

# THE DEVELOPMENT OF GREEN ENTREPRENEURSHIP IN THE MODERN WORLD ECONOMY

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**ABSTRACT.** Global economy is undergoing a new systemic transformation, which led to a significant increase in popularity and profitability of green entrepreneurship throughout the world. The article explores the main trends in the development of green entrepreneurship in modern world economy through a wide range of aspects: as a megatrend in global economy, its share in foreign direct investments (FDI), international trade and consumption, its role and impact. Following the study of the related EU regulations, the author explores the specifics of green entrepreneurship management in Portugal with the focus on the Azores Islands. The research has been conducted using electronic and paper based bibliographic sources in English and Romanian, interviews with the specialists in the field, case study and personal observations.

**KEYWORDS:** *green entrepreneurship, renewable energy, green products and services, startup projects, synergies, public and private sectors, European Union, Azores Islands, Portugal, pandemic, tourism*

## Introduction

Global economy is undergoing a new systemic transformation. According to the founder of the World Economic Forum, Klaus Schwab, it can be categorized as the Fourth Industrial Revolution [1]. It is redefining the core tenets of modern economy and entrepreneurship fast through the Schumpeterian concept of creative destruction. New technologies, like 5G connectivity, artificial intelligence, 3D printing, Internet of Things, drones, autonomous vehicles, as well as many others, are bringing with them the promise of increased productivity and return on capital. However, the modern society expresses the discontent with the current economic model, due to the fact of accelerated consequences of man-made climate change. Consumers tend to eschew companies and products that are known for their careless attitude towards the environment. The representatives of the Millennial and Gen Z generations, who are about to overtake the Baby Boomers as the main consumer group, are leaders in this behavior. These trends, as well as relevant national and sub-national policies and multilateral agreements, have led to a significant increase in popularity and profitability of green entrepreneurship throughout the world. It is associated with the concept of leading with purpose, is indicating the willingness of the businesses to take into account its impact on environment and wider range of stakeholders. Business Roundtable, one of the most influential business lobbies in the United States, issued a statement on August 19, 2019, in which it for the first time in 40 years redefined the purpose of corporations to a much wider interpretation, including “protecting the environment by embracing sustainable practices across our businesses” [2]. This marks an important departure from more than 40 years of Milton Friedman’s ideas on corporations [3] and move towards Klaus Schwab’s stakeholder theory [4]. Thus, the *importance of the topic* of green entrepreneurship cannot be overstated, and the *purpose of the article* consists in providing an opportunity to explore a more global picture of its role. The *research methodology* has included the documentation and analysis of the relevant electronic and paper based bibliographic sources, interviews with the specialists in this field, personal observation as well as a case study.

The article provides an outline of the role of green entrepreneurship in the modern world economy through a wide range of aspects: as a megatrend in global economy, its share in foreign direct investments (FDI), International trade and consumption, its impact on the world economic development. 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 trends and specifics of green economy development in Portugal, with the emphasis on the Azores Islands, as well as the current activities in response to COVID 19 pandemic impact on tourism sector are explored in the article too.

### **Ecologization as a Megatrend of the Contemporary World Economy**

The notion of megatrend, introduced in 1982 by John Naisbitt in his work “Megatrends: Ten New Directions Transforming Our Lives” [5], represents a relatively new term in social sciences. Naisbitt defined *megatrend* as “a long-term, broad reach transformational process with broad reach, global scope, and a fundamental and dramatic impact”. Michael O’Sullivan, Head of Portfolio Strategy & Thematic Research at Credit Suisse, defines Megatrend as “... a profound and long-lasting social and/ or economic change that has been spurred by factors such as technological breakthroughs, shifts in the balance of geopolitical power, altering demographic patterns and environmental change”[6]. Many further interpretations of this term exist among various social scientists, financial executives, risk analysts and other actors. In our research, the definition of a megatrend that will serve as a base for further analysis will be the one provided by Z. Siscan: "the most general direction that produces its impact on all socio- economic systems at all levels, shaping ... a global socio- economic space, and which is acting persistently for centuries, forming a global socio-economic time"[7].

Ecologization unarguably constitutes one of the greatest megatrends of our time in economy and general life. Businesses are under more pressure to be environmentally friendly and disclose their climate related risks to investors. To understand the growing impact of this megatrend, it is worth noting that in its 2020 Global Risks Report [8] experts asked by the World Economic Forum [9] cited exclusively environment related risks in their top five of risks by likelihood, those being extreme weather, climate action failure, natural disasters, biodiversity loss and human-made environmental disasters. Among the top-five risks by impact, three are in the “green” category: climate action failure (1st place), biodiversity loss (3<sup>rd</sup> spot) and extreme weather (4th position).

The impact of Ecologization on entrepreneurship is being increasingly felt not only in big industrial and/or financial conglomerates, but also has influenced the blossoming a lot of small and medium enterprises (SMEs) focused on providing green goods and solutions to the needs of their communities. Thus, the megatrend democratized the entrepreneurship itself, and contributed to its new form, significantly enlarging its geography. In Sub-Saharan Africa, a region that is the most vulnerable to climate change and is experiencing the fastest population growth, green entrepreneurship is a way for many people, especially youth, to escape poverty and solve additional challenges to their way of life [10]. Another illustrative example is the growing presence of micro- and mini-grids. Their maintenance and installation costs are comparatively cheap, they use an abundant renewable source (solar energy) and allow those connected to it a constant access to energy even if conventional power lines are not connected

to their homes or are not functioning due to power outage. Being cheaper, healthier and more environmentally friendly than using diesel generators or firewood, mini-grids established by local entrepreneurs simultaneously provide solutions to the host of other developmental challenges by allowing women to cook without using dangerous fuels or firewood, children to study anytime, but most importantly it provides potential for increasing cold storage capacity for food. In developing countries, only 40% of food loss occurs after harvest and early in the supply chain, which amounts to more than \$310 billion in food waste and loss annually. On top of that, food waste is the third-largest global emitter of carbon dioxide [11]. Thus, the Ecologization as a megatrend also manifests itself by its capacity to influence and transform not just industries and spheres of life that are most responsive to it, but also provides substantial beneficial spillover effects further along the way. Green entrepreneurship is the main driving engine of this megatrend and will continue to be in such a position for the time being.

### **Green Entrepreneurship: Concept and Main Directions in Development**

Definitions of “entrepreneur” and “entrepreneurship” vary depending on study or business dictionary. For the purpose of this research the following synthetic definition of entrepreneurship is being suggested: an activity that involves the discovery, evaluation and exploitation of opportunities to introduce new goods and services, markets, processes and raw materials through organizing efforts that previously had not existed [12], [13]. Berle [14] provided the first instance of using the term of entrepreneurship in academic literature. The connotation of its use was mostly a derivative from the conventional notion of entrepreneurship, involving its core characteristics, such as risk taking, innovation and higher degree of positive social and environmental impact, in its description. The concept has later been developed by Gevrenova [15]. Schaper [16], Dean and McMullen [17] came up with their interpretations, introducing terms “eco entrepreneurship” and “sustainopreneurship”, respectively. Volery [18] identified two types of ecopreneurs: environment-conscious entrepreneurs developing any kind of innovation that decreases resource use and/or improves cost efficiencies on the way to zero-waste target; and green entrepreneurs, who are both aware of the environmental issues and whose business is entirely in environmental marketplace. According to the GREENT project implementers, “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” [19]. Among the terms available to describe green entrepreneurship, the following are the most commonly used: ecoentrepreneurship, ecopreneurship, environmental entrepreneurship, sustainable entrepreneurship, ecological entrepreneurship, enviro-preneurship or sustainopreneurship.

Proceeding from the aforementioned literature review, it is considered to be the most appropriate to define green entrepreneurship as follows. It is an economic activity, the results of which have net positive effect on the environment (by enhancing the positive changes and/or stemming the negative ones, i.e. internalizing externalities), change consumer behavior in the same direction and reward the risk of such an enterprise with profit.

From being a relatively niche business model, green entrepreneurship is gaining much more attraction and economic weight while the environmental concerns gain in importance and influence advanced and developing economies alike. The low carbon environmental goods and services (LCEGS) sector has continued to expand at nearly 4% per annum while

the global turnover in the sector exceeded \$5.4 trillion in 2012 [20]. That said, the scholarly literature still could not provide us with a cohesive response on how exactly the success of a green innovative startup and its financial performance is influenced by such important factors as innovations and industry life cycles [21]. Verreyne and Mayer [22] suggest that the main factor is the stage of the life cycle of a particular green technology at the moment when the firm enters market. In the initial phase, when standards for the development of said technology are not completely set, the startup firms are plenty and more aggressive in their behavior to gain market clout [23], while in the maturity phase of the cycle there are fewer and bigger firms remaining. They allow themselves more investments in R&D and mainly maintain their competitive edge through process innovations. For now, though, the market landscape is favoring two polar business models. The first one is of the green upstarts that are SMEs operating with a focus on one particular technology solution, in some cases sponsored by venture capital and unlikely to pursue a public flotation of its shares anytime soon. On the opposite end of the spectrum, one can find big so called “superstar” firms that use their economies of scale to significantly increase the green share of their business or to make their main green business even more profitable. Since the range of applications of green technologies is getting wider, the industries where such companies are in is widening as well. However, the beacons of innovation are mostly likely to be found in energy, electricity, car making and mobility solutions sectors.

### **International Trade in Green Goods and Foreign Direct Investments in Green Production**

International trade in green goods is about to receive a new impetus, owing to the following. The 21<sup>st</sup> Conference of Parties (COP21) and the UN Framework Convention on Climate Change (UNFCCC) in Paris in December 2015 resulted in signing of the ambitious Paris Climate Agreement and COP24 in Katowice in December 2018. It was agreed on almost whole handbook of their implementation (except on Article 6 of the Paris Agreement, which is referring to the establishment of global carbon markets). It became certain that increasing trade in green goods to fundamentally ecologize the modern economy is though not enough, it requires transformation of entire industries, which cannot be achieved without necessary capital and expertise. It is usually coming to many countries in the form of foreign direct investment (FDI). By establishing a foreign company’s affiliate or commercial presence, a company shows that its intentions to set foot in the respective market are serious. Greening production thus is becoming a strong commercial imperative, while host countries increasingly see attraction of green FDI as a priority in their development strategies. UNEP (2017) provides an outline of conditions under which attraction of green FDI will result in success:

- More purposefully aligning inward and outward FDI promotion, facilitation, and governance initiatives with environmental commitments made, and objectives identified in connection with the Paris Agreement and SDGs. This includes examining and strategically orienting host country policies, home country policies, and international frameworks such international investment treaties; such strategic alignment could include, for instance, efforts to use investment policy to advance projects that countries have identified in their Nationally Determined Contributions (NDCs) to Paris Agreement.

- Focusing on green reinvestment as a strategy for upgrading performance of existing assets.
- Ensuring that policy shifts and priorities by upstream national and international development banks enhance the viability and performance of green FDI.
- Increasing the effectiveness of FDI as a channel for green technology transfer.

Along with investment, it is important to look at the growing role of the environmental goods and services in global trade. Even though there are many barriers remaining at the policy level to facilitate their free and unimpeded flow green goods are of increasing importance in global trade. Moreover, this process of expansion is followed by significant reshaping and establishing of new green value chains that can be of any scale from local to global (even though a green global value chain is now hard to contemplate due to a significant impact of shipping sector emissions). The most successful cases are the value chains related to the production of solar panels and wind turbines. The batteries sector is looking for a breakthrough that will allow to transition from the lithium-ion and cobalt (for cars like Tesla) ones to those made of materials that will be mined and delivered more sustainably and ethically.

### **The Impact of the WTO on the Development of Green Entrepreneurship**

International trade in any goods, including green ones, can flourish as much as the regulatory environment allows it. At the international level, the main responsible body is the World Trade Organization (WTO), formed in 1995 after entering into force of the Marrakech Agreements. Under its auspices, a significant work has been done to liberalize various aspects of international trade. Unfortunately, the increasing dysfunction of the WTO has had its negative impact upon trade in green goods as well. One of the main objectives of the WTO Doha Round has been removal or significant reduction of both tariff and non-tariff barriers to the trade in green goods. However, continuous negotiations have not been yielding any significant result. When the WTO launched its version of the Green Goods Agreement for open subscription in 2014, only a few dozen countries have committed to it since then. Authors whose scholarship is focused on providing the perspective of developing countries on the Green Goods Agreement [24] mention that its focus primarily on lifting tariff barriers to trade in goods is too narrow, and that the negotiations per se are not inclusive, because the only non-high-income category countries present were China and Costa Rica. Melo and Solleder [25] also analyze the non-participation of developing countries at these negotiations. According to the authors, several factors have contributed to the non-participation by developing countries. First, the average applied tariffs on environmentally friendly goods in rich countries are around 0.5%, with few tariff peaks. Hence, at the tariff level, very little is at stake for the current participants in the EGA negotiations. Second, as expected, for both lists, average applied tariffs increase as income level decreases. Such asymmetry of interests, compounded by a sustained rise of protectionism and disregard for the rules of the multilateral trade system, mostly likely will continue stalling any meaningful advances in Environmental Goods Agreement negotiations for the time being. However, the growing bargaining power of developing states in climate negotiations at a certain point time will spill over in the EGA ones as well, which will make rich but still considered developing countries like China potential kingmakers. Since the leadership of the PRC embraced international trade agreements more openly, such developments cannot be excluded.

For the Environmental (Green) Goods Agreement to become more inclusive, the logjam should be broken in the WTO reform process as a whole. It will require all 164 countries with voting rights at the General Council to be onboard. When the threat of climate change intensifies and threatens the economy more directly, it is likely we will see the importance of the EGA rising and the negotiations going much smoother than now.

### **Green entrepreneurship in Portugal: Azores Islands Case**

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 launch of a new set of structural reforms followed, as well as the targeted investments in such strategic areas as knowledge, industrial policy and the green economy. The Government has been tackling structural reforms in the areas of the environment, energy, spatial planning, transport, housing, science, innovation, agriculture and tourism. It goes 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 Specialization (ENEI), The Industrial Development Strategy for Growth and Employment (EFICE) etc., as well as a number of sectorial 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, as well as to proper funding mechanisms.

The Green Growth Coalition (GGC), founded in 2014, puts together the efforts of about 100 associations, business representatives, 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, started 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 were launched (Startup Lisboa), accelerator activity improved (Lisbon Challenge, acknowledged one of the top five most active programs in Europe), startups like TechSned tars, Y Combinator, Seedcamp etc., as well as Portugal and Azores Ventures. Aligned with 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.

Proceeding from the 2030 Agenda for Sustainable Development, and namely Sustainable Development Goal 7: *Affordable and clean energy*, the following guidelines have

been highlighted for Portugal. Promoting the country as Europe's energy supplier and a leader in energy transition to a low carbon economy; promoting renewable sources in the final energy consumption; promoting the potential for cleaner and cheaper energy production; stimulating energy competition and competitiveness and develop an energy technology cluster in Portugal Push for energy efficiency and expand electric mobility etc.

The Azores region, situated in the middle of the Atlantic Ocean, midway between Europe and North America, has a particular state of affairs in the founding documents of the EU. The Azores 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 Islands also demonstrate significant renewable potential and contribute their renewable energy sources (RES) to the region's needs. Each of nine islands is specific in its own way, their 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. 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)).

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 highlights the need of 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 the 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. The associated 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/or 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 as follows. The Green Islands Project, a multidisciplinary MIT Portugal Program. Its main objective is 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. It 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 sum up, the recycling practices have increased the 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, the launched initiatives yielded positive feedback. 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. The Azores 2014-2020 Rural Development Programme (PRORURAL+) provides support for investments in agricultural enterprises, processing and marketing of agricultural products as well as measures supporting knowledge transfer, with the aim of increasing productivity and farmers’ incomes, increasing resource efficiency and job creation.

A multi-fund Operational Programme "Regional Azores 2014-2020" with contributions from the European Regional Development Fund and European Social Funds for the period 2014-2020, covers the outermost region of Azores. The programme aims to contribute to the fulfilment of the Europe 2020 strategy through the following: (i) fostering Research and Development (R&D) knowledge transfer to SMEs; (ii) promoting the competitiveness of the businesses of the region; (iii) promoting sustainable transport chiefly by developing and improving low-carbon transport systems; (iv) investing in education, training and vocational training for skills and lifelong learning; (v) supporting the development of renewable energy sources and improving energy efficiency in enterprises and buildings; (vi) promoting sustainable and quality employment and supporting labor mobility. One of the priorities of the regional government is the promotion of energy efficiency in the residential sector and in other sectors such as services, industry, public buildings, public

roads, as well as electric mobility. The related practices and measures have been developed to achieve the objectives that promote energy efficiency, in order to make the region energy efficient, consumers being considered as an integral part of the process.

### **Facing the COVID-19 pandemic crisis in the tourism economy**

The coronavirus (COVID-19) pandemic has led to an unprecedented crisis in the tourism economy, provoking the immediate shock to the sector. The Organization for Economic Co-operation and Development (OECD) [26] estimated 60% decline in international tourism in 2020. To that end, the measures taken today, viewing the pandemic crisis as an opportunity to rethink tourism for the future, will impact the tourism of tomorrow. An extraordinary convening of the G20 Tourism Ministers was held on 23 April 2020, and a statement was issued that welcomed national efforts to mitigate the economic and social impact of the pandemic, and committing to providing the support to a sustainable and inclusive recovery of the sector [26]. The Government of Portugal announced EUR 9.2 billion package, which includes EUR 3 billion in state-backed credit guarantees to provide liquidity for companies affected by the coronavirus outbreak. EUR 900 million are for hotels and accommodations, EUR 200 million for travel agencies, recreational services and event organizers, and EUR 600 million for restaurants (EUR 270 million of which for micro and small businesses). Turismo de Portugal, in turn, launched several specific measures to support the tourism sector, with the objective of minimizing the impact of the temporary reduction in demand levels in tourism, due to the crisis caused by COVID-19. Among them being such actions as: (i) launching a specialized online support service to provide advisory services to businesses in dealing with specific operational issues, helping to design Contingency Plans for COVID-19; (ii) transforming its destination's communication from #CantSkipPortugal to #CantSkipHope, a message of hope for all and adjusted to the moment of uncertainty in which we live [27]; (iii) refocusing its work to collect and provide market information on a weekly basis to companies, and is developing digital content for national operators in each market; (iv) updating the data on International Source Markets to Portugal: Daily update of market information for enterprises (air transport, reservations, tour operators and travel restrictions), produced by the offices of Turismo de Portugal worldwide and publicly available on Turismo de Portugal's knowledge management platform; (v) developing specific initiatives in the area of communication; (vi) collaborating with #Tech4COVID19, a platform to recruit accommodation (hotels and short-term rental) for use by health professionals who are unable or unwilling to return home for fear of contagion to the family etc.

At the background of the pandemic negative impact on tourism sector, aligning with the outlined above policy and measures taken by Portugal, Azores Islands regional and local government in partnership with business, associations, NGOs etc. have been implementing the local action plan on facing the pandemic situation. Some examples of the most recent activities in place since summer 2020, are as follows. The Regional Government launched two new editions of the Campaign for the Promotion of Energy Efficiency in the Azores, dedicated to the business and industrial sectors. The purpose was to boost energy optimization and enhance the positioning of these entities, going in line with the development of a low carbon economy in the Azores through energy efficiency and the use of renewable energy sources. The campaigns fall within the "Energy Efficiency Award - Azores," taking place this year in various sectors of activity, including tourism companies and tourist establishments, the industry, and public and private schools. Besides, a number of charging stations were

allocated and installed in a public access area near the hotels facilities. Technical support in implementing energy efficiency measures was offered. It aligned with Regional Government aim to expand the network of public access charging stations for electric vehicles, as provided for in the Plan for Electric Mobility in the Azores (PMEA). In August 2020, another tourism project that differentiates accommodation offer on São Jorge Island was launched with opening the tourist resort tailored to sustainable positioning of the Azores destination. This contributes to the development of the emerged innovative tourism projects targeting leisure tourism, promoting a closer contact with nature through extensive green areas and other outdoor spaces and facilities. Those projects have been supported and cost-shared by local entrepreneurs who invested their resources despite hard pandemic times.

## Conclusions

Green entrepreneurship is a megatrend in the global economy that is reshaping the latter at a growing pace. Growing awareness of the consumers of their impact on the environment, as well as generational change in consumer patterns, put pressure on businesses to be green or to leave the market. Such a situation represents an immense opportunity for green entrepreneurs to take over commanding heights of world economy in upcoming years. The success of green entrepreneurship underpins major global efforts to prevent catastrophic consequence of climate change. Paris Agreement, as well as Green European Deal unveiled by new President of the European Commission Ursula von der Leyen, all bet on a significant reliance on such type of entrepreneurs and influx of private (especially venture) capital to support them. However, states and multilateral institutions are not living up fully to the responsibility of the promotion of green entrepreneurship as of now. Even though governments roll out many incentive schemes for the sectors like renewable energy, red tape remains a significant problem, especially when it comes to fulfilling the potential of green and low-carbon FDI. Liberalization of the green FDI will inevitably require the removal of tariff and non-tariff barriers for the environmental goods, both finished and intermediate. Stalled Green Goods Agreement negotiations under the WTO auspices make for a bleak outlook in this regard. This can lead to the adoption of more radical and soloed solutions in this sphere by various actors.

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. 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. In doing so, Eco-innovation becomes a priority. 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 real.

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