

# Firms as a Component of Smart Specialisation in the Opolskie Voivodship Development Strategy

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## Abstract

*The main goal of the paper is to study the significance of businesses as a component of smart specialization, on the basis of the Opolskie Voivodship Development Strategy. The structure of the paper consists of two sections. The first part is related to theoretical studies which consider companies as an element of smart specialisation. The second part of the paper contains the analysis of Opolskie Voivodship Development Strategy with regard to the relevance of companies in a smart specialization of the voivodship in question.*

**Keywords:** firms, smart specialisation, region, innovation, Opolskie Voivodship

## Introduction

Development based on knowledge and innovation is regarded as a fundamental factor of regional development nowadays. This development is in general multidimensional, with social, demographic and economic scopes. The principal issue of this development is to concentrate on smart specialisation which might be considered a key factor of growth in regional competitiveness. It appears that a relevant part of smart specialisation might be composed of the development of firms, especially if innovation strategies are considered. Issues related to company performance are broadly discussed in the literature. The economic side of this performance for firms from Opolskie Voivodship has been studied inter alia by Zygmunt A. (2012), Zygmunt A. and Szewczyk (2011a, 2011b, 2012; Szewczyk and Zygmunt 2011). Furthermore, the issues concerning smart specialisation in Opolskie Voivodship are primarily under the interest of Malik and Dymek.<sup>1</sup> Moreover, the issues of business innovation in Opolskie Voivodship in the framework of regional development and smart specialisation are considered by, inter alia, Potwora D. and Potwora W. (2012), as well as Zygmunt J. (2013).

The main goal of this paper is to study the significance of businesses as a component of smart specialization, on the basis of the Opolskie Voivodship Development Strategy. With regard to smart specialisation's importance for growth of regional competitiveness, it might be anticipated that firms are considered a component of this voivodship's smart specialisation in its development strategy. The structure of the paper is divided into two sections. The first is related to literature studies on the significance of companies as an element of smart specialisation, whereas the second section includes the analysis of the Opolskie Voivodship Development Strategy in terms of the importance of companies in smart specialization.

## 1 Firms as a component of smart specialisation — theoretical view

Significant factors which influence development of regions are innovation and knowledge transfer. An important matter which should be emphasised here is a region's uniqueness which reflects its

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1. See: Ł. Dymek i K. Malik: Strukturalizacja prac nad RSI, materiał roboczy zespołu ds. Aktualizacji RSI [z 2012 roku]. Opole, Urząd Marszałkowski.

innovation potential, level of institutional development with regard to knowledge transfer, business performance in the region, etc. From this point of view, it might be said that the same policy, and as a result, usage of the same instruments enhancing innovativeness is relatively difficult to employ in every single region. This statement is confirmed by, inter alia, Isaksen (2001), as well as by Nauwelaers and Wintjes (2003) who maintain that there is no single innovation policy which might be considered the ‘best practice’ and be applied with success in every region. Hence, it might be concluded that innovation policy in a region should be implemented with a special regard to the region’s features.

The above-mentioned issues are the subjects of contemporary discussions within the European Union. According to Strategy 2020 the main objectives of regions nowadays should be equally:

- smart growth,
- sustainable growth,
- inclusive growth.<sup>2</sup>

The basis for smart growth should include primarily the reform of both the education system and research capabilities, as well as innovation and knowledge transfer promotion.<sup>3</sup> It should be emphasised at the same time that the growth in question should be based on resources which are at the disposition of the region with regard to the capabilities of the region for innovation strategy implementation (McCann and Ortega-Argilés 2011). Sustainable growth means primarily more efficient resource usage, especially greener solutions, while inclusive growth is related to a high-employment economy with respect to both social and territorial cohesion.<sup>4</sup>

The achievement of EU Strategy 2020 is based on the concept of smart specialisation. It should be stressed, however, that the Strategy itself does not contain the definition of specialisation in question. An explanation of the smart specialisation concept might be found otherwise in one of the factsheets published by the European Commission (EC). According to the EC “smart specialisation means identifying the unique characteristics and assets of each country and region, highlighting each region’s competitive advantages, and rallying regional stakeholders and resources around an excellence-driven vision of their future.”<sup>5</sup> It should be emphasised that, most of all, smart specialisation is related to the innovation capabilities of regional actors. This view is expressed by Foray and Goenaga who claim that “smart specialisation is an innovative policy concept which emphasizes the principle of prioritisation in a vertical logic (to favour some technologies, fields, population of firms) and defines a method to identify such desirable areas for innovation policy intervention” (Foray and Goenaga 2013, 1). In an OECD publication smart specialisation is regarded as frameworks which “illustrate how public policies, framework conditions, but especially R&D and innovation investment policies can influence economic, scientific and technological specialisation of a region and consequently its productivity, competitiveness and economic growth path” (*Innovation-Driven Growth...* 2013, 17).

Concentration on smart specialisation in processes related to a region might lead to such outcomes as better usage of both research capabilities and transfer of knowledge (Foray et al. 2012, 11). As Foray et al. claim, a smart specialisation strategy should involve:

- choices and critical mass — concentration on a limited number of priorities might lead to better European fund allocation, with a quest for avoiding research replication within Europe
- competitive advantage — connecting R&D research with the needs of firms should bring awareness to the importance of entrepreneurship
- connectivity and clusters — increased importance of clusters, as well as creation of the basis for regional and beyond regional relationships in an aim to acquire technology diversification
- collaborative leadership — a motivation system’s efficiency depends on relationships between private and public sectors (Foray et al. 2012, 17)

2. See: Europe 2020. A Strategy for Smart, Sustainable and Inclusive Growth 2010, COM (2010) 2020 final, p. 5.

3. Ibid., 11–12.

4. Ibid., 5.

5. See: Financial Instruments in Cohesion Policy 2014–2020. Cohesion Policy 2014–2020. The European Commission adopted legislative proposals for cohesion policy for 2014–2020 in October 2011. [@:] [http://www.buildup.eu/sites/default/files/financial\\_instruments\\_en.pdf](http://www.buildup.eu/sites/default/files/financial_instruments_en.pdf).

The essential substance of smart specialisation might refer to firms. This opinion is expressed by, among others, Foray, David et al. who indicate the particular significance of entrepreneurship in smart specialisation of regions (Foray, David, and Hall 2011). Foray claims that smart specialisation “concerns an essentially entrepreneurial process in which the new knowledge produced relates to the ‘pertinent specialisations’ of the region” (Foray 2009, 14). Moreover, Foray, Goddard et al. highlight the idea that smart specialisation is connected with entrepreneurship which should be considered not only on an individual level but also on the level of organisations supporting entrepreneurship, and most of all on the basis of firms (Foray et al. 2012, 20).

The substantial importance of firms in smart specialisation is also indicated by Camagni and Capello. They believe that firms represent the crucial part of smart specialisation primarily because of their development abilities, as well as concentration on effective resource usage on innovation (2013). These issues are also considered by Tödtling and Trippl. They emphasise, however, that the value of firms in regional smart specialisation is determined by regional specificity and therefore they distinguish such types of regions as: peripheral, old industrial and metropolitan (2005, 1212–1214). In the case of peripheral regions they maintain that “firms should be linked to external clusters and knowledge providers” (Tödtling and Trippl 2005, 1214), as well as with national and European innovation systems. With regard to old industrial regions, Tödtling and Trippl propose to employ technology diversification, reorganisation of firms, and their connection to technology transfer institutions (Tödtling and Trippl 2005, 1214–1215). For metropolitan regions, development might be achieved by “enhancing the level of communication and cooperation among firms and between industry and knowledge providers”, as well as by “attracting innovative firms and leading global companies” (Tödtling and Trippl 2005, 1215).

The importance of smart specialisation itself, as well as the significance of firms in smart specialisation of region should be incorporated in strategies related to the region. This issue is regarded by, among others, Słodowa-Hełpa, who emphasises the necessity of including smart specialisation in regional development strategies, as well as in regional innovation systems (2013, 95–97).

## 2 Firms and smart specialisation in terms of the Development Strategy of Opolskie Voivodship

Opolskie Voivodship (NUTS 2, PL52) is the smallest of all sixteen voivodships in Poland, regarding both territory and population. It is located in south-western Poland and covers an area of 9412 square kilometres. The population of Opolskie Voivodship is about one million people. Business activity is carried out there by almost 93 thousand firms, most of which are micro and small-sized. The dominant industries are: fuel and energy, food, timber, as well as cement.

The significant value of firms as a component of Opolskie Voivodship smart specialisation is noticeable most of all in the ‘Development Strategy of Opolskie Voivodship through 2020’.<sup>6</sup> In this strategy, the issues connected to business performance, as well as their importance in regional development are included in Strategic Goal 4 “Dynamic Firms.”<sup>7</sup> As indicated in the Strategy, the basis for Goal 4 was a presumption that regional development is determined by business development capabilities. Hence, the operating goals were defined as follows: support for business development and for modern craft; development of the market services sector; and support for international cooperation of firms.<sup>8</sup>

With reference to firms, areas were identified in Opolskie Voivodship with significant value to regional development. These areas were divided into development fields such as:

- essential with regard to technology and regional knowledge, and
- prospectively essential.<sup>9</sup>

6. See: Strategia rozwoju województwa opolskiego do 2020 r., Załącznik do Uchwały Nr XXV/325/2012 Sejmiku Województwa Opolskiego z dnia 28 grudnia 2012 r. [@:] [http://strateg.stat.gov.pl/strategie\\_pliki/opolskie\\_2012.pdf](http://strateg.stat.gov.pl/strategie_pliki/opolskie_2012.pdf).

7. Ibid., 98.

8. Ibid., 87.

9. Ibid., 67.

The first includes the following branches: chemical industry, construction industry, with mineral industry and construction services, machine-building and electro machines industry, fuel and energy industry, agro and food industry, timber and paper industry, with furniture industry, metal and metallurgy industry. Prospective essential development fields consist of: medical and rehabilitation services, tourist services, transport and logistics.<sup>10</sup>

For these development fields were indicated technologies which are considered a smart specialisation of Opolskie Voivodship. According to the “Development Strategy of Opolskie Voivodship through 2020,” the smart specialisation of Opolskie Voivodship is related to such technologies as: polymer and rubbers, organic chemicals, cleaners, low-energy constructions, concrete and cement, timber, powertrains, metals, fuels, engines, high voltage equipment, farming, and milk processing. Smart specialisation in Opolskie Voivodship is also considered in terms of life and environmental science, especially health protection, physiotherapy, tourism and intermodal transport.<sup>11</sup>

To measure the smart specialisation of Opolskie Voivodship the following indicators were employed:

- expenditures on R&D in firms (in millions of PLN)
- employment in R&D in firms (in persons)
- expenditures on innovation activity in firms (in millions of PLN)
- share of net revenues from sales of innovative products in firms (in %)
- share of business entities in expenditures on R&D (in %)
- gross value added per employed person (as a trend, where Poland = 100)
- share of export in net revenues from sales (in %)
- foreign capital value in business entities with foreign capital involvement (in millions of PLN)<sup>12</sup>

It is assumed that through 2020 all indicators will show growth in relation to the base year (2010). It is also supposed that through 2020, the share of business entities in expenditures on R&D will increase from 20,7%<sup>13</sup> (in 2010) to 30%. With reference to share of net revenues from sales of innovative products in firms, 1,69% growth is expected from 5,31% in the base year (2010). It is also anticipated that the growth will be achieved in: expenditures on R&D in firms (from PLN 6,96 million in 2010), employment in R&D in firms (from 91 persons in 2010), expenditures on innovation activity in firms (from PLN 287,99 million in 2010), foreign capital value in business entities with foreign capital involvement (from PLN 1525,6 million in 2011). The level of growth for these indicators is not defined, however.

The significance of business as a component of Opolskie Voivodship smart specialisation might be enhanced by supporting implementation primarily in such areas as: improving the competitiveness of companies in the region, both risk and cost reduction in terms of innovation activities, R&D development, proper conditions for creative industries, craft promotion, foreign partner search and business contact creation, business promotion on external markets, development of international cooperation, and development of efficient information systems regarding both regional and external markets. It is said that those goals might be achieved by IT promotion as an effective tool for business, law amendment with regard to public-private partnership, law creation for family firms, and legal protection for firms which function virtually.<sup>14</sup>

## Conclusions

On the basis of the literature studies, as well as empirical analysis it might be concluded that firms might be regarded as a fundamental component of smart specialisation. Literature studies lead to the conclusion that smart specialisation is feasible strictly if firms are involved. The analysis

10. Strategia rozwoju województwa opolskiego..., 67.

11. Ibid.

12. Ibid., 99.

13. [In the journal (in both Polish and English texts) European practice of number notation is followed—for example, 36 333,33 (European style) = 36 333.33 (Canadian style) = 36,333.33 (US and British style). Furthermore in the International System of Units (SI units), fixed spaces rather than commas are used to mark off groups of three digits, both to the left and to the right of the decimal point.—Ed.]

14. Strategia rozwoju województwa opolskiego..., 98–99.

of the ‘Development Strategy of Opolskie Voivodship through 2020’ confirms the hypothesis that firms are considered a component of smart specialisation in Opolskie Voivodship. It should be emphasised all the same that accomplishment of strategic goal 4 in the “Development Strategy of Opolskie Voivodship through 2020” will provide empirical evidence of this significance. However, the influence of smart specialisation on regional development will take time to emerge, and will be seen in the long term. Therefore it is too early for comprehensive evaluation of the accuracy of the selected industries with significant value within Opolskie Voivodship development. It should be indicated also that the relevant question here is related to smart specialisation measurement in terms of firms. Then, for future research it appears necessary to establish a methodology which provides verification of the importance of firms from specific industries in smart specialisation.

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