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READINESS OF SMEs TO IMPLEMENT ECO-INNOVATION

Abstract: The article discusses the subject of activities related to the preparation of companies from the SME sector to the implementation of eco-innovations. The presented data was obtained during the preparation of a doctoral dissertation, which was carried out in the Faculty of Management at Czestochowa University of Technology. The research was conducted in the years 2017-2018 and concerned both environmental awareness of entrepreneurs and eco-innovative activities in the enterprises. This paper presents analyses, directly related to the issue of the readiness of enterprises to implement eco-innovation.

Keywords: ecoinnovation, SME, pro-environmental activities

J E L C o d e: J53, L22

INTRODUCTION

The constantly changing economic environment forces enterprises to abandon classic business strategies [Nowodziński, Pardela, 2009, s. 197-209] and to implement new business models. To remain competitive on the market, enterprises need a catalyst in the form of innovation [Krawczyk-Sokołowska 2013]. It is the nature and intensity of innovation that often determines both: the effects of the activity and the future development opportunities of each enterprise [Borowiecki 2011, pp. 5-15; Kemp, Horbach 2008 p.2]. Considering the increase in the role of the environmental factor in the economy, more and more often as the way of achieving competitive advantage is indicated by building the organization strategies on a particular type of innovation - eco-innovation [Chodyński 2009, s. 34-37]. Unfortunately, as the European Commission points out [https://ec.europa.eu/environment/ecoap/indicators/index_en] in Poland,

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the development of eco-innovation is slow, and the eco-innovativeness index is one of the lowest in the European Union¹ [Wisniewska 2018, s.10]. Poland achieves low results in both: economic activities related to green technologies and in the implementation of eco-innovation to organizations. In order to be competitive on the European and global market, Polish enterprises must be transformed into more ecologically active organizations. Therefore, necessary is the “Sustainability transition” of the economy, a multi-level transformation of the economic system towards a “green”, low-emission and resource-efficient economy based on clean technologies and eco-innovations [Daszyńska-Żygadło., Ryszawska 2015, pp. 62-72]. In the past, only large organizations were indicated as entities that should include pro-ecological initiatives in their strategies and actions. In the last decade, small and medium-sized enterprises (SMEs) has been increasingly often pointed out as those that play a major role in the sustainable development of economies [Klewitz, Hansen. 2014 pp.57-75].

Companies of the SME sector both in the European Union and in Poland constitute the core of the economy. In the EU, over 99% of registered organizations are companies from the sector of small and medium enterprises (about 23.9 million enterprises) [Muller P., Julius J., Herr D., Koch L., Psycheva V., McKiernan S., 2017, pp. 7-9.] In Poland, entities in this sector are also a vast majority² [GUS 2017]. That is why they must play a key role in the aforementioned transformation, changing into modernly managed organizations, where the paradigm of value growth is understood much more broadly than just shareholder income [Brzóska J. 2012, p. 34-43].

IMPLEMENTATION OF ECO-INNOVATION IN ENTERPRISES OF THE SME SECTOR

In order to participate in transformation in sustainable enterprises and thus to achieve the goals of the idea of sustainable development, it is necessary to implement eco-innovation or broader pro-ecological activities to the overall functioning of the organization.

The concept of ecoinnovation was introduced in 1996 by C. Fussler and P. James [Fussler, James, 1996] defining them as new products and processes that provide added value to business and customers, while reducing the impact on the environment. Since then, various types of eco-innovation definitions and classifications have been presented in the literature, including, for example systems based on the criterion of purpose, mechanism or impact on the environment. [Carvalho A. Zarelli P. Madey Dalarosa B. 2018, Díaz-García C., González-Moreno A., Sáez-Martínez F. 2015, Păcesilă M., Ciocoiu C. N. 2018].

¹ 59 points with the EU average = 100 points - data for 2017

² Ok. 2 million organizations according to the Central Statistical Office data.

In general, eco-innovation is an innovation, which main goal is to bring environmental benefits. These benefits may result from increasing the efficiency of using natural resources, from preventing or minimizing the negative impact on the environment, but also from creating new pro-environmental social attitudes. Eco-innovations in an enterprise can have a very various dimension, from small changes in the “everyday life” of an organization to significant modifications in all areas of its functioning. Although eco-innovations are often equated with the reorientation of production processes and modern technologies, they may also include such activities as: introducing new or significantly improved products (goods or services), organizational changes or marketing practices [European Commission 2018]. Eco-innovativeness is connected with the change of whole business models. This process not only restructures the value chain of the organization but also creates new types of producer-consumer relations and influences the culture of consumption and product usage [OECD 2012]. Depending on the type of innovation, the implementation process can be characterized by various duration, implementation stages, risk level or costs [Baran, Ryszko 2015, p. 36]. Generally, the eco-innovative process can be divided into two phases: development and implementation. The subject of this article are actions preceding the above-mentioned phases - the process of preparing the organization for the implementation of eco-innovation.

RESEARCH AND RESULTS

The research was carried out at the Faculty of Management Czestochowa University of Technology as part of the PhD thesis entitled: “Environmental management in SME enterprises of the slaskie voivodship” [Koszarek-Cyra, 2018]. The subject of research were enterprises regarded as innovative, motivated to introduce changes in their organizations, and constantly looking for solutions in the field of conducting innovative activities as well as means of their financing. The sample was selected on the basis of purposive sampling. 2729 enterprises were invited to the survey, 100 of whom were participants in the “Zanim udu-si nas SMOG” project, the remaining 2629 enterprises were the organizations that received funding for the implementation of innovations from EU funds in 2007-2013.

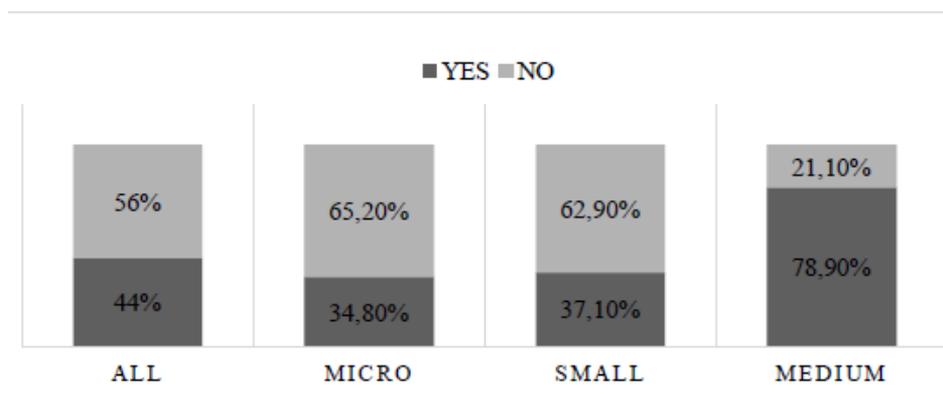
The research material was collected using two methods: CAWI (Computer Assisted Web Interview) and PAPI (Paper & Pen Personal Interview). The study was carried out in 2017 and 2018. 117 companies responded to the invitation (4% of invited companies). The respondents were the owners of the SMEs` and the managers. Finally, 100 questionnaires were qualified for the statistical analysis. The remaining 17 were rejected due to incomplete data. All of the surveyed enterprises had their headquarters in the Śląskie Voivodeship. Micro-enterprises

constituted 46% of the surveyed organizations, 35% were considered as small enterprises, 19% were assigned as medium enterprises.

This sub-chapter will present the results of research on preparatory activities, such as considering environmental protection in the organization's strategy, appointing a person responsible for environmental issues or carrying out an environmental audit, as well as acquiring knowledge about eco-innovation financing options.

The first of the analysed problems is taking environmental issues into account during creation of the company's policy. The obtained data show that only 44% of the surveyed organizations have considered environmental issues in their policy (Figure 1)

Figure 1. Taking environmental issues into account in the policy of the surveyed organizations



Source: Own research

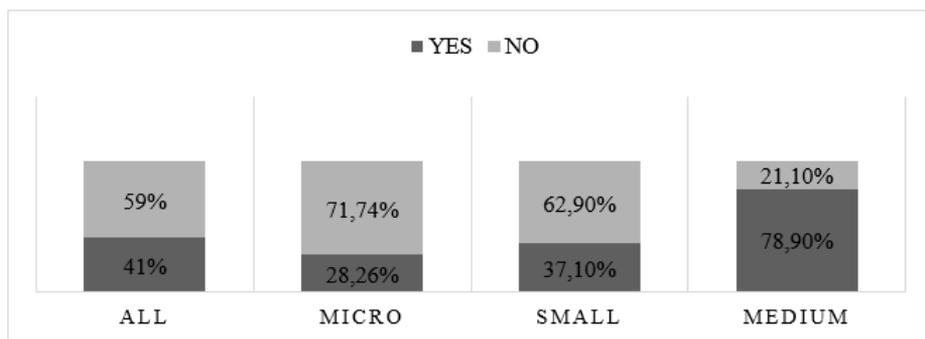
In this case, the differences between medium enterprises and other groups are clearly visible. Among medium-sized organizations, almost 80% declare that they take into account the environmental issue in the company's policy, in micro and small organizations, this percentage does not exceed 40%. It may indicate that decision-makers in larger organizations are more environmentally aware.

In most of the surveyed enterprises, no person / organizational unit responsible for environmental issues has been designated (Figure 2).

The percentage of enterprises in which a person/organizational unit responsible for environmental issues has been designated was again the highest in medium-sized organizations. It is understandable due to their more extensive organizational structures. Nevertheless, while in microenterprises it is often that one person - the manager/owner - deals with all matters of the organization and it is

difficult to talk about identifying someone responsible especially for environmental issues, in small and medium-sized organizations, where the employee structure allows for designation such a person, it should be done. It will facilitate conducting pro-environmental activities.

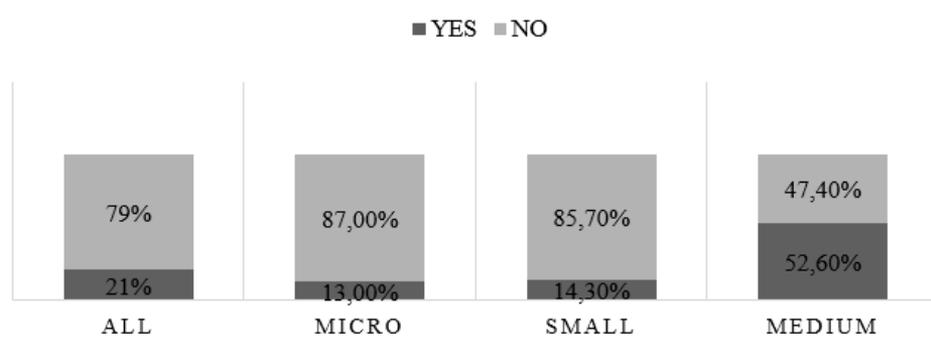
Figure 2. Percentage of enterprises with a designated person/unit responsible for environmental issues



Source: own research

The results obtained in the further part of the study indicate that only one in five of the surveyed organizations carried out an environmental audit (Figure 3).

Figure 3. Declarations of respondents regarding the environmental audit



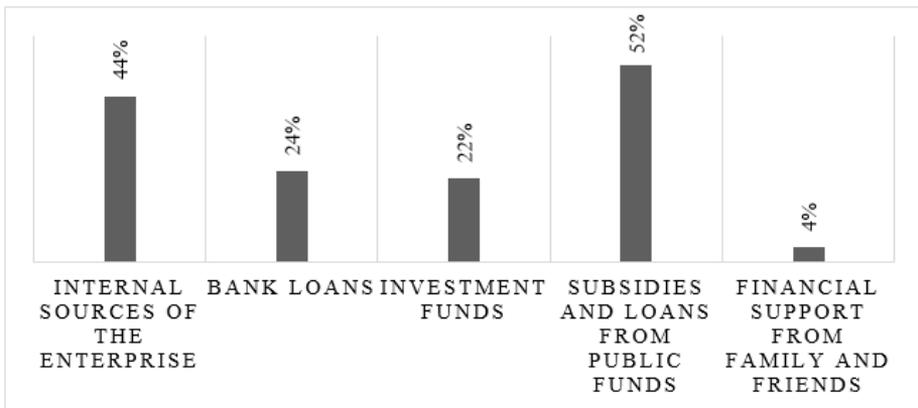
Source: Own research

Among micro-entrepreneurs, the audit took place only 13% organisations, a similar percentage of respondents declared such activity in small organizations. Medium-sized companies more often carried out them, however, the percentage

of audits is also unsatisfactory. It seems necessary to make managers more aware that conducting such an audit is very helpful, if not necessary in planning pro-environmental initiatives.

Referring to the eco-innovations planned in the nearest future, the respondents were asked from what sources their companies intend to finance such activities (Figure 4)

Figure 4. Potential sources of financing pro-environmental activities



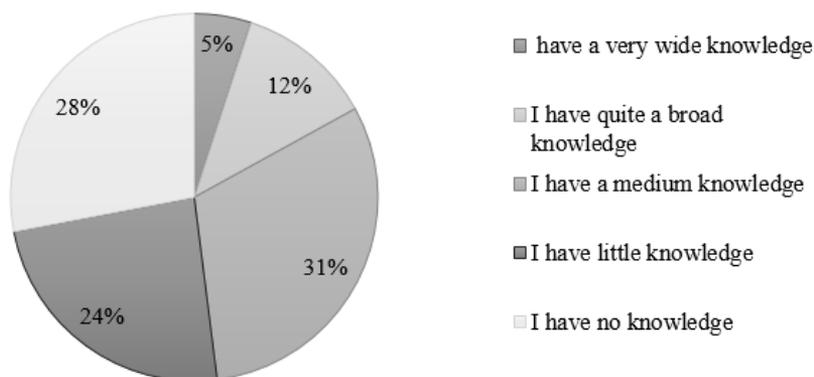
Source: Own research

The most frequently indicated sources of financing were subsidies and loans from public funds, more than half of the respondents pointed out this answer. Almost equally often, the surveyed organizations intend to use their own sources for the implementation of eco-innovation. Loans or investment funds were chosen much less frequent. The popularity of both subsidies from public funds and own funds is fully understood, because they do not generate additional costs (e.g. in the form of bank interest), so are a lower burden for the enterprise (in the case of subsidies they are significant financial support).

The answer regarding subsidies and loans from public funds was most often indicated in each size category of the organization. It is surprising, therefore, that 28% of respondents indicate that they have no knowledge about the possibility of financing investments from public funds, and another 24% have little knowledge (Figure 5).

The average level of knowledge was most frequently indicated. Only 17% of respondents declare that their knowledge is wide or very wide. The highest percentage of respondents indicating that their knowledge is wide was in medium-sized enterprises. In this group, the smallest percentage pointed out that they have little or no knowledge about public funds.

Figure 5. Opinions on the level of knowledge about the possibilities of financing investments from public sources



Source: Own research

In small and micro enterprises, the percentage of people with low level of knowledge exceeds half of respondents (small 54.3%, micro 58.7%), which shows the need to inform smaller entrepreneurs more effectively about the possibilities of support that are directed to their organizations.

The need to increase the level of entrepreneurs' knowledge about potential sources of financing of eco-investments is confirmed by the fact that 45% of respondents, which were asked about knowledge of specific public eco-innovation funding programs, stated that they do not know any of them, which may indicate that the real knowledge of respondents about public funds is even lower than they had declared.

CONCLUSIONS

In more than half (56%) of the surveyed organizations, the environmental issue in the company's policy was not taken into account, nor the person/organizational unit responsible for environmental matters has been designated (59% of respondents). In addition, an environmental audit was carried out only in 21% of companies. It may suggest that pro-environmental activities in the majority of surveyed organizations are not the result of organizational policy and are not carefully planned. They often have the character of one-time, random actions. A significant obstacle to conducting activities is the lack of real knowledge about the possibilities of financing such initiatives, including obtaining public funds.

It can therefore be concluded that organizations from SME sector are not prepared for the systematic implementation of eco-innovation. It is therefore necessary to generate programs that create pro-environmental attitudes among managers in this sector. In particular, those focused on issues related to the transition from passive attitudes, which are only the response to the legally requires, towards active attitudes - based on searching for the possibility of implementing eco-innovation not only as activities conducive to environmental protection but also as a way to gain a competitive advantage on the market.

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GOTOWOŚĆ PRZEDSIĘBIORCÓW SEKTORA MSP DO WDRAŻANIA EKOINNOWACJI

Abstrakt: Artykuł podejmuje tematykę działań związanych przygotowaniem firm sektora MSP do wdrażania ekoinnovazione. Przedstawione dane zostały pozyskane w trakcie przygotowywania pracy doktorskiej realizowanej w wydziale Zarządzania politechniki częstochowskiej. Badania przeprowadzone były w latach 2017-2018 i dotyczyły zarówno świadomości ekologicznej przedsiębiorców jak i działań ekoinnovazione w badanych przedsiębiorstwach. Niniejsza praca przedstawia jedynie wąski zakres analiz, związanych bezpośrednio z kwestią gotowością wybranych przedsiębiorstw do wdrażania ekoinnovazione.

Słowa kluczowe: ekoinnovazione, MSP, działania prośrodowiskowe

