Green Strategies and Business Ecosystems

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Abstract: The green strategies together with decisions create a business ecosystem in the Environmental Goods and Services Sector (EGSS). Such an ecosystem is a result of both technological development and strategy evolution. This paper aims to present and discuss the outcomes (as relations) of this sector activity. The adopted methods in this paper are un inductive inference method supported by a literature study and deduction methods supported by statistical calculations based on secondary data Eurostat. The main result of this paper is, that the main relations are: cooperation and the creation of strategic alliances; therefore, the creation of social value is favored.

Keywords: Green Management, Green Decisions, Environmental Goods and Services Sector, Circular Economy.

1. Introduction

The environmental or Green Strategies (GS) can be classified in two ways: first as a stage or continuous models and second as categorial or matrix models (Worthington, 2013, p. 88). The multidimensional and strategic approach is crucial for development in achieving sustainability by organizations (Sulich and Grudziński, 2019). On the other hand, the GS can be more operational and together with decisions can be a part of processes of the transition towards the business ecosystem. The subject of this study is the Environmental Goods and Services Sector (EGSS) in the EU. The activity scope of this sector is to reduce the negative impact of other economic sectors' activities on the natural environment.

This paper aims to present and discuss the phenomena of business ecosystem creation in the EU. Used methods in this paper are un inductive inference methods supported by a literature study and deduction methods supported by statistical calculations based on secondary data from European Countries.

2. Managing Ecosystem and Strategies

The GS is about making decisions by enterprises that as a result have a positive impact on the environment. The GS can be passive (static, reactive) or active, depending on the factor that initiates the organization's environmental performance. In the first case, the stimulus limiting the organization's negative impact on the environment are legal regulations, penalties, and fees, and in the second case, the organization's interest in caring for the natural environment. The foundations of a GS are formed by principles based on business logic and environmental protection goals (Olson, 2008). We can currently observe a shift from the traditional, reactive approach to a proactive one in the matter of dealing with ecological issues. Additionally, some organizations use a predictive approach aimed at taking advantage of environmental business opportunities (Azzone and Bertelè, 1994).

The GS can be distinguished into three types: pollution prevention strategy, product stewardship strategy, sustainable development strategy (Hart, 1995). There are also: clean technology and base of the pyramid in a term of the strategy of sustainable development (Hart and Dowell, 2011). Buysse and Verbeke proposed another typology of ecological strategies. The first strategy uses a feature of the most passive strategy is overexploitation of an environmental resource, which has nothing to do with environmental protection. Such organizations generate pollution to the natural environment in an uncontrolled manner, i.e., they emit dust and gas pollutants, discharge sewage, and produce waste. This strategy is referred to as uncontrolled dumps. The second strategy is also static; in the literature, the names of controlled discharge and dilution of pollutants are used, which refers to pollutants discharged into the environment. The total dose of pollutants remains the same; it is only diluted and released into the air, water, and soil. Another strategy is for the organization's transition from a controlled discharge strategy to an end-of-pipe strategy to remove the effects of pollution. In this strategy, improvements in environmental protection only concern the reduction of the number of pollutants discharged. The goal is to remove the effects of contamination; therefore, the strategy is called the end-of-pipe strategy. The next strategy is characterized by a proactive, dynamic approach to environmental problems. Organizations assume the need for a quick response and are looking for new solutions to minimize and prevent pollution. Pro-ecological activities are voluntary and meet stricter requirements than applicable legal regulations. The dynamic approach as an idea is similar to the strategy of clean production, emphasizes the minimization of the amount of pollution in the company, and is based on the principle of continuous improvement of pro-ecological activities (Buysse and Verbeke, 2003).

Table 1. Green Strategy goals

Variable symbol	Indicator characteristic [unit]	Average unit
CE_2	Generation of municipal waste per capita [kg per capita]	482,0
CE_3	Generation of waste excluding major mineral wastes per GDP unit [kg per thousand euro]	110,2
CE_4	Generation of waste excluding major mineral wastes per domestic material consumption [%]	12,3
CE_5	Recycling rate of municipal waste [%]	33,0
CE_6	Recycling rate of all waste excluding major mineral waste [%]	46,1
CE_8	Recycling rate of e-waste [%]	35,4
CE_9	Recycling of biowaste [kg/capita]	56,6
CE_10	Recovery rate of construction and demolition waste [no unit]	80,4
CE_12	Circular material use rate [%]	8,6
CE_13	Trade in recyclable raw materials [tonne]	317705,8
CE_14	Private investments, jobs, and gross value added related to circular economy sectors [mln euro]	4721,8
CE_15	Patents related to recycling and secondary raw materials [number]	11,5

Source: Authors elaboration based on (Eurostat, 2021)

3. Method and Results

In this paper we assume, that all mentioned strategies lead towards the Circular Economy (CE) and EGSS development. The secondary data from Eurostat were analyzed (Table 1). The EU measures the changes in country level for each CE indicator. Researched variables, represents the mix of the all-strategies types. The values of the variables describing the EGSS and the CE indicate that there is a strive to achieve a common GS in the EU or establish one business ecosystem based on the EGSS. In Figure 1 we present that there are multiple GS with different specific goals (as presented in Table 1). The EGSS is then completely 'emerged' in GS and is a part of wider Business Ecosystems.

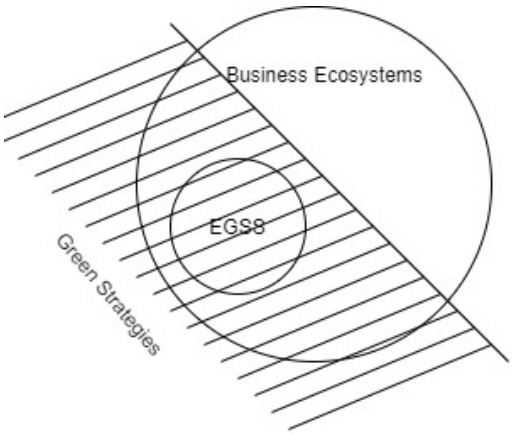

Figure 1. Business Ecosystems and Green Strategies

4. Conclusions

The EGSS characteristic is the result of the general strategy of the EU which aims is to achieve Circular Economy. The ecosystem is the result of the joint efforts of all companies which develop relationships between them closing loops (instead of chains) in CE. Development of GS into the fourth type which we propose is based on the proverb that "one man's trash is another man's treasure". This dependency can support both CE transition and the development of EGSS.

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