

CORPORATE SOCIAL RESPONSIBILITY VERSUS SUSTAINABLE PRODUCTION IN THE PROCESS OF IMPLEMENTING ECO-INNOVATIONS

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Purpose: The purpose of the paper is to assess investments made to-date in the field of innovations introduced within the sector of small and medium-sized enterprises (SMEs) located in the Małopolskie voivodeship, including environmental initiatives.

Methodology: The research was conducted at the turn of 2023 and 2024. At the first stage of the research the selection of enterprises was intentional, namely, small and medium-sized enterprises that carried out their business in the Małopolskie voivodeship. Then enterprises were selected on a random basis (350 respondents). A statistical analysis of the results was made. The obtained results were subjected to a two-way analysis of variance (ANOVA) and Tukey's multiple comparisons tests, with a significance level of 0.05. Tukey's post-hoc tests allowed for a detailed analysis of the means by identifying statistically homogeneous groups. Confidence intervals for the means of the examined traits were calculated, assuming a confidence level of 0.95. The calculations were performed using the Statistica 13.1 statistical software package (StatSoft Inc., USA).

Findings: The results of the research confirmed that the SMEs are hardly interested in introducing eco-innovations (approx. 5% of respondents). The most frequent barriers that hinder environmental initiatives among the respondents included: insufficient financial resources and inexperience. Other responses included: lack of knowledge and qualified personnel.

Originality/value: The research on eco-innovations is a necessary activity in order to increase competitiveness of enterprises from the SME sector. An innovative approach to the analysis of this issue becomes necessary for current and future research in this field. The above is confirmed by the presented research.

Keywords: Corporate Social Responsibility (CSR), sustainable production, eco-innovations.

Category of the paper: Research paper.

1. Introduction

The concept of sustainable development involves developing a competitive economy that effectively relies on resources, including environment friendly solutions. The implementation of modern environmental technologies has become an important challenge faced by contemporary economies. Hence activities aimed at efficient utilization of resources are necessary, among other things, as part of activities that are an important element of economic, social and environmental challenges of contemporary economic systems. However, those processes require implementing innovative ecological activities. Taking into account factors specified in the paper, the paper presents the role of eco-innovations in the process of sustainable production. The nature of innovative ventures has been analyzed with a special focus on eco-innovations, opportunities of investing in eco-innovations as well as major factors being barriers resulting in reluctance to invest in environmental activities. A low level of innovativeness performance in the area of ecology is currently one of key problems experienced by any economy.

2. Corporate Social Responsibility – the essence

Corporate Social Responsibility (CSR) has become a very common concept in recent years. There has been a belief that CSR complements the principles of free market (Filek, 1999). CSR is a long-term approach to business with a dialogue as its underlying principle allowing to find solutions beneficial both to an enterprise such as profits, competitiveness on a local or global market as well as to its employees, a local community, business partners and cooperators, investors, suppliers and other stakeholders.

CSR plays a conscious role, has its place and function in the process of transforming a local community into an active, entrepreneurial and civic one (Stachowicz, 2007). That requires conscious recognition of values and doing business with trust, co-operation and loyalty as its underlying principles. CSR's clear definition is not an easy task as different aspects of that concept are emphasized (Gagacka 2006). Numerous definitions of CSR refer to economic issues manifesting in rationality and good intentions in a decision-making process to maximize profits and expand business activities. CSR should be considered in various areas, including (Rok, 2004):

- internal – related to the growth of human capital, HR management (ensuring equality of staff, fair pay, introducing programs for improving qualifications), introducing ethical programs for staff (codes of ethics, training in ethics), ensuring occupational safety and hygiene, as well as that targeted at owners (shareholders), managers (management board, senior and middle management), trade unions,

- external – oriented towards groups interested in the activities of a company in its closer and more distant surroundings, including introducing rules governing relations with trade partners, suppliers, competitors, financial institutions, investors, representatives of government and self-government administration, customers, economic organizations (traders' associations, commercial chambers), relations with a local community (teaming up with local NGOs, philanthropic activities, social investments), media and international institutions,
- activities affecting the natural environment – accounting for an environmental aspect in business, including environmental impact, taking care of the natural environment.

There are three phases in the development of the perception of CSR (Kietliński, Reyes, Oleksyn, 2005). The first one lasted until the 1920s and was the phase of managing profit maximization. Market observers, experts in management saw the need for corporate social responsibility, however, the society mostly believed in business's responsibility only in the context of its own interests. As a result of the activities performed by trade unions, entrepreneurs began to improve working conditions which then led to the next phase called "trust management". A belief emerged in the 1960s that businesses should be engaged in solving social problems which was then called the phase of managing life quality.

Table 1.
The growth of CSR

Values	PHASE I MANAGING PROFIT MAXIMIZATION	PHASE II TRUST MANAGEMENT	PHASE III MANAGING LIFE QUALITY
Economic	What is good for me is also good for my country. A profit maximization factor. Management board responsibility pertains to owners	What is good for an organization is also good for a country. A profit generating factor. Management board responsibility pertains to owners, customers, employees, suppliers and other co-operators	What is good for the society is also good for our business. Profits are needed but... Management board responsibility pertains to owners, co-operators and society
Technological	Technology is very important	Technology is as important as people	People are more important than technology
Social	Employees must leave their personal problems at home I am a strong individual and will manage business as I please. Ethnic minorities are inferior to white people	Taking into consideration non-economic needs of the staff. I am an individual but I get to learn the value of teamwork. Minorities have their own place in the society but a worse one than mine	Taking into consideration all needs of an employee (meaning a human being). Being a member of a group is of key importance to succeeding. Members of minority groups have the same rights as any other people
Political	The best government is that which rules least	Government is a necessary evil	Business and government must work together to solve social problems

Cont. table 1.

Environmental	Natural environment controls the purpose of people	People can control and manipulate the environment	Environment protection is necessary to lead a high-level life
Ethical	Ethical values? What are they?	Ethical values are good but not for us	Ethical values need to be protected and we have been doing that

Source: Żelazna-Blicharz, 2013.

3. Sustainable growth and corporate social responsibility

Over the past twenty years the concept of CSR has been increasingly frequently called sustainable growth of companies (Rok, 2003). Responsible business involves taking account of the following three areas in which businesses operate: economic, environmental and social.

Sustainable growth is a multi-dimensional category that is researched by representatives of numerous fields: economy, political science, law etc. It mostly refers to systems on a macro level: states, economies, international communities, however, its implementation in practice requires the implementation at the level of micromanagement. Sustainable growth is a political economy doctrine that assumes the quality of life at a level which is allowed by the contemporary civilization progress (Rutkowska-Podołowska, Pakulska, 2011).

The notion of sustainable growth is definitely a broader concept than CSR. The concept of sustainable growth refers not only to business activity but also to the attitudes of governments, units of self-government, any and all state institutions and the society as a whole.

Focusing on a given organization, CSR is both a certain philosophy and a set of tools that allows to attain the condition of sustainable business which, in the long run, guarantees a long-term increase of the enterprise's value as well as generating environmental and social benefits.

Sustainable growth is achieved thanks to meeting (Jabłoński, 2007):

- social goals - eliminating hunger, diseases, poverty, illiteracy, social orphanage, satisfying intellectual needs, safety and personal fulfillment,
- environmental goals – preventing the degradation of natural environment, eliminating environmental risks, increasing diversity of natural environment, efforts to use renewable sources of energy,
- economic goals – satisfying material needs, equalizing the speed of economic growth in individual regions, adjusting techniques and manufacturing technologies to meet the requirements of the protection of natural resources.

The analysis of said definitions allows to distinguish a few common elements:

- it refers to three major domains: economic, environmental and social,
- it makes human activities an integral part of the process of maintaining a nature balance,
- it is an intergenerational and a long-term initiative,
- it helps satisfy human needs world-wide.

CSR is an inseparable part of the sustainable growth strategy as the success of enterprises involves long-term growth that equally accounts for social, economic and environmental aspects. Recently a view has emerged that the formula of CSR is no longer valid and that goals of sustainable growth are now more important. According to Porter and Kramer (2011) transformative corporate social responsibility can be a response to such status quo being the highest stadium of that concept as part of which willingness to solve a social problem becomes a starting point for developing a company's business model.

4. CSR and sustainable production versus eco-innovations

Eco-innovations or in other words ecological innovations have played an important role in the process of reducing negative impact on the environment. Eco-innovations have been researched since late 1970s. They involve creating, adjusting or using a product, manufacturing process, a service or management methods, business practices which are innovative for the national market (being developed or implemented) that result in – throughout the entire life cycle – a smaller environmental risk, help reduce pollution and other negative impacts being the effect of using resources vis-a-vis alternative solutions.

Two basic features make eco-innovations different from classic innovations according to the OECD. The first one is focusing on the reduction of negative impact on the natural environment (regardless of whether such effect is intended or not). Another one is the fact that innovations are not limited in the area of the product, process and marketing methods – eco-innovations also include innovations in social and institutional structures (OECD, 2009). Ecological innovations are conditional upon many factors, including internal and external ones, such as those related to technological trends, natural environment policies, competitive activities, consumer attitudes and the company's potential. As part of the product's life cycle or as part of individual industries and sectors, co-operation with different entities has become increasingly important to creating and implementing eco-innovations.

Eco-innovations can be divided into two groups (Zwolińska-Ligaj, 2013):

- new products, services or manufacturing technologies that result in a small environmental impact vis-a-vis commodities produced to-date or manufacturing processes applied to-date (at the same time assuming higher effectiveness) as well as those being based on natural resources or those recovered as part of recycling,
- new services, devices and technologies that help reduce the impact of the manufacturing processes on the environment – which prevent pollution (sewerage treatment, reducing gas and dust emission into the air etc.) as well as those that are related to undoing damage caused or restoring it to initial condition.

Eco-innovations are aimed at reducing the environmental impact and their implementation also contributes to increasing competitiveness, innovativeness and economic growth (Foltynowicz, 2012). Eco-innovations should be considered not only from the perspective of the environment but also from the perspective of the economy as well as security (decreasing the dependence on the supplies of raw materials) (Szpor, Śniegocki, 2012).

The impact of eco-innovations on the environment can be determined by assessing whether a given technology, product or service helps reduce the environmental impact caused by a man, contributing to meeting objectives such as reducing the consumption of energy, raw materials and soil, reducing emission and waste and preserving bio-diversity and landscapes. Another method of indirect evaluation involves determining whether a given technology contributes to meeting ecological objectives as part of a sustainable growth strategy as determined by an environmental policy or the society (Lulewicz-Sas, 2011).

Another criterion of the division of eco-innovations can be the operations of the enterprise, with three groups of innovations that can be distinguished (Zuzek, 2011, pp. 563-567):

- ecological innovations in the product or services help reduce or prevent environmental pollution. Ecological activities are required in the whole production assortment. Each new proposal in the area of designing and implementing a new commodity needs to be verified from the perspective of the protection of natural environment protection;
- ecological innovations in the manufacturing and the auxiliary and manufacturing process. The first one should encompass both the purchasing of materials and the sale of the goods. Streamlining the technological process from the perspective of the quantity and quality of waste is a classic growth-related task of the enterprise. The enterprise that performs such task in a better and faster way will strengthen its market position. It should be borne in mind that it is less expensive and easier to apply new technologies than to look for ways of reducing pollution resulting from the application of outdated technologies;
- ecological innovations within the organization of the enterprise involve the development of such organizational structures that will integrate the protection of the natural environment into all tasks of the enterprise. The integration of an appropriate system of natural environment information into the enterprise's organizational structure is of vital importance.

5. The evaluation of investment activities in the area of eco-innovations in the Malopolskie Voivodeship

The analysis of the research results allowed to verify the activities of the enterprises in the area of innovations with a special focus on eco-innovations. To assess investment activities made to-date in that area a survey was conducted. From among all the surveyed enterprises (350 entrepreneurs) approximately 35% were the innovators, including only approx. 8% being eco-innovators. As regards plans to implement innovative solutions, approximately 40% entrepreneurs would be interested in implementing such solutions over the coming few years. However, on average 48% of the respondents are undecided in the area of introducing innovations.

Based on the results of the survey, approx. 46% of the surveyed business entities said that they have introduced technological innovations. Further positions in the ranking were occupied by the following: launching new products (approx. 26%) or ideas for starting a new business (approx. 10%). The entrepreneurs' awareness about the possibility of the existence and introduction of eco-innovations is still very low. Only 5% of the respondents invested in eco-innovations which helped improve the condition of the natural environment.

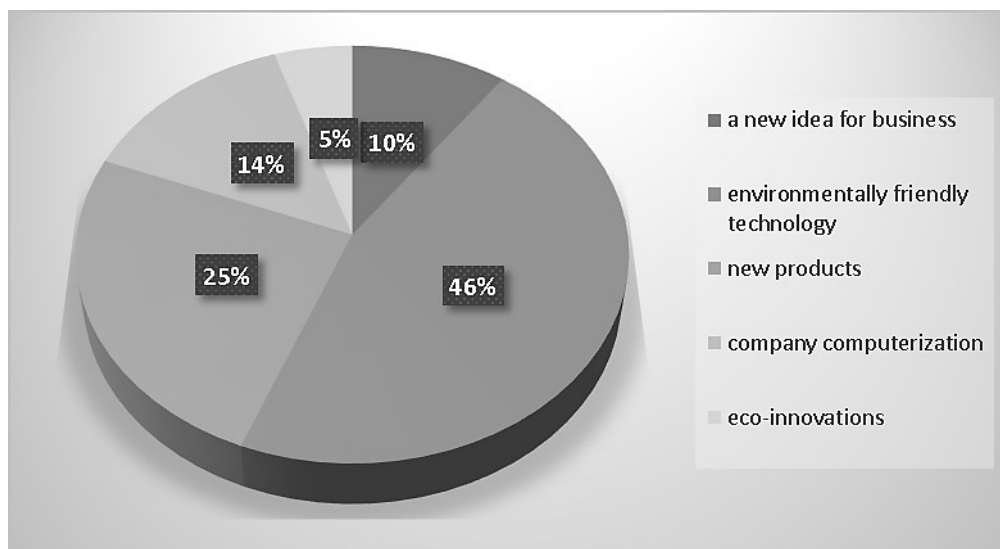


Figure 1. The nature of the innovations introduced by survey participants.

Source: own research.

Analyzing factors which make the entrepreneurs willing to invest in eco-innovations, it can be noticed that support programs such as subsidies to investments or supplement payments to green energy have become the most popular ones (almost 35% of all responses). They were followed by increases of energy prices (over 29%), and then by the popularity of green electricity (almost 16%).

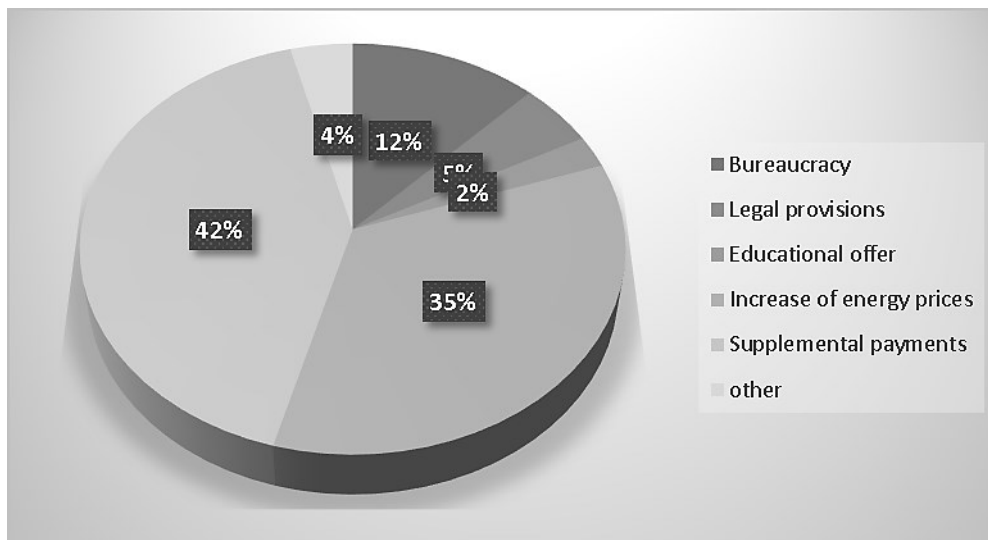


Figure 2. Determinants that impact the involvement in environmental activities (eco-innovations).

Source: Own research.

Major and most frequent barriers to the eco-investments as listed by the respondents included insufficient financial and technical resources, insufficient knowledge or lack of qualified staff. The shortage of staff qualified to implement innovations is one of major features showing the demand in the area of human capital.

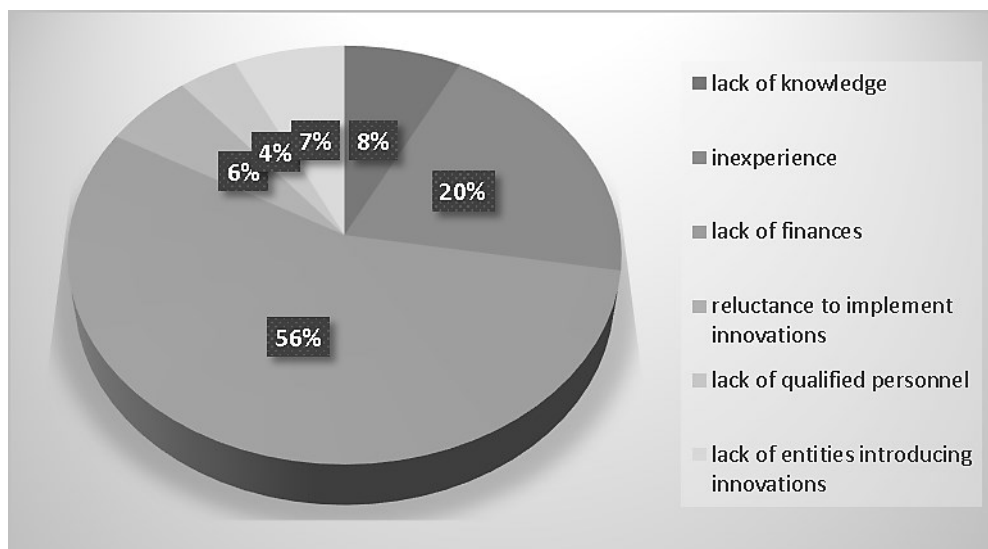


Figure 3. Barriers that result in the absence of eco-innovations.

Source: Own research.

6. Conclusions

Available reference books and empirical research allowed to analyze the determinants of investments in the area of implementing eco-innovative solutions by the SMEs. They validated an initial hypothesis that the entrepreneurs doing business in the Małopolskie voivodeship are hardly interested in eco-innovations (approx. 5% of respondents). The most frequent barriers that hinder environmental initiatives among the respondents included: insufficient financial resources and inexperience. Other reasons specified by the respondents also included the lack of knowledge or qualified staff. All those factors may be interpreted as low interest in eco-innovativeness being the element supporting sustainable growth of small and medium-sized entrepreneurs. Despite gradual increase of investments in technologies and environmental activities the entrepreneurs are not aware of the existence of alternative innovative solutions that comply with the concept of sustainable growth.

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