific research, practice, on the traditions and knowledge of the local population. The criterion for selecting the technologies used is not only productivity, but also the absence of risks to health and well-being” [17].

In 1972, the International Federation of Organic Agriculture Movements (IFOAM) was established with headquarters in Bonn (Germany), it is an international non-governmental organization that defends the interests of all organizations involved in organic farming. Currently, it has about 700 organizations from more than 100 countries.

Organic standards regulate the sphere of organic production, these are sets of requirements imposed on organic producers which are formulated on the basis of the principles of organic agriculture. Throughout the world, there are a large number of organic standards, both public and private. Some have very limited scope (e.g. one country or even one region in a given country), while others are applied internationally. To facilitate trade relations between market participants, it is necessary that systems of standards are comparable and consistent with each other in terms of basic requirements.

IFOAM established and maintains the Organic guarantee system designed to harmonize standards, conformity control procedures and market identity in the production of organic products.

The IFOAM family of standards provides an effective and reliable mechanism for recognizing multiple private and public standards as equivalent. The IFOAM family of standards is a set of standards – both private and public – that are recognized as organic by virtue of their compliance with IFOAM standards. IFOAM recommends to its members from different countries whose standards are included in the family of standards to recognize all other included standards as equivalent in order to reduce the operating costs of multiple estimates of their equivalence. Thus, the standards approved in the IFOAM family of standards can be recognized as organic by all participants of the organic products market. [18].

The leading organic food market is the US - (38.9 billion euros), followed by Germany (9.5 billion euros), France (6.7 billion euros) and China (5.9 billion euros). Switzerland had the highest per capita expenditure (274 euros) and Denmark had the highest share of the organic market (9.7 per cent of the total food market) (Table 1).

TABLE I. SAMPLE STATISTICS OF ORGANIC FOOD MARKET DEVELOPMENT IN 2016 [16].

<i>Country</i>	<i>Market of organic food products (million euros)</i>	<i>Organic market share (%)</i>	<i>Expenditures on organic products per capita (euro / person)</i>
USA	38 938	5.3	121
Germany	9 478	5.1	116
France	6 736	3.5	101
China	5 900	-	4
Switzerland	2 298	8.4	274
Denmark	1 298	9.7	227
Russia	120	-	1

Organic farmland increased by 15 percent compared to 2015 and amounted to 57.8 million hectares, which is the largest growth in history. Australia is a country with the largest organic agricultural zone (27.2 million hectares), followed by Argentina (3 million hectares) and China (2.3 million hectares).

The countries with the largest organic share of agricultural land are Liechtenstein (37.7 percent), French Polynesia (31.3 percent) and Samoa (22.4 percent).

In Russia, the area of organic land was 289,890 hectares, the share of organic agricultural land in the total area of agricultural land is 0.1 percent (Table 2).

TABLE II. AREA OF ORGANIC AGRICULTURAL LAND IN SOME COUNTRIES IN 2016 [16].

Country	Area (hectares)	The share of organic agricultural land in the total agricultural land (%)
USA	2 031 318	0.6
Germany	1 251 320	7.5
Liechtenstein	1 383	37.7
China	2 281 215	0.4
Australia	27 145 021	6.7
Argentina	3 011 794	2
Russia	289 890	0.1

In 2016, 2.7 million organic producers were registered, which is 12.8% higher than in 2015. India is still the country with the largest number of producers (835,200), followed by Uganda (210,352) and Mexico (210,000). According to FiBL and IFOAM, there are 55 organic producers in Russia. (Figure 1)

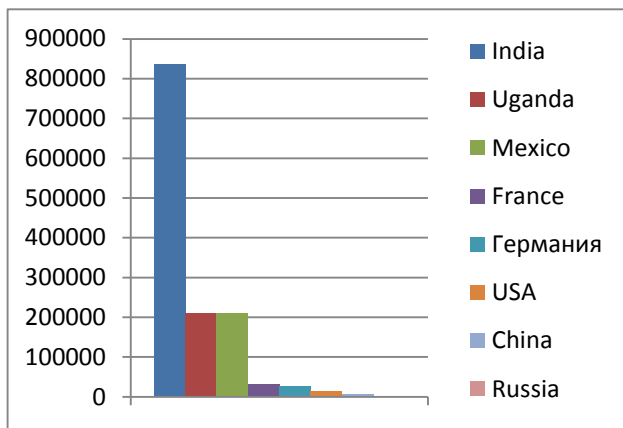


Fig. 1 The number of organic food producers by some countries in 2016 [16].

Today, Russia occupies 0.2% of the world market of organic products [19].

The above data show that the organic market in Russia is at the initial stages of its development. Nevertheless, Russia has opportunities for the development of organic agricultural production. Moreover, Russia has a significant advantage -

large areas of farmland as about 40 million hectares of land lie fallow [20]. The demand for organic products in the domestic market is also growing. According to “Alliance-Media” information agency, over the past 5 years the number of Russians which are ready to pay more for environmental products grew by 19.5%, while the share of such consumers in Moscow increased by 29% [21].

It is difficult to analyze and assess organic agriculture in the country because there are no official registries of organic producers and, accordingly, official data in this field, until uniform terminology is adopted. For example, the federal law creating the legal basis for the functioning of the industry in the country is being developed since 2012 and has not yet been adopted.

The main problem that constrains the development of organic production is the non-compliance with the requirements of international certification. Currently, in the world there are more than 30 systems of voluntary certification, in Russia there is only one, recognized at the international level – “Leaf of Life”, developed in 2001 by the Ecological Union of St. Petersburg. [22]

Obtaining an organic certificate is a long and expensive process. As a result, most producers refuse to receive it, preferring faster and easier ways, which leads to the development of greenwashing.

Greenwashing is a phenomenon when commercial companies that position themselves and their products as environment-friendly and safe for humans and the environment are in fact not such, and they primarily have the goal of significantly increasing their profits [23]. It is with the products of such companies that Russian consumers are most often confronted. The use of the terms “bio”, “eco” for purely marketing purposes undermines consumer confidence and creates problems for bona fide producers investing in environment-friendly production.

To date, the standards of the Russian Federation are developed and put into effect:

- GOST (All Union State Standard) R 56104-2014 “Organic food products. Terms and Definitions”;
- GOST R 57022-2016 “Products of organic production. The procedure for the voluntary certification of organic production”;
- GOST 33980-2016 “Products of organic production. Rules of production, processing, marking and sale. NEQ CAC / GL32-1999”.

In January 2018, a government bill “On the production of organic goods” was submitted to the State Duma for consideration by the deputies. Adoption of this law will solve many problems and create legal conditions for the development of organic agriculture in Russia. The law fixes such concepts as “organic production”, “organic products”, “organic producers”. The creation of a unified state register of organic producers is planned, state support mechanisms are

prescribed, both at the federal and regional levels. The law presupposes that only those organizations that have been accredited by the National Accreditation Body, that is, Rosaccreditation, will be able to certify organic production. Within the framework of this new system, the first Russian company, the Organic Expert, was accredited [19].

To date, the unified Russian graphic mark (marking) that will enable one to identify the product in the database of organic producers has not yet been developed. It takes time to develop, coordinate, compile a set of rules for applying it to the product packaging.

In European countries, the main producers of organic products are farmers while in Russia they are mainly large farms. Products of local farmers are positioned as natural, but in fact no one controls the technology of producing such goods, what fodder and medicines are used. The transition to organic production for such small farms is associated with high costs, from production to processing and sales, so they most need state support.

VII. CONCLUSION

The development of environmental entrepreneurship is one of the main opportunities to combine the growth of the well-being of society with the preservation of the environment.

In the theory of environmental entrepreneurship, different concepts are highlighted, they are close in content, do not contradict each other and can be used in different combinations to disclose the essence and evolution of environmental entrepreneurship in various areas of its activities. So, the growing people's needs for ecologically clean foodstuffs led to the active development of organic agriculture in the world. In turn, the development of organic production is one of the conditions for sustainable development of the society, it contributes to the growth of the quality of life of the population and the preservation of the ecological situation.

Factors restraining the development of organic agriculture in Russia are: the lack of a federal law in the field of organic agricultural production, the lack of management and accreditation of production and marketing of organic products, the lack of conformity of products with the requirements of international standards for organic products, the lack of a unified eco-labeling of national organic products, the orientation of business on short-term benefits and the development of greenwashing, a lack of investment and poorly developed systems of preferences for businesses, low environmental awareness.

The earliest adoption of the federal law on organic farming will solve a number of problems: a state register of organic producers will appear, a record of control indicators over the development of the industry will be introduced, a single terminology in the field of organic agriculture, the procedure for certification of national producers will be regulated, and the distribution of greenwashing will be legislatively limited.

It is necessary to continue the work on the introduction of a unified marking on organic products, to develop various mechanisms for state support to producers, including certification, and to expand investment opportunities.

The organic agriculture will contribute to the sustainable development and growth of the quality of life of the rural population, the creation of new markets for environment-friendly products and will increase the competitiveness of domestic producers both in the national and international markets.

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