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ENVIRONMENTAL ENTREPRENEURSHIP: CHARACTERISTICS OF ORGANIZATION AND DEVELOPMENT

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Abstract. The growing awareness of environmental issues, such as the accelerated depletion of natural resources and declines in the quality of the environment, has led to the emergence of the concept of balanced (sustainable) development, which implies continual coordination with an equal focus on the following three key components of development – economic, social, and environmental. The purpose of this paper is to analyze some of the key characteristics of the development and organization of environmental entrepreneurship. The authors explore in detail the concept of environmental entrepreneurship. An expert survey was conducted to determine some of the key ideas for the development of environmental entrepreneurship, as well as some of the key prospects for integrating environmental aspects into entrepreneurial activity as a whole. Among the key areas for the development of environmental entrepreneurship listed in the paper are production of organic output, environmental construction, environmental tourism, and waste management and recycling. The authors provide an in-depth insight into some of the key principles and lines of activity on each of the areas mentioned.

Keywords: environmental entrepreneurship; ecologization; organic output; environmental construction; environmental tourism; waste management; recycling

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1. Introduction

In the late 20th century, with a focus on balanced development becoming an integral part of international and national development policy, growing attention began to be devoted to the concept of environmental entrepreneurship (EE). An analysis of views by various scholars has helped identify the following possible ways to construe the above concept:

- EE is a type of entrepreneurial activity which involves the use of all available means to reduce and eliminate the environmentally negative consequences of a company's activity and results in the pursuit of peculiarly ecofriendly production practices (Anisimov et al., 2008; Pakina, 2012; Cherniakhovskii, 2016; Smaliukienė, Monni, 2019; Polozova et al., 2019);
- EE is a form of entrepreneurial activity which is aimed at meeting a nation's environmental-economic needs through products with a set of features that are characterized by environmental usefulness, with the components of the environmental system predominantly viewed as factors that determine the nation's environmental-economic needs (Boboshko et al., 2006; Boboshko, 2006; Ershova, 2016);
- EE is a sector of the national economy which is concerned with both direct participation in the implementation of various environmental protection and resource saving programs and the mechanism for compensating losses incurred as a consequence of technogenic and natural emergencies, as well as in the course of the actual carrying out of relevant emergency management activities (Iashalova, 2012; Mamaeva, 2014).

Currently, the leaders in the implementation of environmentally oriented technologies and export of organic products are the United States, Japan and Western European countries. Germany owns 43% of environmental patents for products and goods. According to experts, the volume of production in the ecological market is estimated from 600 billion to 2 trillion dollars, with an annual growth rate of 5.5-7%. Green business in the G8 countries accounts for 12-25% of GDP (Mainstreaming Eco-Innovation in Sustainable Consumption and Production Policies, 2017).

In developed countries, the production of environmental technologies is most profitable, so the ecological market is booming. In 2017, the average annual turnover of the European market for environmental innovation at the beginning of the 21st century was 183 billion euros. An important result of its operation was the creation of 500 thousand new jobs in 2012-2017. In general, the European Union today makes the greatest contribution to the formation of the global market for innovative environmentally oriented technologies, the capacity of which is estimated at 550 billion euros (Eco-Innovation in Europe, 2019).

The structure of the European market for environmental innovation consists of investment goods (54 billion euros) and services (129 billion euros), including non-commercial services. The market sector for managing efficient use of resources accounts for 56 billion euros, and the current market turnover of alternative renewable energy resources and related equipment amounts to 5 billion euros per year (O'Brien et al., 2019).

As for the world market in general, the segment of environmental technologies is about 1000 billion euros per year and is considered an important factor in the development of the world economy today. 45% of this segment is occupied by technological solutions in the energy saving industry. The economic growth of the environmental technology market segment is about 5.4% per year and, according to experts, by 2020 it will be 2,200 billion euros per year (Nicolai, & Pillot, 2017).

Today, the market for organic agricultural products is one of the most dynamic and promising. The annual market growth in Europe is about 10%. According to the research organization Organic Monitor, more than 90% of consumers of organic products live in the United States and Europe. The American market for organic products is the largest, ranging from 47 to 53% of the total market capacity in different years. The countries with the largest

markets for organic products are the USA, Germany and France. The highest per capita consumption is observed in Switzerland, Denmark and Luxembourg. The largest market shares are in Denmark, Switzerland and Austria (Golijan, & Dimitrijević, 2018).

In Europe, 29% of the organic agricultural areas of the world is concentrated. The countries with the largest area of organic agricultural land are Spain (1.6 million hectares), Italy (1.1 million hectares) and Germany (1 million hectares). Seven European countries have a share of organic agricultural areas higher than 10% of all agricultural land: Liechtenstein (29.3%), Austria (19.7%), Sweden (15.2%), Estonia (14.8%), Switzerland (11.7%), Czech Republic (10.7%) and Latvia (10.4%). The largest market for organic products with a turnover of 6.6 billion euros is in Germany, which is followed by France (3.8 billion euros) and the United Kingdom (1.9 billion euros) (Organic Food in the EU, 2018).

European experience shows that 73% of organic products are promoted through a retail chain, 15% through direct sales from manufacturing enterprises and through markets, 12% are sold through specialized stores, including online stores. In addition, now special “organic” restaurants and cafes are appearing in the USA and Europe, dishes from organic products are offered in regular restaurants as well. A characteristic feature of modernity is the rapid development of the organic baby food market (Organic Food in the EU, 2018).

The integration of environmental aspects into entrepreneurial activity has long stopped being a mere trend – today, it is an integral part of regular entrepreneurship. Over the last decade, the EU’s EE sector has been among the areas which have exhibited the greatest growth (an annual increase of 3.8% in the number of green SMEs compared with an annual increase of 1.3% in the number of SMEs as a whole in the period 2010–2017 (Szabó, 2017)). Through the European Council, the governments of EU member states have declared fostering EE among SMEs and a shift to the green economy as key objectives in their policy of sustainable (balanced) development (Szilagyi et al., 2018).

The EU has in place a clear-cut policy aimed at support for SMEs willing to embrace EE practices. Its ‘Europe 2020’ strategy is aimed at fostering “smart, sustainable, and inclusive growth”. As part of its implementation of the above strategy, the EU adopted in 2014 the so-called ‘Green Action Plan for SMEs’ (European Commission, 2014), which is aimed at providing support to SMEs in terms of the use of various business opportunities associated with a shift to the green economy. This action plan is aimed at:

- boosting the efficiency of resource use by SMEs. This implies providing SMEs with information on how to boost the efficiency of use of resources (materials and energy), facilitating the transfer of green technology among SMEs, and providing SMEs with better access to funding.
- supporting EE. This implies promoting eco-innovation among SMEs, facilitating business partnering and cultivating relevant skills and knowledge related to EE, and augmenting the role of clusters in support of eco-innovative SMEs.
- facilitating access to the market for green SMEs. This implies promoting a greener European internal market, facilitating access to international markets for green entrepreneurs, and facilitating the implementation of resource efficiency technology in partner countries through cooperation with European SMEs.

The novelty of the study consists in determining, based on an expert survey, the possibilities of EE in individual branches of business and the measures necessary to obtain the benefits of integrating environmental aspects into entrepreneurial activity.

2. Methods

As the study's primary method, the authors conducted a survey of experts in entrepreneurial activity (an expert study). The expert study provided a set of ideas for fostering EE and some of the potential prospects for integrating environmental aspects into entrepreneurial activity as a whole.

The survey procedure included the following activities: (1) specifying the gist of the issue under study and the motives for approaching a certain person as an expert; (2) gathering information which would substantiate an expert's competence, including information reflecting one's field of knowledge, expertise in the area, and qualifications; (3) preparing information which would form the basis of the survey questions; (4) designing the survey questions; (5) assessing the credibility of the experts' conclusions (views); (6) putting together additional remarks, comments, and suggestions.

As the study's theoretical subject, EE implies that a business adheres to the principles of environmental balance in its activity, strives to use renewable resources, and is committed to minimizing the negative impact its activity has on the environment. Certain aspects of this definition require additional clarification:

- entities engaged in EE activity adhere to regulatory requirements for environmental performance, with specific steps taken to continually improve this performance for the purpose of minimizing the negative impact on the environment;
- entities engaged in EE activity seek to turn out or supply traditional or new products and services in such a way as to minimize the negative impact on the environment;
- entities engaged in EE activity seek to employ resources and energy which are produced in such a way as to minimize the negative impact on the environment.

As the study's empirical subject, the authors engaged representatives of the business community and institutions associated with infrastructure for the support of entrepreneurship in Moscow Oblast. The expert sample consisted of 45 individuals, 9 of them being employees of the regional office of Rosprirodnadzor, 12 – employees of the Moscow Oblast Center of Support for Entrepreneurship, and 24 – executives and staff members of SMEs engaged in EE activity. The authors had deemed this number of experts to be requisite and sufficient to ensure maximum credibility in identifying a set of key opinions on the issue and prospects for the development of the situation.

3. Results and discussion

In discussing the ideas for fostering EE, the experts have noted that fostering EE will help meet society's need for products and services that have less impact on the environment and those that may actually help improve its condition. Most of the ideas for fostering EE are founded on the community's growing awareness of the importance of environmental issues, which, in turn, creates a demand for ecofriendly products and services. Considering that the level of awareness of the significance of environmental issues is going to only increase over time, demand for ecofriendly products and services will also increase along with the potential for the development of green entrepreneurship.

Thus, initially, the experts have drawn the following two crucial conclusions on fostering EE:

1. There will be increases in demand for novel products and services that are ecofriendly, which are going to replace old products and services that are less ecofriendly. More specifically, there will be greater demand for waste recycling systems, which are expected to replace waste disposal systems.
2. Businesses will increasingly become aware of the need to demonstrate to consumers their commitment to the conduct of ecofriendly activity, if they are to retain and expand their client base. At present, there is already a growing trend among companies for striving to position themselves as ecofriendly.

Combined, these factors suggest that growth in the EE sector will surpass economic growth as a whole. The success of green business depends on its ability to win over the consumer based on the benefits it offers, including

the provision of high-quality products and services which will set it apart from the competition. Businesses ought to look for ways to provide consumers with products or services that are valued not only for their commercial characteristics but also because the production of these goods or services has less negative impact on the environment. However, green entrepreneurs may first have to identify potential benefits from their activity and study them intently with the consumer in mind in an attempt to anticipate how consumers may perceive their product or service, and then establish how to organize a marketing campaign that will help convince them to use that particular product or service. In this context, the experts have found the following to be of particular importance:

- the specific environmental properties of ecofriendly products or services: what exactly makes an ecofriendly product or service a top option from an environmental standpoint and what the best ways are to let the consumer know about it.
- the cost of ecofriendly products or services to the consumer: is the ecofriendly product or service more expensive than its traditional counterpart? If it is, then it may help to focus on telling the consumer about the item being much safer environmentally than its counterparts are so that the consumer could factor in its greater value and would not mind paying the high price for it.
- the overall image of the organization: companies operating in the EE sector may be seen by potential clients as a driving force behind the building of an “ecofriendly” future. The firm’s ability to effectively implement ecofriendly products or services may, thus, be closely associated with the way the company is perceived by the general public. If a company’s activity is not generally perceived as environmentally safe, it, accordingly, may have difficulty selling ecofriendly products and services.

The experts suggested that in certain sectors ecofriendly products and services could be implemented more easily and faster than in others. However, any sector can commit to prioritizing work methods that are safer environmentally and, thus, reduce the impact of its activity on the environment. Table 1 illustrates the potential of pursuing EE practices in a set of sectors, as formulated by the experts (listed in order of significance based on the number of mentions).

Table 1. EE Potential in Particular Sectors

Rank	% of mentions	Ideas for the development of EE	Key principles and areas of activity
1	75%	Production of organic output	<ul style="list-style-type: none"> – development and use of a tracking system to make sure consumers can be confident that products referred to as ‘organic’ meet the international standards in that respect; – conduct of an ongoing public awareness campaign that will promote the consumption of organic products as a top food, lifestyle, and health choice; – obligating state-owned entities concerned with the production, processing, and sale of agricultural output to ensure full support for growth in the organic sector.
2	67%	Environmental construction	<ul style="list-style-type: none"> – effective use of energy, water, and other resources; – generation of electricity from turbine towers or solar batteries; – reduction of the volume of waste and reduction of other types of environmental impact; – use of local construction materials and products; – use of ecofriendly materials in construction and in the course of building-finishing activities; – use of biotechnological waste treatment techniques.
3	54%	Environmental tourism	<ul style="list-style-type: none"> – ensuring that the way in which tourism activity is conducted is aligned with a focus on keeping the area used as a tourism destination physically intact; – development of a system for reducing the consumption of natural resources (e.g., water and energy) by a tourism facility and/or of appropriate requirements for the management of its waste (i.e., wastewater and solid waste); – use of equipment that helps reduce the consumption of natural resources by a tourism facility and/or development of appropriate requirements for the management of its waste.
4	46%	Waste management and recycling	<ul style="list-style-type: none"> – utilization of waste from industrial, commercial, and administrative institutions which has the best potential for recovery and recycling (e.g., office paper and cardboard, plastic, various other packaging materials, and special waste, like electronic waste and tires)

Ranked first among the experts' ideas for fostering EE was the production of organic output. It has been noted that Russia possesses significant potential for the production of organic agricultural output. However, a key barrier to development in the sector is the nation's insufficient legal framework in the area.

As an example, in the US, Europe, Japan, India, and China there are already in place well-developed systems for regulating organic agriculture. A number of post-Soviet nations (Kazakhstan, Moldova, Armenia, and Georgia), likewise, have in place legislation on organic agriculture. Russia is virtually the last developed nation where the concept of organic products has yet to be regulated on a statutory level.

With that said, based on official statistics (Mironenko, 2018), in the period 2010–2014 the Russian market for organic products posted an average growth of 10% per year, with the figure dropping between 2015 and 2016 to 4%. Note, however, that compared with the 2000s, when 100% of the nation's organic products were accounted for by imports, at present Russia's domestic certified output accounts for nearly 15–20% of its market for organic products. However, despite Russia's relatively decent performance in the area in absolute terms, its share in the global market is just 0.15%, i.e. at the level of a technical error.

With that said, for SMEs the production of organic output is a window of opportunity that can enable them to not just survive but actually compete on par with large agri-producers based on their ability to turn out high-quality organic products (Kaldiysarov et al., 2014).

According to the experts, the level of awareness about organic products among consumers, manufacturers, and government authorities in Russia is still quite low. Just like in other countries, the price of organic products is higher than that of traditional (non-organic) products. Accordingly, the development of the domestic organic market depends on the level of awareness among the population, purchasing power in the nation, and the level of supply (the availability of a full range of products).

Placed second among the experts' ideas for fostering EE was environmental construction.

Environmental construction is founded on the principles of energy conservation and environmental friendliness. This type of construction helps minimize the environmental impact of construction projects and reduce the costs of house maintenance, as well as ensure comfortable living conditions. It has been suggested that an important consideration not to be overlooked is the favorable influence of the microclimate in houses built based on the principles of environmental friendliness on people's health as a whole and their mood and emotional states in particular.

Over the last 10–15 years, the concept of environmental construction has progressively gained momentum and popularity throughout the world (Dudin et al., 2014; Dobrovolskienė et al., 2019).

Ranked third among the experts' ideas for fostering EE was environmental tourism.

Environmental tourism is a type of tourism which devotes special attention to protecting a region's environment and culture. At the same time, environmental tourism is often associated with the countryside and designated natural areas that remain untouched by human activity. It also covers activity in the tourism sector as a whole related to minimizing negative impact on the environment.

According to the experts, environmental tourism in the countryside and designated natural areas may come in a number of forms, the most common of which are the following:

- agrotourism, which implies visits by tourists to farms and/or their personal participation in agricultural activities;
- ethnographic and cultural tourism, which implies exposing tourists to specific social and public aspects of life in the area;

– tourism in designated natural areas, which implies having tourists explore the area's natural characteristics.

These types of tourism are quite common today and continue to be keenly developed in many countries across Europe. An interesting fact is that in developed countries environmental tourism is popular not only among medium-income citizens but among wealthy ones as well. This is particularly good for the development of small entrepreneurship in rural areas, as it can easily integrate to local conditions and can provide urban residents with the opportunity to experience environmental tourism the way they have always wanted to.

The potential for developing this form of tourism is there both at the microlevel (individual enterprises or homesteads) and at the level of large SMEs. This potential implies the following: lodging services; service provision (marketing services, guide services, etc.); food supply services; construction and site management services.

Placed fourth among the experts' ideas for fostering EE were waste management and waste recycling.

According to the experts, SMEs' potential in waste management implies the following: waste collection; waste treatment and recycling; waste disposal.

Potentially, the greatest potential for SMEs is in waste treatment and recycling, with most waste treatment and recycling technology being quite simple and easy to use and there being large amounts of raw materials that are available for recycling.

In many of the cases, no distinction is made between solid waste from industrial, commercial, and administrative institutions and solid waste from households. However, waste generated by industrial, commercial, and administrative enterprises is known to be easier to process than waste from households. A key factor is that waste from industrial, commercial, and administrative institutions is associated with their actual economic activity: the amount of various types of waste from them is typically not very large, while the volume of waste per unit of waste generated by them tends to be large as opposed to households. This means that it may be possible to gather significant amounts of raw materials for recycling from a relatively small number of industrial, commercial, and administrative institutions. Once this waste is gathered, sorting it will require less effort than sorting household waste.

The processing of organic waste (mainly compost) may require much time and sizable areas if one is not using cost intensive technology. However, in this context one may need to ascertain whether or not the costs of implementing finished compost are sufficient to substantiate the use of costly equipment. With that said, it has been suggested that the technological potential of complete recycling of organic waste into fertilizers is sufficient today to totally resolve the issue of managing organic waste.

It is possible to recycle household waste too, but this may be impractical if there is no agreement in place entered into with the local self-governing authorities.

As regards the possibility of integrating environmental aspects into entrepreneurial activity as a whole, in the sense that environmental aspects could be incorporated into a business's decision making process, the key views voiced by the various experts are outlined below.

Most SMEs and other business entities tend to view the environment as a secondary issue which hinders their activity. As a consequence, it oftentimes takes getting them to react to things in order to direct their attention to environmental protection. For instance, most will start paying attention to their environmental performance and take appropriate measures only in response to regulatory pressure from the supervisory authorities (Lipina et al., 2017). This kind of approach leads to measures being taken to resolve environmental issues after the fact: funds are expended on environmental control (particularly, pollutant control) after the problem is already there. From

this standpoint, investing in environmental priorities may be regarded as unproductive and may dent a company's financial viability.

The integration of environmental aspects helps prevent negative impact on the environment and minimize it with a view to reducing expenditure on control over the condition of the environment, as well as improve environmental and financial outcomes from a company's activity (Lochan et al., 2015). In many cases, the integration of environmental aspects requires the consideration of alternative ways to develop products or organize production and the use of alternative material inputs with a focus on the improvement of environmental indicators at various stages of production or when it comes to the use of a product. For instance, a manufacturer of paper may adopt a technology that requires the use of smaller volumes of water not only with a view to reducing expenditure on water during the process of paper production but also to helping minimize the costs of the wastewater treatment process. In other cases, certain resources may be adopted based on their environmental characteristics, to go with the rest of the corresponding factors. For instance, one may adopt packaging that could be recycled with a view to helping reduce waste management costs.

Virtually all SMEs could adopt a strategy of integration of environmental aspects. However, the actual potential for doing so will vary – depending on the type of activity they are engaged in. Some of the measures SMEs could undertake to derive gains from the integration of environmental aspects are listed in Table 2.

Table 2. Measures to Capitalize on the Integration of Environmental Aspects

No.	Measure	Gist	Activities
1	Environmental analysis	Establishment of environmental indicators of the firm's activity	Form a task group that will consist of representatives of each of the firm's key departments with a view to establishing an agenda of issues that are relevant for the entire company. Explore the possibility of enlisting the services of third-party specialists to engage them in work with the task group. Conduct environmental audits and assessments of expenditure which will encompass all aspects of the firm's environmental performance – more specifically, indicators of its "regular" activity related to the environment (e.g., the use of energy).
2	Environmental solutions	Determination of ways to improve the firm's environmental indicators	Explore the possibility of modernizing the firm's key business processes, including in the area of supply of new materials, as well as making changes to the firm's operating activity with a view to improving its environmental performance. Implementation of environmentally attractive options, most importantly solutions that are facilitative of reductions in the costs of resolving environmental issues after they arise.

The integration of environmental aspects should result in boosts in SMEs' efficiency – reductions in their expenditure and increases in their net revenue. Going forward, boosts in efficiency may well become a new standard for SMEs. By that time, the integration of environmental aspects will have naturally become part of a new standard for SMEs – an indispensable component of the practice of conducting entrepreneurial activity among SMEs. Thus, the cycle of integration of environmental aspects will be continued:

- environmental analysis will be updated periodically;
- there will be determined new potential for enhancement based on new technology and upgrades to revenue/expense structures;
- there will be proposed and implemented new types of activity.

Due to a number of operating and financial benefits it provides, the integration of environmental aspects is becoming a common element of activity for increasingly more SMEs. SMEs that sell their products directly to clients may gain an additional advantage, as their activity and products will be perceived as ecofriendly. This will

also result in boosts in revenue in markets where a product's environmental performance is an important consideration.

Conclusions

Today, increasingly more entrepreneurs find it necessary to react to client demand for ecofriendly products and services. In this regard, they deliberately orient their products and services, as well as technologies and methods used to manufacture and supply those products and services, toward meeting the needs of their clients (who often desire to pay for ecofriendly products and services rather than traditional ones).

Among the key areas for the development of green entrepreneurship today are production of organic output, environmental construction, environmental tourism, and waste management and recycling.

A prospect for future research is analysis of the potential for the development of SMEs' environmental organizational potential and creation of appropriate conditions for fostering green entrepreneurship.

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