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Absorption of EU Funds in the context of Polish enterprises competitiveness measured by profitability rates

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**Absorption of EU Funds in the context of Polish
enterprises competitiveness measured by
profitability rates**

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Absorption of EU Funds in the context of Polish enterprises competitiveness measured by profitability rates

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Keywords: *financial results, profitability, competitiveness, EU Funds.*

Abstract: Competitiveness at the firm level is a subject of interest not only to managers and policy makers but also academics. An effective functioning under the conditions of new economy requires from the enterprises to develop their core capabilities and talents along with the ability to quickly identify and seize the opportunities generated by market environment. The implementation of such an approach allows the creation and sustain of economic surpluses in the long-run.

The paper aims to examine the profitability of enterprises in Poland which is regarded in the context of absorption of EU funds in years 2007-2013. Taking into account that Poland became one of the largest beneficiaries, it is worth analyzing the impact of EU funding on the economic performance of Polish enterprises.

The paper offers a critical reflection on the relationship between the absorption of EU funds and Polish enterprises competitiveness on the basis of the content analysis literature and statistical data derived from the European Commission, the Central Statistical Office and the Ministry of Infrastructure and Development. It is assumed simultaneously that the competitiveness of enterprises is expressed in the term of profitability rates. In spite of limitations which relate to the adopted definition of competitiveness and the short period of the conducted analysis concerning the key relationship, the paper contributes to the debate on the significance of EU Funds in the process of building modern and innovative economy.

Introduction

There is a common consensus that enterprises competitiveness is critical to national prosperity. The stable microeconomic fundamentals are perceived as one of the key prerequisites for sustainable economic growth. Although competitiveness is the most often interpreted as involvement in a business

rivalry for markets, it seems to be rather a multidimensional and relative concept (Ambastha, Momaya, 2004, pp. 46-48). In the face of the necessity of improving the competitiveness of the European Union countries, in accordance with the assumptions of the EU Strategy 2020 on smart, sustainable and, inclusive growth, it is particularly worth indicating some of the main factors which determine enterprises competitiveness as well as their financial results.

The aim of the article is to examine the relationship between the profitability of enterprises in Poland and absorption of EU Funds. It appears that better absorption of EU structural funds, especially those directed to companies, leads to the improvement in firm competitiveness and is reflected in their financial performance. Moreover, the effective absorption of EU funds brings many benefits because not only allows for increasing competitiveness of Polish enterprises on global market but also narrowing development gap and contributing to the country competitiveness.

Methodology of the research

The critical reflection on the relationship between the absorption of EU funds and Polish enterprises competitiveness is done on the basis of the content analysis literature and statistical data derived from the European Commission, the Central Statistical Office and the Ministry of Regional Development. For the purpose of the research, it is assumed that competitiveness is expressed by profitability rates such as ROS, ROA and ROE. To assess the correlation between the absorption of EU Funds in years 2007-2013 and profitability of Polish enterprises achieved during the analyzed period, the Pearson correlation coefficient was used. The main limitations of such kind of research refer to the adopted definition of competitiveness and its method of measurement and the short period of the analysis regarding the key relationship.

The factors influencing enterprise competitiveness under the condition of new economy

Competitiveness means a firm's capacity to compete in a specific market, to increase its market share, to enter international market by exporting, and to achieve sustainable growth and profitability (Cetindamar, Kilitcioglu, 2013, p. 9). In the microeconomic perspective, the concept of firm competitiveness is usually related to market performance and productivity. It is in accordance with the neoclassical explanation of the nature of competition which underlines that business main objective is to

maximize profit over rivals in the external market place. Firm must provide products and services for which customers are willing to pay a fair return or price. The ultimate goal is to make a profit and in the long run, competitiveness is identified with the ability of the firm to survive in business and to protect its investment (Laureti, Viviani, 2011, p. 2615). Taking it into account, in the process of competition a special attention should be paid to the shareholders who provide the necessary capital as well as help in achieving the business objectives. A firm is competitive only if is able to provide a satisfactory return on investment and find an appropriate balance between short term and long term expectations of its key stakeholders, such as clients, cooperators, natural environment, etc. This is a real challenge because all of them have got different preferences concerning rate of return and the risks attached and what is more, it is worth stressing that the interests of many shareholders are not directly related to financial performance (Feurer, Chaharbaghi, 1994, pp. 49-51). The above discussed view on competitiveness implies that it is a multidimensional concept which can be regarded as a statistic concept (at a particular moment in time) and expressed in financial results as well as in a more dynamic and holistic approach (in terms of the creation of competitive advantages in the future). On the basis of the literature review it seems to be obvious that business competitiveness is a combination of different factors shaping competitiveness and it confirms that the results obtained in this scope should not be only associated with better market performance and higher profitability. Moreover, the pursuit of competitive advantage in order to sustain profit and fulfill the interests of key stakeholders can not be regarded in a narrow sense (cost only) but special efforts must be focus on aspects such as quality, sophistication of inputs and core capabilities development (Aiginger, Bärenthaler-Sieber, Vogel, 2011, p. 11). The increased attention to firm's internal resources and capabilities, understood as capacity to deploy resources, usually in combination, to produce a desired effect, emerged in the mid 1980s twentieth century along with the resource-based theory of competitive advantage (e.g. Wernerfelt, 1984; Barney, 1991). Its consequences are the dynamic-capabilities view of the firm represented by: theory of key competences (Hamel, Prahalad, 1994), knowledge-based view of the firm (Grant, 1991) and dynamic possibilities view (Teece, Pisano, Shuen, 1997). The resource-based theory suggests that internal resources are the primary determinants of firm performance. In turn, Porter (1980, p. 30) in his competitive forces model emphasizes mainly the significance of external factors (generated by market environment) such as: competition between companies which already exist in the industry, threat of new entrances, substitute products, suppliers' and customers' bargaining position (Zhang,

London, 2014, pp. 95-97). The collective strengths of those micro level forces determine firm profitability. One of the external factors affecting competitiveness is also macro environment which embraces: institutions, infrastructure, education, particularly including the access to financing or tax regulations. They are perceived as the crucial drivers of firm competitiveness. In spite of that many researchers highlight that internal as well as external factors are equally important. That it why, firms functioning under the conditions of new economy should seek a strategic fit between the external environment, which generates threats and opportunities, and their internal resources, including intangible assets such as skills and experience workforce, patents, know-how, software, customer relationships, brands, unique organizational culture, etc.

Profitability as a gauge for competitiveness of Polish enterprises

Measuring firm competitiveness is not an easy task, especially if it is a function of different components and embraces aspects such as effectiveness, efficiency, productivity, quality of work life, innovation or customer satisfaction (Rolstadås, 1998, pp. 990-992). In the authors opinion the focus on profitability which represents the ultimate goal for any organization allows to assess the economic performance and competitiveness of Polish enterprises, irrespective of the sectors in which they operate. Profitability rate expresses the efficiency of using the entire patrimony of a firm and can be measured in a different ways on the basis of data derived from financial statements. One of the most frequently used indicators in evaluating profitability are:

- return on sales: $ROS = \text{net profit} / \text{net sales} \times 100\%$
- return on assets: $ROA = \text{net profit} / \text{total assets} \times 100\%$
- return on equity: $ROE = \text{net profit} / \text{stakeholders' equity} \times 100\%$

Table 1 shows the profitability rates of Polish enterprises. The data presented concerns only those entities which keep accounting ledgers and employ more than nine persons.

Table 1. Profitability rates of non-financial enterprises in Poland

Indicators	2007	2008	2009	2010	2011	2012	2013
ROS	6,0	5,5	5,0	5,1	5,2	4,3	4,3
ROE	13,4	11,6	12,1	12,0	13,0	11,5	11,1
ROA	7,1	5,9	6,3	6,2	6,5	5,8	5,6

Source: Financial results of non-finance enterprises in years 2007-2013, Central Statistical Office.

For the purpose of the analysis, it is also proposed to use such kind of indicators as: profitability rates of gross/net turnover which constitute the relation of gross/net financial result to revenues from total activity. The competitiveness of enterprises in Poland in years 2007-2013 measured by gross profitability rate is presented in Table 2.

Table 2. Gross turnover profitability rate of non-financial enterprises in Poland

Enterprises	2007	2008	2009	2010	2011	2012	2013
Small	8,1	7,3	4,9	5,1	2,1	4,8	4,2
Medium	6,5	6,0	4,2	4,10	3,7	3,5	3,9
Large	6,8	4,7	5,4	5,9	6,2	4,5	4,8

Source: Financial results of non-finance enterprises in years 2007-2013, Central Statistical Office.

The average profitability rate in years 2007-2013 stood at 5,1%. The highest profitability occurred in the large enterprises which turned out to be more resistant to the global economic downturn and its negative impact on Polish economy in comparison to the medium and small entities. It has to be underlined that in the analyzed period macroeconomic factors related to the financial crisis had the greatest influence on the competitiveness of enterprises measured by their profitability.

Absorption of EU funds in years 2007-2013

In the 2007-2013 programming period Poland was one of the largest beneficiaries. The EU funds are considered as an attractive tool for financing investment opportunities and Polish entrepreneurs could obtain support under the following Operational Programmes (OP): five national OP, 16 Regional OP and European Cooperation Programmes. The most desirable forms of the EU aid in the process of building modern and innovative economy seem to be subsidies: to invest and support for R&D and innovation activities, for obtainment of patents and copyrights or staff development, support for business activity in the field of electronic commerce or subsidies to enterprises on environmental protection such as: generation of energy from renewable resources, rationalization of resources and waste management (European 2008, pp.15-107).

Table 3. Number and amount of applications submitted, contracts signed/decisions issued and applications for payment under SCF 2007-2013

Operational Programmes	Contracts forco-financing		The applications forpayment	
	Co-financing from the EU (thousands of PLN)	Level of use of allocation for the 2007-2013 period	Co-financing from the EU (thousands of PLN)	Level of use of allocation for the 2007-2013 period
OP Innovative Economy	38 992 028	108%	25 315 687	70%
OP Infrastructure and Environment	118 578 332	99%	88 708 510	74%
OP Human Capital	44 097 151	105%	36 624 344	88%
OP Technical Assistance	2 234 478	104%	1 678 672	78%
OP Development of Eastern Poland	9 970 975	100%	6 994 519	70%
OP of European Territorial Co-operation	1 499 675	104%	1 032 122	71%
16 Regional OP	70 180 720	98%	57 986 812	81%
Total SCF	285 553 359	101%	218 340 665	77%

Source: The use (2014, p. 3).

It turns out that in the analyzed period 33% of Polish enterprises became the beneficiaries under the Strategic Coherence Framework 2007-2013 and the total amount of investment is estimated at 93 103 mln PLN (The utilization, 2014, p. 4). Taking it into account, the assessment of the absorption understood as a country capacity of effectively and efficiently spending the allocated financial resources from the EU funds is also worth considering. According to the Commission Report on the implementation of Cohesion Policy 2007-2013 absorption rate among Member States is diverse (Cohesion, 2013, p. 11). The highest absorption of 90% and more was recorded in countries such as: Ireland, Sweden, Portugal, Belgium,

Austria or Germany, whereas the lowest in: Italy, Slovakia, Czech Republic, Bulgaria and Romania (around 30% of their allocated budget). Poland was ranked third among CCE-12 countries with a 67,9% payment rate, however according to the latest data presented in Table 3 the level of use of allocation in Poland is estimated at 77%.

The Relationship between absorption and profitability of Polish enterprises in years 2007-2013

The EU funds contributed to the country development, investment intensification, and the process of building competitive economy (Belka, 2011, p. 34). The total value of inflow of EU funds during the 2007-2013 programming period is presented in Table 4.

Table 4. The total amount of EU funds under the SCF 2007-2013 (in thousands of PLN)

2008	2009	2010	2011	2012	2013
8 775 028 564	72 806 092	154 437 303	195 188 684	235 848 545	269 047 417

Source: Data obtained from the Ministry of Infrastructure and Development.

Polish enterprises belongs to one of the key beneficiaries of EU funds. They impact through investment in micro and SMEs, both in tangible and intangible assets, had a positive influence on their economic performance. It is expected that along with the absorption of EU funds the competitiveness and financial results of Polish enterprises should improve considerably. To assess the relationship between the absorption of EU funds and their profitability, the Pearson correlation was used. On the basis of conducted analysis, the strongest correlation was obtained between the absorption of EU funds and gross turnover profitability rate. However, the strong correlation between the absorption of EU funds and gross turnover profitability (0,842) is only apparent because this relationship turned out to be statistically insignificant.

Table 5. Correlation between the absorption of EU funds and gross turnover profitability rate

	EU funding	Gross turnover profitability
Pearson Corellation	1	0,842*
EU funding Significance		0,35
N	6	6
Pearson Corellation	0,842*	1
Gross turnover Significance profitability	0,35	
N		6

*Corellation is significant at 0,05 (bilateral)

Own calculations based on Financial results of non-finance enterprises in years 2007-2013, Central Statistical Office and data obtained from the Ministry of Infrastructure and Development.

Similar results were achieved in case of correlation between the absorption of EU funds and ROS which seemed to be strong (0,595) but also statistically insignificant. In turn, the weak negative and statistically insignificant correlation (-0,2) was obtained for ROE and ROA with respect to the absorption of EU funds. However, it is worth mentioning one of the surveys conducted by InfoCredit in years 2007-2011. The conducted survey concerned a role of EU funds in the process of Polish enterprises development. It confirmed that the EU funds not only contributed to the increase of sales revenues and assets but also determined long term profitability of enterprises (Igielski, 2014, pp. 31-34). In a selected group of entities using EU funds the worse economic performance was only observed at the beginning of the period. It is not surprising, especially if the realization of projects co-financed by EU funds is usually expensive and investment brings benefits in the future.

Conclusions

On the basis of conducted analysis is difficult to assess the relationship between the absorption of EU funds and profitability of Polish enterprises. It appears that the apparently strong correlation between the key variables can not be statistically proved. In the authors opinion it is a result of the limits of research such as: too short period of the analysis, macroeconomic factors which determined economic performance of enterprises at the time of global crisis, and the sample of entities taken into consideration. The EU funds were directed mainly to micro, small and medium enterprises but

because the majority of them keeping rather simplified forms of accounting (Tax Revenue and Expense Ledger) they were not embraced in the analysis. Moreover, it is worth highlighting that the apparently high absorption of EU funds did not find its confirmation in the competitiveness growth of Polish enterprises measured by their profitability. As a result, the expected rise in profitability rates, as well as innovativeness of enterprises benefiting from the support, compared to the others Member States did not appear. According to the Innovation Union Scoreboard 2014 Poland is still ranked below most EU countries (in 26th place) and classified as a moderate innovator. In spite of the inflow of EU funds in years 2007-2013, Summary Innovation Index (SII) remained at the level of 0,279, while the EU average increased to 0,554 (Innovation, 2014, p. 94). It allows to conclude that the effective absorption at the administrative level which goes along with the optimal choice of economically desired investment is not possible and Polish entrepreneurs simply adopted to the required criteria.

References

- Cetindamar, D., & Kilitcioglu, H. (2013). Measuring the competitiveness of a firm for an award system. *Competitive Review: An International Business Journal*, 23(1). <http://dx.doi.org/10.1108/10595421311296597>.
- Ambastha, A., & Momaya, K. (2004). Competitiveness of Firms: Review of Theory, Frameworks, and Models. *Singapore Management Review*, 26(1).
- Laureti, T., & Viviani, A. (2011). Competitiveness and productivity: a case study of Italian firms. *Applied Economics*, 43. <http://www.informaworld.com>, DOI: 10.1080/00036840903357439.
- Feurer, R., & Chaharbaghi, K. (1994). Defining Competitiveness; A Holistic Approach. *Management Decisions*, 32(2). <http://dx.doi.org/10.1108/00251749410054819>.
- Zhang, P. & London, K. (2013). Towards an internationalized sustainable industrial competitiveness model. *Competitiveness Review: An International Business Journal*, Vol. 23(2). <http://dx.doi.org/10.1108/10595421311305325>.
- Aiginger, K., & Bärenthaler-Sieber, S., & Vogel, J. (2011). *Competitive under New Perspectives*. Brussels: European Commission. WWForEurope. Working Paper 44.
- Rolstadås, A. (1998). Enterprise performance measurement. *International Journal of Operations & Production Management*, 18(9/10). <http://dx.doi.org/10.1108/01443579810225577>.

European funds for entrepreneurs. Guidebook through operational programmes 2007-2013. (2008), Warsaw: Ministry of Regional Development.

The use of EU funds under the National Cohesion Strategy 2007-2013. Monthly Information for November 2014. (2014), Warsaw: Ministry of Infrastructure and Development.

Cohesion Policy: Strategic report 2013 on programme implementation 2007-2013. (2013), Brussels: European Commission.

Barney, J. B. (1996). *Gaining and Sustaining Competitive Advantage*. New York: Addison-Wesley Publishing Company, pp. 143-144.

Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, Vol. 5.

Hamel, G. & Prahalad, C. (1994). *Competing for the Future*. Boston: Harvard Business School Press, p. 220.

Kay, J. (1996). *The Fundamentals of firm success*. Warsaw: PWE Press, pp. 176-185.

Senge, P. (1990) *The Fifth Discipline: The Art. And Practice of the Learning Organization*. New York: Doubleday Currency, p. 3.

Grant, R. M. (1991). The Resource - Based Theory of Competitive Advantage: Implications for Strategy. *California Management Review*, Vol. 33(3).

Teece, D. & Pisano, G. & Shuen, A. (1997). Dynamic Capabilities and Strategic Management. *Strategic Management Journal*, Vol. 18(7), pp. 509-533.

Igielski, M. (2014). The role of EU funds in Polish firms development. *Contemporary Economy. Electronic Scientific Journal*, Vol 5(1).

Innovation Union Scoreboard 2014 (2014). Brussels: European Commission, pp. 91-95.