

ARTICLES

CENTRAL EUROPEAN REVIEW OF ECONOMICS & FINANCE

vol. 35, No. 4(2021), pp. 15-28

DOI <https://doi.org/10.24136/ceref.2021.014>

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Development of small and medium-sized enterprises sector and the use of European Union structural funds in the Radom subregion

Abstract

The aim of the chapter was to analyze the use of European Union structural funds by the sector of small and medium enterprises in the Radom subregion. There was one hypothesis and one research question posed in the study. On the basis of literature studies, as well as the observation of economic reality, the SME sector for the Radom subregion was discussed, as well as the role of European Union structural funds in four programming periods.

The theoretical part includes a detailed author's questionnaire containing fifteen variables relating to the effects of implementing projects co-financed by EU funds on a group of 100 companies in the SME sector of the Radom subregion.

The paper contains results for a group of a national study conducted in September 2021 (100 enterprises) that used the method of Computer-Assisted Telephone Interview (CATI) are presented. The paper contains the author's original research into a representative group of SME's enterprises that can be generalised to the entire population.

JEL classification: D22, D24

Keywords: *Competitive potential of enterprise, structural funds, economic development, SME sector.*

Paper type: *Theoretical research article*

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Introduction

In the last 10 years, there have been far reaching changes in the global economy connected with the development of economies, liberalization of trade, fight against corruption and flows of production factors (especially capital), internationalization of economies and development of integration of European Union countries. As a result, a significant dynamics of small and medium enterprises sector importance growth may be observed.

The development of the SME sector is a resultant of the impact of various factors. On one hand external, on the other internal, among which an important role is played by financing business activity, especially access to external sources of financing. Therefore, it may be stated that it is undoubtedly related to the economic situation of start-ups and already operating SME sector enterprises. Often, however, small and medium-sized enterprises do not have significant equity capital, but they should because they are an important source and place in creating new jobs and stimulating economic growth of economies (Srroj et al., 2021; Supun and Nadeeshika, 2021; Sava 2020; Bukowski, Siek, 2013).

On the basis of generally available Eurostat data, small and medium-sized enterprises constitute ca. 99% of over 18 million companies in the European Union. And in Poland this sector constitutes over 99.8% of the total number of enterprises operating on the market. The answer to gaining the investment capital are, among others, the activities of the European Union aiming at creating, stimulating and supporting an open and competitive economy by means of structural funds available for its members.

The available structural funds of the European Union are the largest in terms of amount of transferred funds for beneficiaries and the most important non-returnable financial support for Polish enterprises. The support from the European Union thanks to the availability of structural funds has enabled small and medium-sized organizational entities to open wide possibilities of development and competition in the global market, as a result of which the SME sector may be an attractive partner for the already existing as well as potential clients of the European Union.

Moreover, the aim of all the actions carried out in their scope is not only the necessity to adjust the level of the European Union member to the European standards, but also to ensure an even internal development of the country and to aim at levelling the disproportions between particular regions and sub-regions. It should be noted, however, that the analysis of already completed programmes or projects carried out within the framework of aid funds from the European Union structural funds indicates that the used strategies do not always guarantee an even increase in the level of regional development.

The literature presents many examples of the use of structural funds, their impact on investment, innovation, employment and sales and financial performance of the SME sector in different regions (Sandy and Fang, 2017; Lewandowska et al., 2015; Sońta, Markowska, 2015). Therefore, it is necessary to highlight how the mutual relationship of the use and impact of EU funds is shaped in creating, stimulating and supporting an open and competitive economy, ensuring an even internal development of the country and levelling disproportions between individual regions and sub-regions even on the example of a selected sub-region, which may be the Radom sub-region.

Therefore, based on the observation of economic reality, the following research question and one hypothesis were posed. The research question specified referred to the effects of projects co-financed from structural funds, i.e. which effects are most highly evaluated by the SME sector of the Radom subregion. The hypothesis assumed that the use of structural funds by the sector of small and medium enterprises in the Radom subregion is evaluated highly.

1. Small and medium-sized enterprises sector

In the modern economy, many organizational and legal forms of enterprises can be observed, the vast majority of which are SMEs (Wolak-Tuzimek et al., 2015). The enrichment of societies and the emergence of more and more individualised needs for products and services, global changes in the market through more efficient access to production factors, the increased importance of promoting culture and entrepreneurial attitudes among societies, as well as changes in the creation of missions, visions and strategies of enterprises, and the setting of goals have all contributed to the growth of the potential and economic strength of the SME sector as one of the categories of socio-economic growth (Chiapello, Lebas, 1996, p. 6).

Small and medium-sized enterprises were previously interpreted on the basis of a quantitative criterion, and it was only in 1996 that the European Commission issued Recommendation 96/280/EC concerning a uniform way of defining SMEs in order to standardize concepts (Maastricht Treaty), which was later replaced by a new recommendation numbered 2003/361/EC (Czarkowska, 2000, p. 215). Thanks to this Recommendation the members of the European Union could use the same definition of SMEs. The chosen way of defining SMEs was recommended as a necessary condition for applying concessions and preferences for entrepreneurs in the SME sector. Although this recommendation was not binding, all member states should feel obliged to strive to replace the existing

definitions with the definition recommended by the European Commission (Definition of SMEs).

The SME sector includes three categories of organizational and legal forms, i.e. (Biernacki, 2008, pp. 7-9):

- micro-enterprises whose average annual employment is less than 10 employees, whose annual net turnover from sales of goods, products and services and financial operations does not exceed the equivalent of EUR 2 million, and whose total assets as at the end of one of the last two years do not exceed the equivalent of EUR 2 million;
- small enterprises whose average annual employment is less than 50 employees, the annual net turnover from sales of goods, products and services and financial operations does not exceed the equivalent of EUR 10 million, and the total assets of the balance sheet drawn up at the end of one of the last two years does not exceed the equivalent of EUR 10 million;
- medium-sized enterprises which average annual employment is less than 250 employees, the annual net turnover from sales of goods, products and services and financial operations does not exceed the equivalent of EUR 50 million, and the total assets of the balance sheet drawn up at the end of one of the last two years does not exceed the equivalent of EUR 43 million.

However, it is important to underline the fact that the guidelines related to the interpretation of the SME sector are not unambiguous and uniform, as there is no generally recognised characteristic of enterprises in this sector. This category is usually subjective in nature and depends on the country of location and the country's affiliation to the EU communities (Biernacki, 2008, pp. 7-9). For example, in the United States of America the definition of SME sector entities is determined by the government department Small Business Administration Size Standards Office. In this case, the quantitative criteria are applied individually for each industry, which gives more tailored standards to the specifics of the selected company (U.S. Small Business Administration). In Canada, on the other hand, the SME sector is defined from an accounting and tax perspective (Biernacki, 2008, pp. 7-9).

Multifaceted characterization and classification is difficult due to the large number of various factors affecting their differentiation. One of the basic criteria for the classification of enterprises is their size. It is a quantitative category, but changes in size lead to qualitative transformations. Figure 1 shows the criteria used most often in practical definitions of classes of companies by size.

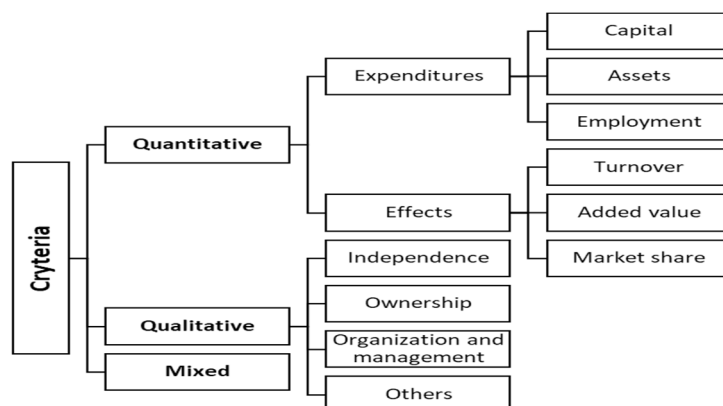


Figure 1. Most commonly used criteria in practical definitions of classes of firms by size

Source: own elaboration based on: (Dominiak, 2005, p. 28.)

The definition of an SME is based on three criteria: quantitative, qualitative and mixed. The quantitative criteria for assessing the size of an enterprise can be either inputs or outputs. An enterprise can be small (large) because it involves low (high) inputs or it can have low (high) outputs. Of the input criteria, employment and capital or assets are the most commonly used. Qualitative criteria are extremely valuable in identifying the essence of an enterprise. These include: independence, ownership, organisation and management. Mixed criteria are a combination of selected qualitative and quantitative criteria. Therefore, when defining the SME sector, it is also recommended to use three sets of criteria: quantitative, qualitative and mixed.

2. The role of the European Union Structural Funds

The policy of the European Union implements a number of actions aimed at strengthening the importance of this SME sector on the market. Support for SMEs can take various forms such as loans, grants and in some cases collateral. Moreover, both direct support is available, or through programs managed at the national and regional level, such as programs funded by the EU structural funds (Szymańska, 2017, p. 318). Among the structural funds, the European Regional Development Fund (ERDF) and the European Social Fund (ESF) are the largest of the Community funding instruments supporting SMEs through various thematic programmes and Community initiatives implemented at the regional level. The beneficiaries of structural funds receive funding for the implementation of their projects (Vita, 2017, p. 997).

The funds provide a kind of guarantee for budget expenditure on approved objectives. The EU primarily co-finances regional policy programmes,

the so-called Operational Programmes, i.e. multi-annual activities aimed at achieving a given regional policy objective (Dyńia, 2006, p. 196). The Structural Funds have become a resultant of achieving specific goals resulting from common policies. At the initial stage of development all funds functioned independently of each other and were intended to serve purposes other than solving structural problems, which accumulated during the later development of the European Communities. The Structural Funds by programming period are shown in Table 1.

Table 1. Structural Funds by programming period

2004-2006	2007-2013	2014-2020	2021-2027
European Social Fund (ESF)	European Regional Development Fund (ERDF)	European Regional Development Fund (ERDF)	European Funds for Infrastructure, Climate, Environment (FEnIKS)
European Agricultural Guidance and Guarantee Fund (EAGGF)	European Social Fund (ESF)	European Social Fund (ESF)	European Funds for Modern Economy (FENG)
European Regional Development Fund (ERDF)			European Funds for Social Development (FERS)
Financial Instrument for Fisheries Guidance (FIFG)			European Funds for Digital Development (FERC)
			European Funds for Eastern Poland (FEPW)

Source: own elaboration based on: (<https://www.funduszeuropejskie.gov.pl/>)

While the structural funds of the first three programming periods are known, it is appropriate to discuss the structural funds of the fourth programming period. A brief analysis of the Structural Funds for the fourth programming period is given in Table 2.

Table 2. Structural Funds characteristics of the fourth programming period 2021-2027

Programme	Purpose	Beneficiary
FEnIKS	<ul style="list-style-type: none"> • building an efficient and resilient transport system, • the completion of sections of the TEN-T core network by 2030, • decarbonisation of the economy, • improving transport safety, • improving the resilience of the health system, • strengthening the role of culture in social and economic development, • ensuring equal access to health care. 	<ul style="list-style-type: none"> • energy service providers, • cultural institutions, • health care institutions, • local government units, • churches and religious associations, • NGOs, • State Fire Department, • State budget units and public administration, • entities providing public services as part of their own responsibilities of local government units, • entities managing airports and seaports, • enterprises, • emergency services, • residential building owners, • managers of national roads and railways.
FENG	<ul style="list-style-type: none"> • develop skills for smart specialisation, industrial transformation and entrepreneurship, • transformation of economy towards Industry 4.0 and green technologies • increasing the competitiveness of SMEs, • Strengthen research and innovation capacity and the use of advanced technologies. 	<ul style="list-style-type: none"> • financial institutions • business environment institutions, • consortia of entrepreneurs with research organisations, • consortia of entrepreneurs, • innovation centres, • enterprise centres, • enterprises, • science sector.

Table 2. cd

FERS	<ul style="list-style-type: none"> • training of personnel for the economy, • improving access to public services, • improving the professional and social situation of people with disabilities, • developing social and civil dialogue, • Support for implementation of social policy in the field of social integration, social services and social economy, • strengthen the health and education systems, • increasing access to childcare for the youngest children, • Improve the quality of services provided by public employment services, • increase the use of social innovation, including in the provision of public services. 	<ul style="list-style-type: none"> • government administration, • scientific units, • local government units, • NGOs, • people with disabilities and their families, • social partners, • facilities and entities of the health care system, • entrepreneurs, • parents of children under 3 years old, • colleges.
FERC	<ul style="list-style-type: none"> • building a gigabit society in Poland, • developing a data-driven economy using the latest digital technologies, • development of cooperation for creating digital solutions to socio-economic problems, • provision of advanced e-services enabling full electronic handling of citizens' and entrepreneurs' matters (level 4 and 5 of e-services maturity), • support for the development of advanced digital competencies, including in the area of cybersecurity for local government units and entrepreneurs, • ensuring cyber-security through support under a new dedicated area of intervention. 	<ul style="list-style-type: none"> • public administration, • cultural institutions, • NGOs, • medical entities, • entities of the higher education and science system, • entrepreneurs.

Table 2. cd

FEPW	<ul style="list-style-type: none"> • Strengthening the settlement attractiveness of cities and improving the quality of life of inhabitants in the era of climate change, • strengthening the competitiveness and innovation of enterprises, • increasing the use of the potential of tourism and spas for development, • Increase transport accessibility of the macro-region. 	<ul style="list-style-type: none"> • local government units with the status of a health resort or health protection area • local government units, • cities of the macroregion - urban transport organisers • micro, small and medium enterprises operating or intending to operate in the macro-region, • non-governmental organisations and their partnerships • innovation centres, • PKP PLK S.A. • PKP S.A. • entities providing public services as part of the tasks of local government units, • enterprises - entities providing sanatorium or spa services and health treatment facilities • energy companies, • managers of public facilities.
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Source: own elaboration based on: (<https://www.funduszeuropejskie.gov.pl/>)

The presented EU funds together model the regional policy of the European Union. Each structural instrument contributes in an appropriate way to the objectives of cohesion policy: convergence, regional competitiveness and employment, and European territorial cooperation (Kuciel, 2016, p. 216).

3. The use of European Union structural funds in the Radom subregion

In order to verify the use of European Union structural funds in the Radom subregion, a survey on a group of 100 enterprises from the SME sector was used. For the survey were qualified only those companies that meet two conditions, ie:

- Running a business in the Radom subregion
- Benefiting from the aid offered by the European Union in the form of structural funds during the period of activity.

The surveyed companies had to evaluate fifteen achieved effects of projects co-financed from EU funds, which were selected on the basis of the literature analysis. The obtained assessments were registered on ten-point ordinal scales, where 1 meant a low achieved effect, while 10 meant a high achieved effect. Only the first three programming periods were analysed, i.e. 1st period

(2004-2006), 2nd period (2007-2013) and 3rd period (2014-2020), which is presented in Table 3 and Figure 2, where measures of central tendency were used.

Table 3. Descriptive statistics of observable variables concerning the evaluation of the effects achieved as a result of projects co-financed from the EU funds in the Radom subregion

Variable number	Observable variables	Descriptive statistics	
		Average assessment of the impact of the use of structural funds by SMEs in the Radom subregion	Standard deviation of the impact assessment of the use of structural funds by SMEs in the Radom subregion
V1	Increase in expenditures on fixed assets	5.52	1.65
V2	Increase in outlays on investments in human capital	5.47	1.67
V3	Increase in IT development expenditures	5.54	1.84
V4	Increase of the company's equity	6.88	1.92
V5	Increase in outlays on R&D activity	7.07	1.99
V6	Changes in marketing activities	7.27	1.96
V7	Purchase of patents, licenses	7.50	2.09
V8	Introduction of organisational innovations	6.03	1.66
V9	Improving the quality of products/services	6.21	1.37
V10	Introduction of new products/services	5.80	1.70
V11	Creation of new jobs	5.88	1.47
V12	Increase employment levels	5.70	1.71
V13	Total sales growth	6.21	1.11
V14	Increase in domestic sales	6.34	1.98
V15	Export growth	5.50	1.83

Source: own elaboration.

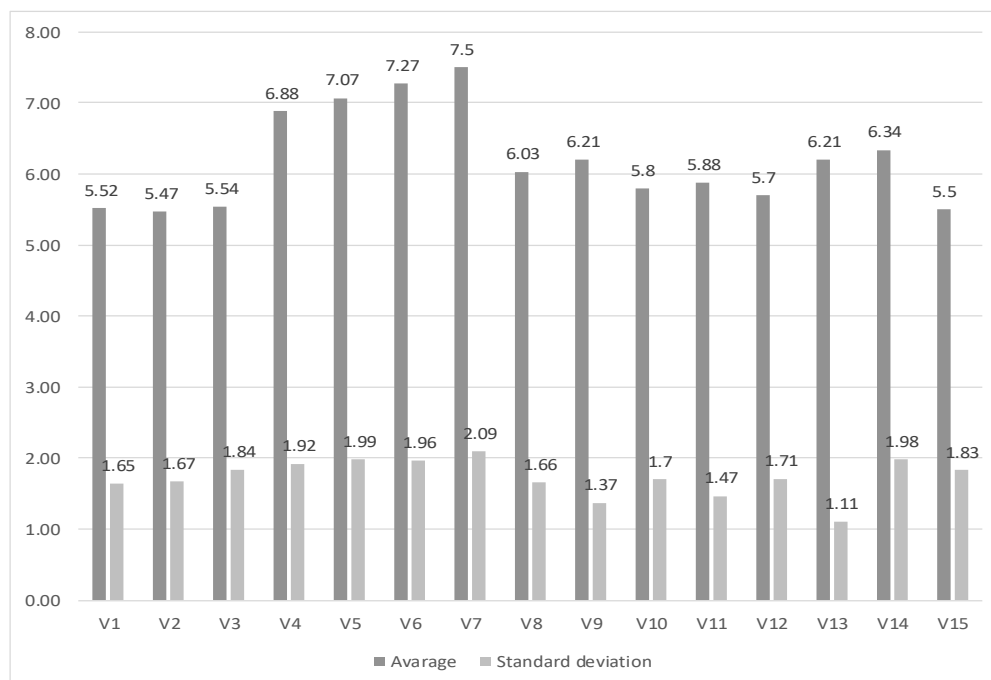


Figure 2: Descriptive statistics of observable variables concerning the evaluation of the effects achieved as a result of projects co-financed from EU funds in the Radom subregion

Source: own elaboration.

On the basis of the analysis of the information from the questionnaire survey it was possible to observe that for all variables concerning the evaluation of the effects achieved as a result of projects co-financed from EU funds in the Radom subregion, the average scores exceeded the value of 5.40 and were in the range $\langle 5.47; 7.50 \rangle$. It only proves that all examined variables were rated "very high and coherently". The highest average values were obtained by variables No. V7 (Purchase of patents, licences), V6 (Changes in marketing activities) and V5 (Increase in R&D expenditure) and V4 (Increase in enterprise equity), for which the average values were 7.50; 7.27 and 7.07 and 6.88 respectively. On the other hand, definitely the lowest average values, although high anyway, were obtained for the following variables: Increase in investment expenditures on human capital, Increase in exports and Increase in fixed assets and Increase in IT development expenditures, for which the average values amounted to 5.47, 5.50 and 5.52 and 5.54 respectively.

On the other hand, when analysing the obtained scores in terms of standard deviations of the effects achieved as a result of projects co-financed from EU funds in the Radom subregion, they fell within the range <1.11; 2.09>. In view of the ten-degree scale, the results of standard deviations were stable. Among the examined variables the lowest diversification of answers was observed for variables V13 i.e. Total sales increase, V9 i.e. Improved quality of products/services and V11 i.e. Creation of new workplaces, for which the results of standard deviations were 1.11 and 1.37 and 1.47 respectively. It should be noted that the same variables obtained one of the highest average scores in the conducted research. On the other hand, variables V7 i.e. Purchase of patents, licenses and V5 i.e. Increase in R&D expenditures and V14 i.e. Increase in domestic sales, for which the standard deviation scores were 2.09 and 1.99 and 1.98 respectively. It is also worth mentioning that the same variables obtained some of the lowest average scores in the conducted research. Thus, we can see a tendency, that for variables evaluated better the variation of grades is small, and for variables evaluated worse the variation is large.

Conclusion and recommendatons

This chapter analyses the use of European Union structural funds in the Radom subregion by the SME sector. Regional development itself includes many aspects of human life, such as economy, technology or ecology. It also undoubtedly refers to the communities living in a given territory. Therefore, it is important to ensure sustainable regional development in the context of existing social needs. One of the main elements contributing to raising the level and pace of regional development is the use of assistance offered by the European Union in the form of structural funds. Poland's accession to the EU community in 2004 made it possible to take advantage of all kinds of "facilities" in this respect, mainly as beneficiaries of numerous European programmes and funds, from which impressive amounts in the form of subsidies made it possible to significantly accelerate development processes both in the whole country and its individual regions.

The analysis of the results in terms of the existing state gives a picture of a situation that shows great interest and far-reaching benefits that result from the use of aid offered to members of the European Union. On the basis of the survey carried out, the following conclusions can be drawn that the examined effects were dominated by factors related to the growth of innovativeness among enterprises, such as the purchase of patents, licenses, changes in marketing activities, the increase in expenditure on R&D activities) and the increase of financial capabilities, i.e. the increase in the enterprise's own capital, or the increase in general and domestic sales.

The above results of the research also indicate the validity of the research hypothesis, which stated that the use of structural funds by the sector of small and medium-sized enterprises in the Radom subregion is rated high, because for all variables concerning the evaluation of the effects achieved as a result of the implementation of projects co-financed from EU funds in the Radom subregion, the average ratings exceeded the value of 5.40 and were in the range $< 5.47; 7.50 >$.

It seems that the conducted analysis has provided sufficiently significant conclusions to constitute a starting point for further analyses in this area. In the coming years, in spite of the ongoing unfavourable economic situation related to inflation, further use of aid offered by the European Union in the form of structural funds should be expected. The current evaluation of the situation is objective in nature; however, an assessment of future trends and effects will only be possible in the subsequent years of the fourth programming period.

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