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GREEN ENTREPRENEURSHIP MANAGEMENT IN PORTUGAL: THE CASE OF AZORES ISLANDS

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Abstract

The World Ecologic Crisis puts a pressure on International Business to revise its approaches to business management. The Article refers to such a challenging object of study as Greening Economy and Business. Leaning upon the study of the respective EU regulations, the author takes as a goal the exploration of the specifics of Green Entrepreneurship Management in Portugal, with the focus on the Azores Islands green business management experience in sense of problems appeared and solutions found. A Case Study is used as a research method.

Keywords: *green economy, green entrepreneurship, renewable energy, sustainable energy system, sustainability, green products and services, economic growth, startup projects, synergies, public and private sectors, European Union, Azores Islands, Portugal.*

JEL CLASSIFICATION: Q01, Q5.

INTRODUCTION

With more opportunities arising for green/eco- entrepreneurs to invest in, green businesses are getting more popular. Therefore, more “greened” products and services are being offered worldwide, while the demand of those consumers who are interested in them and ready to buy/use them, is growing. The options for investing in green businesses vary from green consultancy to recycling, the businesses being tailored to saving energy, water and other resources. *Purpose of the article is to explore the trends and approaches of green entrepreneurship management in Portugal, with the emphasis on the Azores Islands.*

Outline of Key Concepts

GREEN ECONOMY

One of the main economic megatrends, ecologization, has served the base and the context for the Green Economy concept. The latter dates back to 1992 when the Declaration of Rio de Janeiro on Environment and Development was adopted which in turn included a program and an action plan for sustainable development in the 21st century as well as envisioned achieving two main objectives: high-quality environment and a healthy economy for all the peoples of the world. According to the definition of Green Economy developed by the United Nations Environment Programme (UNEP), it represents “a system of economic activities related to the production, distribution and consumption of goods and services that result in improved human well-being over the long term, while not exposing future generations to significant environmental risks and ecological scarcities” (Demuth, 2014). The Organization for Economic Cooperation and Development (OECD) views green economy as the economic development model based on sustainable deve-

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lopment and knowledge economy environment. The notion of green economy is, in turn, the part of the concept of sustainability, emphasizing the importance of taking into account the interactions between the economy, society and the environment. The European Environment Agency defines “green economy” as the one in which policies and innovations enable society to use resources efficiently, enhancing human well-being in an inclusive manner, while maintaining the natural systems that sustain the humanity, people all over the world (EEA, 2013).

The definitions of Green Economy formulated by different international organizations generally highlight such objectives as improving resource-use efficiency (e.g. use of energy, water and other material inputs); ensuring ecosystem resilience (protecting the natural environment, its ecosystems' structures and flows of ecosystem services), and enhancing social equity (promoting human well-being). Under the condition of global world market development, green entrepreneurship represents an essential component of green economy both as a concept and as a reality.

GREEN ENTREPRENEURSHIP

The term “green entrepreneurship” stems from Berle's 1991's work (Berle, 1991) and derives from the combination of the main characteristics of the entrepreneurship itself – innovation, risk, a brand new business idea, and the ecological and social engagement of those who do business (Gevrenova, 2015). Definitions of “green entrepreneurship” vary, being generally associated with “green” (Berle, 1991), “eco entrepreneurship” (Schaper, 2002) and “sustainopreneurship” (Dean & McMullen, 2007). According to the GREENT project implementors, “green entrepreneurship is the activity of consciously addressing an environmental/social problem/need through the realization of entrepreneurial ideas with a high level of risk, which has a net positive effect on the natural environment and, at the same time, is financially sustainable” (GREENT Project, 2012).

GREEN ENTREPRENEURSHIP IN PORTUGAL

After the completion of the EU Economic and Financial Assistance Programme (PAEF), Portugal needed a further vision of the long-term development of the country. The momentum followed the launch of a new set of structural reforms, as well as the targeted investments in such strategic areas as knowledge, industrial policy and the green economy. The Government has been undertaking structural reforms in the areas of the environment, energy, spatial planning, transport, housing, science, innovation, agriculture and tourism, going in line with the plans and actions reflected in the national strategies (key public policy instruments), among them being The National Research and Innovation Strategy for Smart Specialisation (ENEI), The Industrial Development Strategy for Growth and Employment (EFICE) etc., as well as a number of sectoral plans aimed at and based on public- private partnership (PPP). Portugal takes an advantage of the opportunity to promote an integrated and comprehensive vision of the sectors with green growth potential. The “red line” approach lies on nurturing the ability to link research, development and innovation to production, products, services and processes, and to proper funding mechanisms.

The Green Growth Coalition (GGC), founded in 2014, combines the efforts of about 100 associations, representatives of the business, science and financial sectors, public bodies, foundations and NGOs. The Green Growth Commitment (GGC), published by the Ministry of Environment, Spatial Planning and Energy sets out 14 quantified goals for 2020 and 2030, reflecting on the paradoxical situation faced by Portugal (i.e. possessing talents, resources and infrastructures with high potential, encountering however considerable structural problems) and the ways of overcoming it. The strategic paper highlights the importance of using the existing economic opportunities and the chances to create green growth related jobs (given Portugal has the talent, resources, infrastructures required to win on a global scale in the short-term, and considering the growing demand for green goods and services). The goals of green growth are consistent with the main challenges faced by the society in Portugal, and therefore contribute to meeting them: growth, employment, lower dependency on imports, more intelligent taxation etc

Backed up by the government support and investment coming from private sector, the country has witnessed the startup revolution, an “entrepreneurial discovery trend”. Portugal's novo

entrepreneurs applied their creativity, took a chance to start their own businesses, and thereby contributed to the transition of the economy from its traditional manufacturing roots to the one based on innovation. As a result, a number of business incubators have been created (Startup Lisboa), accelerator activity improved (Lisbon Challenge, acknowledged one of the top five most active programs in Europe), startups like TechStars, Y Combinator, Seedcamp etc., as well as Portugal and Azores Ventures were launched. Backed up by The Strategic Plan for Waste Management (for Portugal, and for the Azores in particular), recycling practices have increased and have become one of the Government priorities.

THE AUTONOMOUS REGION OF THE AZORES

Situated in the middle of the Atlantic Ocean, midway between Europe and North America, in the founding documents of the EU, the Azores region has a particular state of affairs, where the social and economic situation is compounded by the remoteness, insularity, small size, changeable climate, economic dependence on a few products etc., which in turn requires the specific measures. The Azores has significant renewable potential and contribute their renewable energy sources (RES) to the region's needs. Each of 9 islands is specific in its own way, their potential/resources being used most effectively based on the potential and use it represents. Thus, e.g. Flores has 54 per cent of its electricity produced by renewable energy (hydro & wind), while San Miguel has 44 of electricity production by renewable energy due to geothermal. Besides, San Miguel generates about half of its electricity from 2 geothermal plants and Flores has significant hydroelectric resources. As a result, the latter two were chosen as the first participants in one of the world's largest experiments in feasible energy systems powered by renewable sources (The Green Islands Project: the brainchild of engineers at INESC Porto, a non-profit body affiliated with Portugal's University of Porto, and the Massachusetts Institute of Technology (MIT).

For the course of years, EU- allocated funds and support have been the essential element in the economic and social development of the region. The main strategic guidelines for 2014- 2020 have been outlined in the Autonomous Region of the Azores: Assumptions and context for the Action Plan 2014-2020, in the context of the Communication from the European Commission “The outermost regions of the EU: towards a partnership for smart, sustainable and inclusive growth” document. The Plan calls for increase in the regional economy's level of competitiveness, covering the core and specialized areas, promoting the diversification of new sectors and areas of economic production. Active promotion of private sector employment is highlighted and became a priority, thereby linking the qualification of human resources to the needs of companies, while at the same time protecting underprivileged sectors of society. The tools used go in line with environmental sustainability, efficiency and the preservation of resources principles.

Given the specificity of each island, the main potential and advantages of each one should be properly used following the sustainability principles. Among the islands' main advantages to focus on are the following: renewable energy (geothermal & wind); the main industries working basically with their own resources (agriculture, dairy farming, livestock ranching, fishing, tourism); sustainable outdoor/wildlife activities as tourism attraction (whales watching etc.); tourism etc. Tourism, being an emerging sector, is at the same time one of the sectors of the regional economy which has the greatest potential for growth (green economy growth inclusive). Besides its impact on income generation and employment, it also has a positive effect on the trade balance as an ‘export’ activity. National Geographic Traveller ranked the Azores in the 2nd place among the leading destinations worldwide for sustainable tourism and was later ranked as the best “Green” destination in Europe. Being a sector which has become an important priority relatively recently in the region economy, it plays a growing role in the Azores region strategy for economic development. Mention should be made that the related growth is linked to the sustainability of the Azores as a destination and a suitable balance between tourism activities, associated with infrastructure and the protection of the landscape, eco-systems and biodiversity.

The islands are not viewed and promoted as a “sun, sea and sand” mass tourism destination. The new consumers are targeted, motivated towards special interest holidays, including the “green” component.

A number of innovative research projects (synergies) are worth highlighting. Among the most significant ones are: **The Green Islands Project** (a multidisciplinary MIT Portugal Program, its main objective being to design and implement a sustainable energy system that minimizes the dependence from fossil fuels and contributes to the economic and social development of the region); **Green Islands Field Monitoring** (the main project goals including the creation of a network for the real-time remote monitoring of energy consumption and examining the effect of real-time energy information on consumer behavior); **Net Zero Farms** (promoting the use of micro-generation facilities as one of the approaches to build a sustainable energy system; design and monitoring clean energy solutions using an optimal system design approach, applying a set of related devices that can be applied within the farming and dairy sectors); **Net Zero Schools** (the Net-Zero energy buildings (NZEB) concept based; aims to explore the subject deeper by designing and implementing 3 Net-Zero energy schools (NZES) in the Azores and to couple it with active education strategy, thereby contributing to improving sustainable behavior of Azoreans) etc.

Waste prevention and management constitutes one of the pillars of the sustainable development strategy of the Azores ensuring the environment protection and the health of both local population and tourists. To that end, recycling practices have increased and present a Government priority in Portugal and the Azores Islands region in particular (backed up by the Strategic Plan for Waste Management in the Azores and other national level regulations in question), As a result, a number of the launched initiatives yielded positive feedback. Mention should be made of at least some of them as follows. More than 5,000 tons of used tyres have been fragmented, containerized and removed from the Azores for recycling in mainland Portugal. Recycling and its advantages have been actively promoted among Azoreans by the Sociedade Ponto Verde and the regional network of Environmental Awareness Raising Centers (ecotecas), coupled with environmental education at schools (reflecting on waste reduction, reuse, recycling etc.). “Catchy” Ecopontos recycling bins have become widespread throughout the town and countryside and impact the population’s (“eco/green”) behavior/habits.

CONCLUSION

EU support has been the indispensable element in the economic and social development of Portugal, the Azores region inclusive. Public investment subsidized by the EU has been structured along two main guidelines: (i) providing necessary investment for basic infrastructure in diverse areas and in the nine islands of the archipelago, and (ii) Economic and social structures which consider promoting private investment and enhancing human capital. At the same time, after the completion of the EU Economic and Financial Assistance Programme (PAEF), more approaches and tools have been explored and implemented. Structural reforms at the national level in the areas of the environment, energy, spatial planning, transport, housing, science, innovation, agriculture and tourism were launched, with the investments targeting such strategic areas as knowledge, industrial policy and the green economy. Portugal has been promoting an integrated vision of the sectors with green growth potential. The main approach applied stems from the ability/necessity to link *research, development and innovation* to production, products, processes and services, as well as to related funding mechanisms.

The Action Plan provides the guidelines to increase the regional economy’s competitiveness level, covering the core and specialized areas, promoting the diversification of new sectors and areas of economic production. Supported by the government, as well as by the investments made by private sector, Portugal’s *novo entrepreneurs*’ efforts contributed to the startup revolution, an “entrepreneurial discovery trend”, and thereby to the transition of the economy from its traditional manufacturing roots to the one based on innovation. Promotion of private sector employment became a priority and tailors the qualification of human resources to the needs of companies, while

protecting underprivileged sectors of society. The applied means and tools go in line with environmental sustainability, efficiency and the preservation of resources principles. Synergies (research projects) between economic growth and sustainability and strategic choices in which the green component is an actual reality in economic growth priorities, have become a reality.

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