The impact of the Cohesion Policy on social and economic development of Poland and its regions in the years 2004-2017
Introduction

The Ministry of Investment and Economic Development (formerly The Ministry of Regional Development and The Ministry of Economic Development) has been conducting systematic research on the impact of the Cohesion Policy on the socio-economic development of Poland and of its regions for many years. Within the framework of this research, the Cohesion Policy’s financial resources invested since Poland's accession to the European Union are subject to evaluation.

The impact of the EU Funds is being cyclically evaluated on the basis of analysis of selected indicators which measure the degree of achievement of the objectives set in the main strategic documents, i.e. The National Development Plan 2004-2006, The National Cohesion Strategy 2007-2013, The Partnership Agreement 2014-2020, as well as The Strategy for Responsible Development.

The assessment of the Cohesion Policy’s impact on the Polish economy in the years 2004-2017 as well as forecasts for the period until 2023 was based on research conducted by IMAPP and the Institute for Structural Research with the application of the EUImpactMOD model, which belongs to the class of Dynamic, Stochastic General Equilibrium (DSGE) models. In addition, some indicators were estimated with the use of the econometric module.

The impact of the EU funds on the development of basic macroeconomic indicators is singled out by a comparison of two scenarios – one reflecting the use of the EU funds and one implying lack of these funds. The scenario corresponding to the situation in which the analyzed funds are used constitutes the starting point for the analysis. For historical periods, it corresponds to real changes which were taking place in the economy. The second scenario is hypothetical one and rests on the assumption that the economy does not have access to the funds described in the analyzed strategic documents. The difference between the two scenarios reflects the impact of the EU funds.
Conclusions of the evaluation

To date, the impact of the Cohesion Policy on Poland’s socio-economic development has been unequivocally positive. The European Funds exerted significant impact on economic growth, investment activity and the labor market in Poland, as well as on the internal and external equilibrium of the national economy. The EU financing served to support domestic investments and the development potentials of the Polish economy.

The results of research indicate that thanks to the EU Funds, the acceleration in the GDP growth and in the real economic convergence towards the level of advanced EU countries has been observed. The EU Funds also caused a noticeable increase in employment and a resultant drop in unemployment. The beneficial impact of the European Cohesion Policy manifests itself in the creation of new jobs, improvement of the qualifications of employees and their better adaptation to the changing labor market conditions.

The implementation of the Cohesion Policy has contributed not only to narrowing of the gap between Poland’s level of socio-economic development and the average level of the advanced EU countries, but also to mitigating the processes of internal differentiation. Since accession to the EU, the distance in the level of economic development between all Polish regions and the EU average has been gradually decreasing.

- the distance between Poland and the EU-28 measured in the GDP per capita (in the PPS) terms has narrowed markedly - by 21.5 p.p., with 15% of the progress in this area resulting from the implementation of the Cohesion Policy;
- it is estimated that approximately 8.5% of the average annual GDP growth recorded in Poland in the period 2004-2017 resulted from the implementation of projects co-financed from the EU Funds;
- on account of the EU co-financed expenditures, the gross fixed capital formation was higher in 2017 by nearly 24%, and the investment rate by at least 3.6 p.p. than under the scenario without the EU financial assistance;
- positive impact on labor productivity was noted - the European Funds led to a reduction of the gap between labor productivity in Poland and the EU-28 average level by about 1.3 p.p.;
- the EU Funds have contributed to the increase in the share of R&D expenditure in the GDP - it is estimated that in recent years the impact averages to around 0.3 p.p.;
- almost 1/7 (around 1.9 p.p.) of the increase in the employment rate observed in the period 2004-2017 resulted from the implementation of investments co-financed from the EU Funds;
- the number of jobs created as a result of investments co-financed from the EU budget is estimated at 400-500 thousand jobs.
- there was a significant impact on the reduction of the unemployment rate – with the said rate being on average about 1.7 p.p. lower than under the scenario without the EU co-financed investments. In absolute terms it reflects the drop in the number of unemployed by over half a million people;
- the beneficial impact of the European Funds is also visible when it comes to reduction in the level of relative poverty – with the Cohesion Policy responsible for about 3 p.p. of the recorded improvement;
- the Cohesion Policy contributed also to the reduction of income inequalities measured with the Gini coefficient – by around 3 p.p.;
- inflows from the European Funds to Poland led to an improvement in the ratio of the result of the sector of government and self-government institutions to GDP and to an improvement in the sector’s debt-to-GDP ratio – by respectively 0.9 p.p. and over 8 p.p.;
- The Cohesion Policy contributed only slightly to the worsening of the current account deficit to GDP ratio (on average by 1.1 p.p. annually).
The Cohesion Policy Financing Allocated in Poland in the Years 2004-2017
Until the end of 2017, the Structural and Cohesion Fund resources in Poland have totaled approximately PLN 381.8 billion. The average annual volume of payments under the Cohesion Policy amounted in the analyzed period (2004-2017) to 1.9% of the GDP.

The regional breakdown of nominal payments indicates that in the years 2004-2017 the highest payments were recorded in the following voivodeships: Mazowieckie (slightly over PLN 62.0 billion), Śląskie (nearly PLN 37.3 billion), Dolnośląskie (over PLN 29.7 billion) and Łódzkie (nearly PLN 27.5 billion). The lowest payments from the EU funds were recorded in Opolskie (over PLN 8.2 billion) and Lubuskie (slightly over PLN 10.4 billion).

Analysis of the Cohesion Policy funds from both the perspective of their relation to regional GDP and in per capita terms reveals that the highest amounts of payments were observed in the Warmińsko-Mazurskie and Podkarpackie voivodeships (in those regions the EU Funds were equivalent to respectively 3.7% and 3.2% of GDP, while in per capita terms they amounted to respectively almost PLN 14.5 thousand and PLN 12.0 thousand.

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**Figure 1.** Support under the Cohesion Policy (the EU funds) in Poland, 2004-2017.

Source: own elaboration based on the databases of the Ministry of Investment and Economic Development.
In the analyzed period, the largest EU support was directed towards projects in the field of development of basic infrastructure (transport infrastructure, energy, environmental protection, social infrastructure). In the majority of voivodeships, expenditures in this category accounted for around 2/3 of total funds disbursed. The remaining part of the invested funds was divided more or less equally between the development of human resources and direct support of the production sector. The structure of support is similar among regions, with certain departure from this general similarity being evident in the case of the Opolskie and Lubelskie voivodeships, where infrastructure expenditures are relatively low (about 50%), with support for the production sector being relatively high.
The Investments co-financed by the EU Funds account for a significant share of public investments in Poland. In 2017, total investment expenditures amounted to PLN 252.3 billion, of which public investments constituted approximately 30% (about PLN 76.6 billion). The average share of investments financed from the EU Funds in total public investments had been steadily growing since Poland's accession to the EU until 2013, when it reached over 50%. In recent years; however, this share has been consistently declining - from 48.6% in 2014, to 44.4% in 2015, 43.2% in 2016 and to about 30.4% in 2017. The expenditures discussed here exhibited pronounced regional differentiation. Investments financed from the Cohesion Policy resources prevailed in Podlaskie, Łódzkie, Opolskie, Warmińsko-Mazurskie, Podkarpackie Kujawsko-Pomorskie and Lubelskie voivodeships - in 2016 their share ranged in these voivodeships from 53.5% (Lubelskie) to nearly 90% (Podlaskie) of the public investments. On the other hand in Śląskie, Mazowieckie, Pomorskie, Wielkopolskie, Zachodniopomorskie Świętokrzyskie, Małopolskie, Dolnośląskie and Lubuskie voivodeships the majority of public investments was financed from domestic sources.

Figure 2. Public investments financed from the EU funds and from domestic funds, 2004-2017.

Source: own elaboration based on the databases of the Ministry of Investment and Economic Development and on the Local Data Bank of the Central Statistical Office of Poland.

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1 Estimated on the basis of the share of public investments in 2016.
2 Data for the voivodeships for 2016.
Map 2.

Investment expenditures in voivodeships in 2016 (by financing sources)

Value and structure of investment expenditures by voivodeships, 2016

Value of investment expenditures per capita, in PLN
- 6 840 to 10 480 (4)
- 5 580 to 6 840 (3)
- 4 650 to 5 580 (5)
- 3 520 to 4 650 (4)

Structure of investment expenditures

- Private
- Public from domestic funds
- Public from the EU funds

Source: own elaboration based on the databases of the Ministry of Investment and Economic Development and on the Local Data Bank of the Central Statistical Office of Poland.
Economic Growth and Structural Changes in the Economy
In the period 2004-2017, Poland, alongside Ireland and Slovakia, posted one the highest cumulative GDP growth rates among the EU Member States. Since the EU accession the Polish economy has expanded by cumulative 71.5%, while the average cumulative growth in the EU-28 economy amounted at the same time to 21.2% (Map 3).


Cumulative change in the GDP in the EU-28 countries in the years 2004-2017 (%)
-13.7 to 0 (1)
0 to 20 (7)
20 to 40 (9)
40 to 85.9 (11)

The relatively high rate of economic growth recorded by Poland in the period 2004-2017 (annual average of 3.9%, as against 1.4% in the EU-28) to a large extent resulted from the presence of the EU Funds. During the economic crisis, the said funds served as shock absorber mitigating the effects of external shocks and helping to implement the national policy of public finances' stabilization.
The impact of the Cohesion Policy on economic development was favorable throughout the analyzed period - it is estimated that approximately 8.5% of the average annual growth recorded in the period 2004-2017 resulted from the implementation of projects co-financed from the EU Funds. These resources, by stimulating investment demand, affected the increase in both disposable income and in consumption demand, thereby contributing to the GDP growth. The inflow of the EU Funds made a significant contribution to real GDP growth (Figure 3).

The visible positive impact of the EU Funds on the level of economic activity in the country is related to the operations of two fundamental transmission channels of the said funds' influence on the economy, namely the demand channel and the supply channel. The impact of funds through the demand channel is particularly strongly linked to the scale of their inflow in individual years. The funds flowing into the country boost the aggregate demand in a given year, primarily by stimulating investments - both public (e.g. in the area of transport infrastructure) and private ones (through direct support of enterprises' investments). Simultaneously, the expanded investment activity of the state and of the enterprise sector generates additional demand for labor, which, by expanding the level of employment and causing gradual wage growth, leads in turn to an increase in the level of disposable income and, hence, positively influences the volume of consumer demand. It should be noted, however, that a continuous inflow of the EU financing is necessary for the demand channel to operate; when such an inflow ceases (e.g. with the finalization of a given financial perspective), this effect disappears. The situation observed in the years 2015-2017 illustrates such a case. (Figure 3). In addition to expanding aggregate demand, the use of the European Funds exerted a positive impact on the GDP volume through the supply channel. The funds disbursed contributed to the expansion of the economy's productive capacity by: accelerating the accumulation of private capital in enterprises (thanks to grants and investment loans), expanding the stock of public capital (via the development of basic infrastructure), and improving the quality of human capital. This resulted in a gradual growth in labor productivity and, consequently, contributed to the expansion of the productive capacity of the entire national economy. However, contrary to situation observed in the case of
demand effects, a longer time and systematic inflow of the European Funds is required for the supply effects to take hold. At the same time, the supply effects were relatively more long-lasting than the demand effects of the EU co-financed interventions.

The significant reduction in the impact of the EU Funds on the level of GDP was visible in the years 2016-2017, due to both the finalization of the spending from the said funds under the 2007-2013 financial perspective and the still limited scale of the projects’ implementation under the 2014-2020 perspective. As a result, in these years there is a significant weakening of the demand impulse, in particular when the stimulation of investment activity is concerned.

Investments financed from the European Funds constitute also an important factor of changes in the economy’s sectoral structure, as evidenced in particular by an increase in the share of sector II (industry and construction) in gross value added, with a simultaneous contraction in the share of sector I (agriculture).

The funds supporting the Polish economy within the framework of the Cohesion Policy contribute also to the strengthening of the processes of real economic convergence between Poland and the EU, thus contributing to the fulfilment of one of the main objectives of the said policy. Poland’s catching up to the average level of economic development in the European Union results from a more dynamic economic growth, stimulated by the increase in physical and human capital and by technological progress, which in turn affect labor productivity growth.

The **distance between Poland and the EU-28 average in the GDP per capita (in the PPS) terms decreased markedly in the period 2004-2017 (by 21.5 p.p.)** - thanks to Poland’s GDP per capita rising from 48.3% of the EU average in 2003 to 69.8% in 2017 (Map 4), of which **15% (i.e. over 1/6) resulted from the Cohesion Policy’s implementation** (Figure 4).

Thanks to the EU Funds, Poland has a chance of reaching 75-78% of the level of the EU-average GDP per capita by 2020.
Changes in the GDP per capita (in PPS, EU-28=100) in the EU-28 countries, 2004-2017 (p.p.).

Source: own elaboration on the basis of Eurostat's database.
It is equally important that the implementation of the Cohesion Policy contributes not only to reducing the distance between Poland and the average level of socio-economic development of the EU-28 countries, but also to mitigating the processes of internal differentiation. The distance in the level of economic development dividing Polish regions from the EU-28 average is gradually decreasing (Map 5), and the use of the EU funds helps all Polish regions to move closer to the average level of development of the EU-28, although the process of convergence is uneven across the country.
In 2016, GDP per capita (in PPS) in five provinces of Eastern Poland still did not exceed 50% of the EU average. In addition, these voivodeships were characterized by a relatively low rate of progress in reducing the distance to the EU-28 average level (Chart 5). In the period 2004-2016, GDP per capita (in PPS) in relation to the EU-28 average increased in each of these regions by from 10 p.p. (Świętokrzyskie) up to 12 p.p. (Lubelskie, Podkarpackie, Warmińsko-Mazurskie and Podlaskie). It should be emphasized, however, that in the latter voivodeship the distance to the EU-28 average widened in 2016 (compared to the level recorded in 2015). At the same time, in these regions, the strongest influence of the Cohesion Policy on the catching-up process was recorded – with from about 28% of the gap being bridged (in Lubelskie) to almost 47% (in Warmińsko-Mazurskie) resulting from the projects co-financed from the

Source: own elaboration based on the Eurostat’s database.
EU Funds. The distance to the EU average was narrowed the fastest by the richest voivodeships - Mazowieckie (by 36 p.p.), Dolnośląskie (by 27 p.p.) and Wielkopolskie (by 24 p.p.). In case of the latter three regions, about 13% -15% of the distance closed was attributable to the implementation of investments co-financed from the EU Funds.

Figure 5. Impact of the Cohesion Policy on the value of the GDP per capita (in PPS) in Poland in relation to the EU-28 average, 2004-2016.

Source: own elaboration based on the data of the Central Statistical Office of Poland and on the studies of the Ministry of Investment and Economic Development.

The pace of the convergence process depends mainly on the rate of economic growth in the regions. The dynamics of the voivodeships’ development is diversified (Figure 6). In 2004-2017, the fastest growth was recorded in the richest voivodeships: Mazowieckie, Pomorskie, Wielkopolskie, Małopolskie and Śląskie. In these regions, the contribution of the Cohesion Policy to the acceleration of the GDP growth ranged from 5.8% to 8.8% (in other words around 6-9% of the annual average growth stemmed from investments co-financed from the EU funds). On the other hand, in the less-developed regions, which were characterized by relatively low growth dynamics, a larger scale of the Cohesion Policy’s influence was evident - over 27% the annual average economic growth in Warmińsko-Mazurskie (and almost 20% in Podlaskie) resulted from investments co-financed from the EU Funds.

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3 For the years 2004-2015 historical data from the Local Data Bank of the Central Statistical Office of Poland were used, while forecasts generated by the EUImpactMOD model were used for the period 2016-2017.
Therefore, the EU Funds constitute (and will continue to do so) a counterbalance to the processes of deepening interregional disparities in the level of development - resources available under the Cohesion Policy allow to partially curtail the process of regional diversification. These effects arise mainly thanks to the funds’ stronger impact in poorer voivodeships than in more developed ones, which is attributable to the highest per capita allocations going to the former regions. Although, the scale of the impact of the Cohesion Policy on development depends, to a largest extent, on the size of funds allocated, other factors, such as regions’ internal potentials and the degree of matching of the thematic structure of funds to the needs of respective regions, also play an important role.

In summary, the Cohesion Policy contributes to limiting the widening of the level of the regional differentiation indicator in GDP per capita terms at both NTS2 and NTS3 levels. In 2016, the respective indicator amounted to 35.3 at the NTS3 level and was lower by 0.8 p.p. thanks to the implementation of the Cohesion Policy.
Investment Activity and R&D Expenditures
One of the factors determining the economy’s development potential is the relation between funds allocated for consumption and those allocated for accumulation, with the gross fixed capital formation (GFCF) being the most important component of the latter.

The Gross Fixed Capital Formation expenditures (in current prices) amounted in 2017 to PLN 350.3 billion - being nearly 2.3 times higher than in the pre-accession year, but at the same time were lower than those recorded two years ago (in 2003 they amounted to PLN 153.7 billion, while in 2015 to PLN 361.5 billion). The implementation of the Cohesion Policy in Poland has contributed to the expansion of investments in the economy. The mechanism of impact of the EU Funds on investment growth was to a large extent based on stimulation of public investments, under which large infrastructure projects were implemented (including in the development of transport infrastructure). Significant financing was also earmarked for subsidies and investment loans for companies. These resources boosted the profitability of investments and limited the range of the financial gap in the economy, hence expanding the scale of the private sector’s investment activity. **The most pronounced impact of the EU Funds in this field was recorded in the years 2012-2015, when thanks to EU expenditures the GFCF was nominally higher by over 50% than under the counterfactual scenario (one which implies lack of the said funds). In 2017 alone, the impact of the Cohesion Policy on the analyzed macroeconomic category was estimated at slightly over 30% (Figure 7).**

![Figure 7. Impact of the Cohesion Policy on the Gross Fixed Capital Formation expenditures (in current prices) in Poland, 2004-2017.](source: own elaboration based on the data of the Central Statistical Office of Poland and on the studies of the Ministry of Investment and Economic Development.)

It should be noted that the impact of EU Funds on the magnitude of the investment activity in the economy was only partly related to the implementation of projects co-financed from the European Funds. A large part of the additional capital expenditures was generated by enterprises that did not directly benefit from the Cohesion Policy. Such enterprises increased expenditures on fixed assets in order to increase their own productive capacity in the circumstances of growing aggregate demand in the entire economy. From the supply side, investments in the public
sector had a positive effect on the investment activity of all entrepreneurs, which, through expanding the economy’s stock of public capital, raised the private sector’s productivity.


The investment rate, which represents the share of gross fixed capital formation in the country’s GDP, recorded a slight decrease in 2017 compared to the previous year. It amounted to 17.7% of GDP (as against 18% in 2016) and was lower than the EU average figure by 2.4 p.p. It should be underlined here that the highest investment rate in Poland was recorded in the period 2007-2009 (when it ranged between 23.1% in 2008 and 21.4% in 2009), mainly on account of the private sector’s investment, but also thanks to the growing share of public investments, including the
ones undertaken by central government and local self-governments. The average annual investment rate in the period 2004-2017 (20%) was slightly lower than the EU average (20.1%) and, at the same time, the lowest one in the entire CEE region (Map 6).

Throughout the entire analyzed period (2004-2017) the impact of the Cohesion Policy on the investment rate was positive – thanks to the inflow of the EU financing, the value of this indicator had been higher by over 5 p.p. in the years 2011-2016 above the level that would have been observed in the absence of EU financial assistance, however, in 2017, this impact slightly weakened - to 3.6 p.p. (Figure 8).

**Figure 8.** Impact of the Cohesion Policy on the investment rate in Poland, 2004-2017.

The inflow of the EU funds exerted also positive impact on labor productivity. This was mainly the result of: the employees’ enhanced access to the means of production, their improved skills and competences (human capital) and the expansion of the stock of public capital (public infrastructure) in the national economy.

Throughout the entire period 2004-2017 labor productivity growth in Poland was faster than in the EU-28. Expressed in terms of GDP per capita per working person (taking into account differences in purchasing power of currencies) labor productivity increased from just over 60% of the EU-28 average in 2004 to 75.7% in 2017. The use of the EU Funds alone allowed to reduce the difference between labor productivity in Poland and its EU-28 average level by about 1.8-1.9 p.p in the years 2012-2015 and by 1.3 p.p. in 2017.

It should be underlined, that the impact of the EU Funds on labor productivity is significantly smaller than their impact on GDP. This difference stems from the attendant positive impact that the Cohesion Policy exerts on the number of employees, which is another - apart to labor productivity – factor influencing the volume of the Gross Domestic Product.

The ratio of R&D expenditures to the GDP continues to be low in the case of Poland - in 2016 it amounted to 0.97% (against 2.03% on average in the EU) and was even slightly lower than the record-high level of 1% posted in
2015. Therefore the respective goal of 1.7% the GDP assumed as Poland’s national target of the Europe 2020 strategy, as well as set in The Strategy for Responsible Development (map 7) remains a challenge.

However, it should be also stressed that the share of R & D expenditures in the GDP has been steadily growing and is currently almost two times higher than in 2004 (0.55%, against 1.75% of the then EU average). It is also important that the initially low level of R & D investment in the business enterprise sector (which was associated with the low share of this sector in the country’s R & D expenditure), is gradually increasing.

Map 7. Changes in the ratio of R&D expenditures to the GDP (GERD) in the EU-28 countries, 2004-2016 (p.p.).

Source: own study on the basis of Eurostat.
The EU Funds made a significant contribution to the expanding share of R&D expenditures in the GDP – it’s estimated than in the last few years their impact amounted to about 0.3 p.p. of the GDP (Figure 9).

**Figure 9.** Impact of the Cohesion Policy on the ratio of R&D expenditures to the GDP (GERD) in Poland in the years 2004-2016.

Source: own elaboration based on the data of the Central Statistical Office of Poland and on the studies of the Ministry of Investment and Economic Development.
Labor Market
Upon the EU accession, Poland was characterized by the lowest employment rate in the European Union, but by 2017 it had recorded the highest improvement in terms of this very indicator—which grew by 13.8 p.p. (map 8). Nearly 1/7 (around 1.9 p.p.) of the employment rate’s increase in the years 2004-2017 resulted from the implementation of investments co-financed from the EU Funds (Figure 10). It should be also underlined here that global financial crisis caused only a minimal reduction in the employment rate in Poland, which we owe largely to the presence of the EU Funds. In 2017, the employment rate of people aged 20-64 reached 70.3%, being only slightly (by 1.3 p.p.) lower than the EU-28 average (while in 2004 the respective distance amounted to nearly 10 p.p.).

Map 8. Changes in the employment rate (persons aged 20-64 years) in the EU-28 countries, 2004-2017 (p.p.).

Change in the employment rate (for persons aged 20-64 years) in the EU-28 countries in the years 2004-2017 (p.p.)

- 6 to 13.8 (10)
- 3 to 6 (8)
- 0 to 3 (7)
- -5.8 to 0 (3)

Source: own elaboration on the basis of Eurostat’s database.
The employment rate exhibits visible regional differentiation. In 2017, its lowest level was recorded in the Warmińsko-Mazurskie Voivodeship (65.6%), while the highest one in Mazowieckie (75.0%). During the period of EU membership the fastest catching up process in this field was recorded by Lubuskie and Dolnośląskie voivodeships - by 17.7-17.8 p.p. respectively. On the other hand, Lubelskie and Podkarpackie witnessed the lowest progress in boosting the employment rate in the period 2004-2017, with the indicator having increased there by only 6.2-8.9 p.p.

The use of the EU Funds exerted a positive impact on the employment rate in all voivodeships. The largest impact in this field was recorded in the Warmińsko-Mazurskie and Podkarpackie, where it is estimated that by 2017 the Cohesion Policy contributed to the 3 p.p. and 2.5 p.p. of the indicator’s growth over the counterfactual scenario. On the other hand the lowest impact of the Cohesion Policy on the labor market was evident in Śląskie and Wielkopolskie - where it helped to raise the employment rate by respectively, 1.4 p.p. and 1.5 p.p. (Figure 11).
The positive effects of the European Cohesion Policy are visible when it comes to creating new jobs, improving the qualifications of employees and assuring their better adaptation to the changing labor market conditions. The number of working persons aged 20-64 amounted in 2017 to 15.99 million. In the period 2004-2017, the growth rate in the number of employees was one of the highest in the EU, with the number having increased by approximately 2.8 million. The number of jobs created as a result of investments co-financed from the EU budget exceeded 500,000. by the period 2013-2016 and amounted to approximately 437 thousand in 2017 (Figure 12).
The implementation of the Cohesion Policy causes, in addition to the impact on the overall level of employment, changes in its sectoral structure. The impact of the EU Funds on the labor market takes place to a greater extent through the demand channel, increasing the importance of the industrial and construction sectors, as well as of the services sector, while at the same time limiting the share of agriculture in the structure of employment.

Beneficial impact of the EU Funds on the labor market manifests itself also via their significant influence on the unemployment rate’s reduction. Upon accession to the EU Poland was plagued by the highest unemployment rate in the European Union (19.1%). However, in the years following the accession, the analyzed indicator recorded fast improvement (Map 9) - declining to 4.9% in 2017, when it was lower by 2.2 p.p. than the EU-28 average figure.

The particularly strong favorable impact of the said funds on the unemployment rate manifested itself in the years 2012-2014, when a substantial inflow of the financial resources from the European Funds generated additional demand in the economy, mitigating the effects of the economic slowdown associated with the second wave of the global financial crisis. Thanks to this mechanism, the unemployment rate (in the group of people aged 15+) had increased only to a maximum of 10.3%, while according to estimates presented in the scenario without the EU Funds, it would have reached the level of 13.7%. In absolute terms, this translates into a drop in the number of unemployed by over half a million people. In subsequent years, the impact of the said funds on the unemployment rate became less pronounced and will continue to be so, due to both a smaller scale of inflow of analyzed resources and a significant reduction in the unemployment rate in the economy linked to a good economic situation and to a systematic reduction in the number of working-age people in Poland.

At the regional level, in 2017 the highest unemployment rates were recorded in the following voivodeships: Podkarpackie (8.4%), Warmińsko-Mazurskie and Lubelskie (7.2%) as well as Świętokrzyskie (7.0%). In all Polish
voivodeships the access to the EU Funds has contributed to the reduction of the unemployment rate (Figure 14). The strongest impact in this respect was recorded in the Warmińsko-Mazurskie- Voivodeship. It is estimated that in 2017 investments co-financed under the Cohesion Policy contributed to the reduction of the unemployment rate in this region by about 2.2 p.p. High impact was also evident in case of Podkarpackie (1.8 p.p.), as well as in Podlaskie and Zachodniopomorskie (1.5 p.p., in each). On the other hand, the Cohesion Policy’s impact on the labor market turned out to be the weakest in the Wielkopolskie and Śląskie voivodeships (around 1.0 p.p. of unemployment rate’s reduction in each).


Source: own study on the basis of the Eurostat’s database.
Figure 13. Impact of the Cohesion Policy on the unemployment rate (among persons aged 15+ years) in Poland in the years 2004-2017.

Source: own elaboration based on the data of the Central Statistical Office of Poland and on the studies of the Ministry of Investment and Economic Development.


Source: own study based on the data of the Central Statistical Office of Poland and on the studies of the Ministry of Investment and Economic Development.
It should be stressed that the processes taking place on the labor market determine to a high degree the level and dynamics of the social development of a given area. The improvement in the labor demand limits a number of negative consequences related to long-term unemployment or inactivity, such as: poverty, social pathologies, apathy, sense of resignation and helplessness. This in turn contributes to improving public sentiments in a given country / region and improves its investment attractiveness. The greater degree of harnessing the labor force’s potential in a given area translates into bigger volume of goods and services produced there, and thus into the territory’s real wealth. Taking the above-mentioned factors into account, the contribution of the Cohesion Policy to the improvement of the situation on the labor market in Poland should be deemed significant.
The Quality of Life
Compared to other EU countries Poland belongs to the group with the lowest gross per capita income (real adjusted gross disposable income per capita in PPS) - in 2016 it amounted to 70.3% of the EU-28 average. The other Central European countries face a similar situation. However, since the EU accession the value of the respective indicator has recorded noticeable growth – in both absolute and relative terms – in comparison with its level in 2005, the indicator’s value increased by 20.3 p.p., which was one of the highest (next to Romania and Slovakia) increases in the European Union (map 10).

Map 10. Changes in households’ real adjusted gross disposable income per capita (in PPS) in relation to the EU-28 average, 2005-2016 (p.p.).

Changes in the households’ adjusted real gross disposable per capita income (in PPS) in relation to the EU-28 average, in the years 2005-2016 (p.p.)

- 10 to 31,4 (8)
- 0 to 10 (7)
- -10 to 0 (7)
- -29 to -10 (6)

Source: own elaboration on the basis of Eurostat’s database.
However, thanks to the EU Funds, the convergence in the analyzed area is slightly faster than it would have been otherwise - while in 2005 the difference in the value of this indicator between the base scenario and the scenario without the EU Funds was close to zero, in 2016 it amounted to 2.2 p.p. (which means that EU Funds corresponded in the years 2004-2016 to around 11% of the convergence achieved - Figure 15).

**Figure 15.** Impact of the Cohesion Policy on households’ real adjusted gross disposable per capita income (in PPS) vis-à-vis the EU-28 average, 2005-2016.

The beneficial impact of European funds is also noticeable in the case of reducing the relative poverty - the percentage of people with incomes below 60% of the median of equivalent income. The percentage of people below the relative poverty threshold decreased in Poland from 20.5% in 2005 to 17.3% in 2016 – simultaneously in the EU-28, on average, the level of this indicator rose from around 16% to 17.3%. Consequently, the level of the analyzed indicator in Poland is identical to the EU-28 average.

It is estimated that in 2016 the beneficial impact of the analyzed funds on the reduction of relative poverty had amounted to about 3 p.p. – without the Cohesion Policy, the level of this indicator would have amounted to about 20.3%, thus being significantly higher than the EU average (Figure 16). Estimates show that the impact of the EU Funds in the analyzed field manifests itself via two indirect effects, i.e. GDP growth (which leads to growing inequalities) and reduction in unemployment (which reduces inequalities), with the unemployment rate developments being more important of the two factors. The drop in unemployment not only reduces the number of people deprived of income, but also leads to an increase in wages of employees, who were previously threatened by unemployment.
The Cohesion Policy contributed also to the reduction of income inequalities as measured with the Gini coefficient (which is correlated with the at-risk-of-relative-poverty rate). In the period 2006-2016, the drop in the value of this indicator was recorded in Poland - from 34.0 to 29.8 (with the latter level being maintained in 2017), while on average in the EU it posted a slight increase - from around 30.3 to 30.8. According to estimates, the most pronounced impact of the EU Funds on reduction of the Gini coefficient was evident in the years 2011-2014 (when it caused the analyzed indicator to be lower by 2.9-3.1 p.p.); and in 2016 (coefficient’s reduction by 3.2 p.p.).
Public Finance
Significant improvement in the state of public finances has taken place in recent years. The deficit of the government and self-government institutions sector’s narrowed from 7.3% of the GDP in the years 2009-2010 to 1.7% of the GDP in 2017. However, despite the excessive deficit procedure against Poland being suspended in 2015, the country still belongs to the group of the EU Member States with a deficit higher than the EU-28 average (1.0% GDP in 2017 - Map 11).

**Map 11.** The result of the sector of government and self-government institutions, in relation to the GDP, the EU-28 countries in 2017 (% of the GDP).

Source: own elaboration on the basis of the Eurostat’s database.
The situation in the area of public debt is more favorable, with Poland’s debt - which was equivalent to 50.6% of the GDP in 2017 - being much lower the EU average (81.6% of the GDP - Map 12).

The influence of the European Funds on the sector of the government and self-government institutions appears ambiguous. On the one hand, the need to co-finance investments implemented by sector’s entities generates additional expenses. On the other hand, however, the positive impact of funds on productivity leads to higher profits of companies and boosts households’ incomes, which translates into an increase of the analyzed sector’s revenues.
The research conducted reveals that additional revenues – ones related to the implementation of the Cohesion Policy - outweigh the additional expenses arising in connection with the very policy. All in all, **the inflow of the European Funds to Poland leads to an improved result of the sector of government and self-government institutions.** The apogee of the positive impact was recorded in the period 2014-2015, when the European Funds caused an improvement of the sector's result by 1.1 p.p.. This was the period of the largest inflow of the funds in question (Figure 17). In subsequent years, the positive impact on public finances was slightly smaller (1 p.p. in 2016 and 0.9 p.p. in 2017). It is forecasted that, from 2018 the impact will weaken to 0.7 p.p. and will remain on the latter level until 2023.

![Figure 17](image)

Source: own elaboration based on the data of the Central Statistical Office of Poland and on the studies of the Ministry of Investment and Economic Development.

The sector's lower deficit resulting from the inflow of the EU Funds translates into an improvement in the public debt-to-GDP ratio (Figure 18). Moreover, the strengthening of the zloty caused by the inflow of the European Funds works in the same direction, causing the foreign-currency denominated debt to be lower in zloty’s terms. Consequently, the positive impact of the Cohesion Policy on the public debt to GDP ratio in 2017 was estimated at approximately 8.3 p.p.
Figure 18. Impact of the Cohesion Policy on the debt of the sector of government and self-government institutions in relation to the GDP in Poland in the years 2004-2017.

Source: own elaboration based on the data of the Central Statistical Office of Poland and on the studies of the Ministry of Investment and Economic Development.
International Economic Exchange
In 2017, the total value of trade in goods (in BOP terms) between Poland and the world amounted to EUR 396.7 billion (of which exports amounted to EUR 198.7 billion and imports to EUR 198 billion). The value of foreign trade turnover has more than tripled in the years 2004-2017, with the exports’ rate of growth being twice as high as that of the GDP, which caused exports to be one of the power engines of the Polish economy.

The current account balance closed with a surplus of 0.3% of GDP in 2017 (as against the deficit of the same magnitude recorded in 2016). It should be emphasized that this was the first time since 1995 that such an outcome has been recorded.

The EU Funds exert a multifaceted impact on international trade turnover. The research indicates that the Cohesion Policy contributed to the noticeable widening of the current account deficit in relation to GDP - by 1.1 p.p. on average annually in the period 2004-2017 and by 1.9 p.p. in the year 2017 (Figure 19).

The inflow of EU Funds stimulates – via resultant increase in consumer and investment demand - the growth of imports, while on the export side the effects of improving the competitiveness of the economy may be offset by the consequences of the zloty’s appreciation. Another effect can be attributed to the positive impact of the European Funds on the level of per capita income. The higher the said income, the higher the individuals’ earnings, and thus the higher their consumption. Because part of consumer goods is imported, the increase in the level of households’ affluence leads also to an increase in imports.
Experts of the IMAPP and the Institute for Structural Research forecast, in the research quoted in this publication, that the rate of economic growth will amount in the period 2018-2019 to 3.8% annually. Due to the fact that the use of funds from the 2007-2013 perspective has been completed, while accelerating expenditures under the 2014-2020 perspective are taking place in an economy with an increasingly higher nominal GDP, the impact of funds on the GDP growth will be relatively lower in this year and in the next one – amounting to about 0.6 p.p. in 2018 about 0.3 p.p. in 2019.

It should be stressed, however, that despite the weaker impact on the GDP growth, the level of nominal GDP (in PLN, in current prices) in the period 2018-2019 will be higher by over 5% thanks to the Cohesion Policy. Investments financed from the European Funds will also continue, in these years to act as a factor supporting the economy's sectoral structure, as they were instrumental in the past in bringing about both a noticeable increase in the share of the industrial sector in the gross value added and the decrease of the sector I (agriculture) in GVA.

It is forecasted that the Cohesion Policy will continue to contribute to the acceleration of the processes of real economic convergence between Poland and the EU. The country’s GDP per capita (in PPS) is predicted to slightly exceed 71% of the EU average in 2018, and reach 72.6% of the said average in 2019, with respectively about 3.5 p.p. and 3.8 p.p. of the progress achieved since the EU accession being attributable to the Cohesion Policy’s implementation.

The highly positive impact of the Cohesion Policy on the investment rate will be maintained in the period 2018-2019 – thanks to the investments co-financed from the EU Funds, the said rate will be higher by approx. 3.7 - 4 p.p. than the one predicted in the counterfactual scenario (one which assumes the lack of the EU financing).

The Cohesion Policy’s positive impact on the labor market will be maintained. It is anticipated that thanks to the EU Funds, the employment rate (for people aged 20-64) will be higher in the period 2018-2019 by around 2 p.p., and the unemployment rate (15+) lower by about 1.2-1.3 p.p. than under the counterfactual scenario. It is estimated that the number of employees will be higher in the period 2018-2019 by approximately 430 thousand – 480 thousand people thanks to the Cohesion Policy. The improvement of the labor market situation will, in turn, translate into an increase in the households’ disposable income.

Moreover, the research quoted here, confirms that the European Funds lead in the long run to a lasting and significant improvement in the stability of public finances, as measured by the ratio of the sector’s deficit to the GDP and by the ratio of the public debt to the GDP. The European Funds will contribute 0.7 p.p. to the reduction of the deficit of the sector of government and self-government institutions, in both 2018 and 2019. This positive impact will also be maintained afterwards. The lower, thanks to the inflow of the EU funds, fiscal deficit will lead to an improvement of the public debt-to-GDP ratio, with the positive impact of the Cohesion Policy on public debt in the period 2018-2019 estimated at approx. 8.9 - 9.4 p.p.
Estimated impact of the Cohesion Policy on the socio-economic development of Poland and of its regions until 2020

The impact of the Cohesion Policy under the Partnership Agreement 2014-2020 on the development of the country and of its regions will remain positive, but its scale is estimated to become smaller than before. Among the main factors responsible for the less pronounced impact of the Cohesion Policy in the coming years, one should enumerate:

- Differences in the real weight of financial allocation for the years 2014-2020. In nominal terms value of funds earmarked for Poland for the period 2014-2020 is higher than that of the funds disbursed in the period 2007-2013. However, assessing the impact of the said financial intervention on the development processes, one has to remember that it is the real magnitude of the funds (as determined in relation to the size of the entire national economy) which matters. Comparison of allocations for the two financial perspectives shows that the weight of funds earmarked for the perspective 2014-2020 (on average 1.5% of the GDP annually) is lower than that of the allocation for the 2007-2013 perspective (on average 2.1% of GDP annually). This, in turn, affects the magnitude of the operations of the demand and supply mechanisms. In the case of a larger economy, given allocation is distributed among a larger number of enterprises, making it difficult to achieve both, sufficient critical mass of support and economies of scale. The increase in the size of the economy signifies that - in the situation of countries and regions characterized by deficits in this area such as Poland and its voivodeships - the demand for basic infrastructure and for human capital increases. If the physical and human capital resources do not expand proportionately to that growing demand, then the financial intervention generates lower economic effects than in a situation when public investments keep up with the needs of the private sector;

- It should also be noted that compared with the years 2007-2013, the stocks of infrastructure, the stocks of enterprises' physical capital (buildings and machinery) as well as those of human capital are currently higher than at the beginning of the National Strategic Reference Framework’s implementation. This explains relatively smaller effects generated by the expansion of these resources since the economy’s level of saturation with the above-mentioned stocks is much higher;

- To a certain extent weaker impact of the Cohesion Policy in the 2014-2020 financial perspective is explained by the fact that infrastructural expenditures constitute a relatively smaller part of total transfers than in the perspective 2007-2013. With still noticeable deficits in the Polish transport system, the impact of expanded and modernized infrastructure stocks on the economy is still high. Even the most innovative business projects or the enhanced human capital will not profoundly impact development processes in the countries/regions characterized by low transport accessibility. As long as an effective transport system is not in place (looking from the perspective of time of travel) expenditures on infrastructural projects will be yielding the strongest impact. In the long run, however, the investments undertaken in the field of research and development and implementation of the R&D results will become of key importance.

The impact on the GDP growth rate will be weaker after 2018, mainly due to the fact that the initial demand effect – resulting from infrastructure expenditures, innovation support and human capital accumulation - will gradually be transformed into a supply-side effect, whose impacts are long-lasting. This signifies that with each passing year incremental GDP growth caused by the demand effect will be declining.
However, it is worth noting that despite their weaker impact on the GDP growth rate, the EU Funds will expand the level of the nominal GDP (PLN, current prices) by 5.9% in 2020 compared to the scenario without the Cohesion Policy. The EU Funds will continue to positively influence the process of real economic convergence between Poland and the EU. Thanks to them Poland has the chance to reach – by the year 2020 - the level of GDP per capita slightly above 74% of the EU average. Therefore, between the EU accession and 2020, the development gap between Poland and the EU will have narrowed by around 25 p.p., with the Cohesion Policy explaining 4 p.p. of the said progress.

Further labor productivity gains are expected, with the Cohesion Policy significantly contributing to the bridging of the gap which separates Poland from the average productivity level in the EU. In the forecasts’ horizon (2018-2020), the average annual impact of these funds will be significantly higher than the one recorded in the period 2004-2016 and at the same time similar to the one observed in the years 2014-2016. The positive impact on labor productivity results from increased labor’s efficiency on the account of the expansion and modernization of the capital stock, improvement of organization of work, specialization of the production processes (thanks to the growing production scale) and the development of human capital, as well as thanks to the improving enterprises’ management of other productive resources.

Positive impact of the Cohesion Policy on labor productivity stems also from factors that do not directly affect the quality and productivity of employees (e.g. expansion of basic infrastructure), but stimulate the growth of total factor productivity, thereby expanding the volume of the goods and services supplied. In 2020, labor productivity in Poland (calculated as GDP per working person, in PPS) will reach 79% of the EU average.

The impact of the Cohesion Policy on investments will remain high - in the forecast years (2018-2020), gross fixed capital formation expenditures will be, on average, by over 30% higher on annual basis, and the investment rate on average higher by around 4 p.p. thanks to the analyzed policy.

The favorable effects of the European Cohesion Policy on the labor market will be maintained. The employment rate (people aged 20-64) is predicted to exceed in 2020 the level of 73%, with the Cohesion Policy explaining approximately 2.4 p.p. of the growth above the values projected in the counterfactual scenario. The number of jobs created as a result of investments co-financed from the EU budget will be higher by 520 thousand than in the counterfactual scenario. The impact on reducing the unemployment rate will be similar as previously, with the EU Funds reducing the value of this indicator by about 1.3. p.p.

On a regional basis, it is predicted that in the long run the intervention financed from the EU budget will exert the most pronounced impact on the development of Eastern Poland, the region which receives – in both per capita terms and in relation to the size of the regional economy – the largest financing. As a result of such a structure of allocation of available funds, GDP per capita in this group of voivodeships may reach - by the year 2020- the level of about 51.5-53.3% of the EU-28 average, with about 4-6 p.p. of the progress achieved since the EU accession resulting from the EU financing. It should be remembered, however, that the Cohesion Policy is only one of the factors that should allow to harness the endogenous potentials of regions and thus stimulate the development processes.
THE DOLNOŚLĄSKIE VOIVODESHIP

The Cohesion Policy financing for the Dolnośląskie Voivodeship in the period 2004-2017

The cumulative value of funds disbursed from structural funds and the Cohesion Fund in the Dolnośląskie Voivodeship until the end of 2017 amounted to PLN 29,705 million. In per capita terms and in relation to the region’s GDP these resources amounted in the years 2004-2017, respectively, to PLN 10,234 and 1.7% of the GDP. Expressed in per-capita terms these funds were higher than the national average (PLN 9,934), while as a ratio to GDP they were lower than the respective national average (1.9%).

Undertakings financed from the EU Funds constitute significant, but not dominant, part of public investments in the analyzed voivodeship - in 2016 they were responsible for 45.9% of total public investments in this region (with the respective national average amounting to 43.2%).

Impact of the Cohesion Policy in the Dolnośląskie Voivodeship in the period 2004-2017

In 2016, the GDP per capita (in PPS) amounted in the Dolnośląskie Voivodeship to 76% of the EU-28 average. In the period 2004-2016, the distance between the voivodeship and the above-mentioned EU average decreased by 27 p.p., of which 15.4% (4.2 p.p.) resulted from the implementation of the Cohesion Policy. Therefore, the EU Funds are conducive to the gradual bridging of the gap in economic development between the voivodeship and the EU-28 average level, even though the pace of this convergence process slowed down significantly, with only 2 p.p. of the distance to the EU average reduced in the period 2012-2016.

The pace of the convergence process depends mainly on the rate of the region’s economic growth. Dolnośląskie was growing at a robust annual average rate of 3.8% (in constant prices), with the EU co-financed investments being responsible for approximately 8.0% (0.3 p.p.) of the recorded growth.

The expenditures earmarked from the EU Funds for infrastructure and for direct support of enterprises contribute to a significant revival of investment activity. It is estimated that in 2017 the voivodeship’s investment rate (ratio of gross fixed capital formation expenditures to the regional GDP) was higher by 3.4 p.p. than under the counterfactual scenario (one which assumes the absence of the discussed funds).

In 2003 (the year preceding Poland’s EU accession) the Dolnośląskie Voivodeship had posted the employment rate (people aged 20-64) of 52.9%, while by 2017 this very indicator climbed to 70.7%, with 11% (2.1 p.p.) of the improvement recorded in the analyzed period being attributed to the impact of the EU Funds.

The beneficial effects of the European Cohesion Policy entail also creation of new jobs, improvement of qualifications of employees and their better adaptation to the changing labor market conditions. The number of jobs created in the analyzed voivodeship thanks to the implementation of investments co-financed from the EU budget by the year 2017 is estimated at over 34 thousand.

The EU funds are also instrumental in lowering the unemployment rate. In the last pre-accession year (2003) the unemployment rate (people aged 15 and over) had amounted in the Dolnośląskie Voivodeship to sizeable 25.6%, while by 2017 it fell to a mere 4.7%. To a certain extent, EU Funds have contributed to this achievement - it is estimated that they were responsible for 1.3 p.p. of the unemployment rate’s decline in the region.

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4 For the years 2004-2015 historical data from the Local Data Bank of the Central Statistical Office of Poland were used, while forecasts generated by the EUImpactMOD model were used for the period 2016-2017.
THE KUJAWSKO -POMORSKIE VOIVODESHIP

The Cohesion Policy financing for the Kujawsko-Pomorskie Voivodeship in the period 2004-2017

The cumulative value of funds disbursed from structural funds and the Cohesion Fund in the Kujawsko-Pomorskie Voivodeship until the end of 2017 amounted to 16,375.4 PLN million. In per capita terms and in relation to the region’s GDP these resources amounted in the years 2004-2017 to, respectively, PLN 7,862 and 1.8%. Expressed in per-capita terms and in relation to the GDP figures these funds were lower than the respective national averages (PLN 9 934 and 1.9%).

Undertakings financed from the EU Funds constitute significant part of public investments in the analyzed voivodeship - in 2016 the were responsible for 53.6% of total public investments in this region (while the respective national average amounted to 43.2%).

Impact of the Cohesion Policy in the Kujawsko-Pomorskie Voivodeship in the period 2004-2017

In 2016, the GDP per capita (in PPS) amounted in the Kujawsko-Pomorskie Voivodeship to 56% of the EU-28 average. In the period 2004-2016, the distance between the voivodeship and the above-mentioned EU average decreased by 13.0 p.p., of which almost 26% (3.4 p.p.) resulted from the implementation of Cohesion Policy. Therefore, the EU funds are conducive to the gradual bridging of the gap in economic development between the voivodeship and the EU-28 average level.

The pace of the convergence process depends mainly on the rate of the region’s economic growth. Kujawsko-Pomorskie was growing at an annual average rate\(^5\) of 3.3% (in constant prices), with the EU co-financed investments being responsible for approximately 10.4% (0.3 p.p.) of the economic growth.

The expenditures earmarked from the EU Funds for infrastructure and for direct support of enterprises contribute to a noticeable revival of investment activity. It is estimated that in 2017 the voivodeship’s investment rate (ratio of gross fixed capital formation expenditures to the local GDP) was higher by 3.5 p.p. than under the counterfactual scenario (which assumes lack of the discussed funds).

In 2003 (the year preceding Poland’s EU accession) the employment rate (among people aged 20-64) amounted in the Kujawsko-Pomorskie Voivodeship to 57.2%, however, by 2017 it climbed to 68.1% - with about 15% (1.6 p.p.) of the improvement recorded in this period being attributed to the impact of the EU Funds.

The beneficial effects of the European Cohesion Policy entail also creation of new jobs, improvement of employees skills and their better adaptation to the changing labor market conditions. The number of jobs created in the analyzed voivodeship thanks to the implementation of investments co-financed from the EU budget by the year 2017 is estimated at about 20.2 thousand.

The EU funds are also conducive to lowering the unemployment rate. In the last pre-accession year (2003) the unemployment rate (for people aged 15 and over) had amounted in the Dolnośląskie Voivodeship to sizeable 21.3%, while by 2017 it fell to 5.5%. To a certain extent, the EU Funds have contributed to this achievement- it is estimated that they were responsible for 1.1 p.p. of the unemployment rate’s decline in the region.

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\(^5\) For the years 2004-2015 historical data from the Local Data Bank of the Central Statistical Office of Poland were used, while forecasts generated by the EUImpactMOD model were used for the period 2016-2017.
THE LUBELSKIE VOIVODESHIP

The Cohesion Policy financing for the Lubelskie Voivodeship in the period 2004-2017

The cumulative value of funds disbursed from structural funds and the Cohesion Fund in the Lubelskie Voivodeship until the end of 2017 amounted to PLN 21,321.7 million. In per capita terms and in relation to the region’s GDP these resources amounted in the years 2004-2017 to PLN 10,028 and 2.7% respectively. Expressed in per-capita terms and in relation to the GDP figures these funds were higher than the respective national averages (PLN 9,934 and 1.9%).

Undertakings financed from the EU funds constitute significant part of public investments in the analyzed voivodeship - in 2016 they were responsible for as much as 53.3% of total public investments in this region (while the respective national average amounted to 43.2%).

Impact of the Cohesion Policy in the Lubelskie Voivodeship in the period 2004-2017

In 2016, the GDP per capita (in PPS) amounted in the Lubelskie Voivodeship to 47% of the EU-28 average. In the period 2004-2016, the distance between the voivodeship and the above-mentioned EU average decreased by 12.0 pp, of which over 28% (3.4 p.p.) resulted from the implementation of the Cohesion Policy. Therefore, the EU Funds are conducive to the gradual bridging of the gap in economic development between the voivodeship and the EU-28 average level. It should be underlined, however, that since 2012 the convergence process appears to have stalled at the almost unchanged level of about 47% of the EU average.

The pace of the convergence process depends mainly on the rate of the region’s economic growth. Lubelskie was growing at an annual average rate of 3.1% (in constant prices), with the EU co-financed investments being responsible for approximately 16.2% (0.5 p.p.) of the economic growth.

The expenditures earmarked from the EU Funds for infrastructure and for direct support of enterprises contribute to a noticeable revival of investment activity. This phenomenon is highly evident in case of the Lubelskie Voivodeship. It is estimated that in 2017 the voivodeship’s investment rate (ratio of gross fixed capital formation expenditures to the local GDP) was higher by 5.4 p.p. than under the counterfactual scenario (which assumes lack of the discussed funds).

In 2003 (the year preceding Poland’s EU accession) the employment rate (among people aged 20-64) amounted in the Lubelskie Voivodeship to 62%, however, by 2017 this indicator reached 68.2% - with about 1/3 (2.1 p.p.) of the improvement recorded in this period being attributed to the impact of the EU Funds.

The beneficial effects of the European Cohesion Policy entail also creation of new jobs, improvement of employees skills and their better adaptation to the changing labor market conditions. As of 2017, the number of jobs created in the analyzed voivodeship thanks to the implementation of investments co-financed from the EU budget is estimated at about 25.1 thousand.

The EU Funds are also conducive to lowering the unemployment rate. In the last pre-accession year (2003) the unemployment rate (for people aged 15 and over) had amounted in the Lubelskie Voivodeship to 15.4%, while by 2017 it fell to 7.2%. The EU Funds have largely contributed to this achievement - it is estimated that they were responsible for 1.4 p.p. of the unemployment rate’s decline in the region.

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6 For the years 2004-2015 historical data from the Local Data Bank of the Central Statistical Office of Poland were used, while forecasts generated by the EUImpactMOD model were used for the period 2016-2017.
THE LUBUSKIE VOIVODESHIP

The Cohesion Policy financing for the Lubuskie Voivodeship in the period 2004-2017

The cumulative value of funds disbursed from structural funds and the Cohesion Fund in the Lubuskie Voivodeship until the end of 2017 amounted to PLN 10,414 million. In per capita terms and in relation to the region’s GDP these resources amounted in the years 2004-2017 to PLN 10,242 and 2.3% respectively. Expressed in per-capita terms and in relation to the GDP figures these funds were higher than the respective national averages (PLN 9 934 and 1.9%).

Undertakings financed from the EU funds constitute significant part, even though not a dominant one, of public investments in the analyzed voivodeship - in 2016 they were responsible for 48.5% of total public investments in the region (the respective national average amounted to 43.2%).

Impact of the Cohesion Policy in the Lubuskie Voivodeship in the period 2004-2017

In 2016, the GDP per capita (in PPS) amounted in the Lubuskie Voivodeship to 57% of the EU-28 average. In the period 2004-2016, the distance between the voivodeship and the above-mentioned EU average narrowed by 15.0 p.p., of which almost 20% (2.9 p.p.) resulted from the implementation of the Cohesion Policy. Therefore, the EU Funds are conducive to the gradual bridging of the gap in economic development between the voivodeship and the EU-28 average level.

The pace of the convergence process depends mainly on the rate of the region’s economic growth. In the period 2004-2017 Lubuskie was growing at an annual average rate of 3.7% (in constant prices), with the EU co-financed investments being responsible for approximately 10.6% (0.4 p.p.) of the economic growth.

The expenditures earmarked from the EU Funds for infrastructure and for direct support of enterprises contribute to a noticeable revival of investment activity. It is estimated that in 2017 the voivodeship’s investment rate (ratio of gross fixed capital formation expenditures to the regional GDP) was higher by 4.3 p.p. than under the counterfactual scenario (which assumes lack of the discussed funds).

In 2003 (the year preceding Poland’s EU accession) the employment rate (among people aged 20-64) amounted in the Lubuskie Voivodeship to 51.2%, however, by 2017 the analyzed indicator climbed to 70% - with about 10% (circa 1.9 p.p.) of the improvement recorded in this period attributable to the impact of the EU Funds.

The beneficial effects of the European Cohesion Policy entail also creation of new jobs, improvement of employees skills and their better adaptation to the changing labor market conditions. As of 2017, the number of jobs created in the analyzed voivodeship thanks to the implementation of investments co-financed from the EU budget is estimated at about 11.2 thousand.

The EU funds are also conducive to lowering the unemployment rate. In the last pre-accession year (2003) the unemployment rate (for people aged 15 and over) had amounted in the Lubuskie Voivodeship to 23.9%, while by 2017 it fell to 3.7%. The EU Funds have, to a certain extent, contributed to this achievement- it is estimated that they were responsible for 1.2 p.p. of the unemployment rate’s decline in the region.

For the years 2004-2015 historical data from the Local Data Bank of the Central Statistical Office of Poland were used, while forecasts generated by the EUImpactMOD model were used for the period 2016-2017.
THE ŁÓDZKIE VOIVODESHIP

The Cohesion Policy financing for the Łódzkie Voivodeship in the period 2004-2017

The cumulative value of funds disbursed from structural funds and the Cohesion Fund in the Łódzkie Voivodeship until the end of 2017 amounted to PLN 27,495.9 million. In per capita terms and in relation to the region’s GDP these resources amounted in the years 2004-2017 to PLN 11,104 and 2.2% respectively. Expressed in per-capita terms and in relation to the GDP figures these funds were higher than the respective national averages (PLN 9,934 and 1.9%).

Undertakings financed from the EU funds constitute significant part of public investments in the analyzed voivodeship - in 2016 they were responsible for as much as 77% of total public investments in the region (the respective national average amounted at that time to 43.2%).

Impact of the Cohesion Policy in the Łódzkie Voivodeship in the period 2004-2017

In 2016, the GDP per capita (in PPS) amounted in the Łódzkie Voivodeship to 64% of the EU-28 average. In the period 2004-2016, the distance between the voivodeship and the above-mentioned EU average narrowed by 19 p.p., of which about 24% (4.7 p.p.) resulted from the implementation of the Cohesion Policy. Therefore, the EU Funds are conducive to the gradual bridging of the gap in economic development between the voivodeship and the EU-28 average level, even though in 2016 the distance towards the EU average was the same as in 2015.

The pace of the convergence process depends mostly on the rate of the region’s economic growth. In the period 2004-2017 Łódzkie was growing at an annual average rate of 3.8% (in constant prices), with the EU co-financed investments being responsible for slightly less than 10% (0.4 p.p.) of the economic growth.

The expenditures earmarked from the EU Funds for infrastructure and for direct support of enterprises contribute to a noticeable revival of investment activity. It is estimated that in 2017 the voivodeship’s investment rate (ratio of gross fixed capital formation expenditures to the regional GDP) was higher by 4.1 p.p. than under the counterfactual scenario (which assumes lack of the discussed funds).

In 2003 (the year preceding Poland’s EU accession) the employment rate (among people aged 20-64) amounted in the Łódzkie Voivodeship to 58.5%, however, by 2017 the analyzed indicator climbed to as much as 73.4% - with over 14% (2.1 p.p.) of the improvement recorded in this period attributable to the impact of the EU Funds.

The beneficial effects of the European Cohesion Policy entail also creation of new jobs, improvement of employees skills and their better adaptation to the changing labor market conditions. As of 2017, the number of jobs created in the analyzed voivodeship thanks to the implementation of investments co-financed from the EU budget is estimated at about 31.6 thousand.

The EU Funds are also conducive to lowering the unemployment rate. In the last pre-accession year (2003) the unemployment rate (for people aged 15 and over) had amounted in the Łódzkie Voivodeship to 18.9%, while by 2017 it fell to a mere 4.6%. The EU Funds have, to a certain extent, contributed to this achievement - it is estimated that they were responsible for 1.3 p.p. of the unemployment rate’s decline in the region.

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8 For the years 2004-2015 historical data from the Local Data Bank of the Central Statistical Office of Poland were used, while forecasts generated by the EUImpactMOD model were used for the period 2016-2017.
THE MAŁOPOLSKIE VOIVODESHIP

The Cohesion Policy financing for the Małopolskie Voivodeship in the period 2004-2017

The cumulative value of funds disbursed from structural funds and the Cohesion Fund in the Małopolskie Voivodeship until the end of 2017 amounted to PLN 27,252.7 million. In per capita terms and in relation to the region’s GDP these resources amounted in the years 2004-2017 to PLN 8,036 and 1.7% respectively. Expressed in per-capita terms and in relation to the GDP figures these funds were lower than the respective national averages (PLN 9,934 and 1.9%).

The share of undertakings financed from the EU funds in public investments in the analyzed voivodeship is slightly lower than the national average - in 2016 it amounted to 42.5% of total public investments in the region (with the respective national average of 43.2%).

Impact of the Cohesion Policy in the Małopolskie Voivodeship in the period 2004-2017

In 2016, the GDP per capita (in PPS) amounted in the Małopolskie Voivodeship to 62% of the EU-28 average. In the period 2004-2016, the distance between the voivodeship and the above-mentioned EU average narrowed by 19 p.p., of which about 17.3% (3.3 p.p.) resulted from the implementation of the Cohesion Policy. Therefore, the EU Funds are conducive to the gradual bridging of the gap in economic development between the voivodeship and the EU-28 average level (even though in 2016 the distance towards the EU average was the same as in 2015).

The pace of the convergence process depends mostly on the rate of the region’s economic growth. In the period 2004-2017 Małopolskie was growing at an annual average rate of 4% (in constant prices), with the EU co-financed investments being responsible for about 8% (0.3 p.p.) of the economic growth.

The expenditures earmarked from the EU funds for infrastructure and for direct support of enterprises contribute to a noticeable revival of investment activity. It is estimated that in 2017 the voivodeship’s investment rate (ratio of gross fixed capital formation expenditures to the regional GDP) was higher by 3.5 p.p. than under the counterfactual scenario (which assumes lack of the discussed funds).

In 2003 (the year preceding Poland’s EU accession) the employment rate (among people aged 20-64) amounted in the Małopolskie Voivodeship to 60%, however, by 2017 the analyzed indicator climbed to 71.2% - with close to 15% (1.7 p.p.) of the improvement recorded in this period attributable to the impact of the EU Funds.

The beneficial effects of the European Cohesion Policy entail also creation of new jobs, improvement of employees skills and their better adaptation to the changing labor market conditions. As of 2017, the number of jobs created in the analyzed voivodeship thanks to the implementation of investments co-financed from the EU budget is estimated at over 33.7 thousand.

The EU funds are also conducive to lowering the unemployment rate. In the last pre-accession year (2003) the unemployment rate (for people aged 15 and over) had amounted in the Małopolskie Voivodeship to 17.7%, while by 2017 it fell to 4.2 %. The EU Funds have, to a certain extent, contributed to this achievement- it is estimated that they were responsible for 1.1 p.p. of the unemployment rate’s decline in the region.

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9 For the years 2004-2015 historical data from the Local Data Bank of the Central Statistical Office of Poland were used, while forecasts generated by the EUImpactMOD model were used for the period 2016-2017.
THE MAZOWIECKIE VOIVODESHIP

The Cohesion Policy financing for the Mazowieckie Voivodeship in the period 2004-2017

The cumulative value of funds disbursed from structural funds and the Cohesion Fund in the Mazowieckie Voivodeship until the end of 2017 amounted to PLN 62,032.6 million. In per capita terms and in relation to the region’s GDP these resources amounted in the period 2004-2017 to PLN 11,520 and 1.4% respectively. Expressed in per-capita terms these funds were higher than the respective national average (PLN 9,934), while in relation to the GDP they were lower than the said average (1.9%).

The share of undertakings financed from the EU funds in public investments in the analyzed voivodeship is lower than the respective national average - in 2016 it amounted to 28.9% of total public investments in the region (with the respective national average of 43.2%).

Impact of the Cohesion Policy in the Mazowieckie Voivodeship in the period 2004-2017

In both 2015 and 2016, the GDP per capita (in PPS) amounted in the Mazowieckie Voivodeship to 109% of the EU-28 average. In the period 2004-2016, the distance between the voivodeship and the above-mentioned EU average changed by 36 pp (with the region first catching up and then surpassing the analyzed average figure), of which about 13% (4.7 p.p.) resulted from the implementation of the Cohesion Policy. Therefore, the EU Funds are conducive to the gradual bridging of the gap in economic development between the voivodeship and the EU-28 average level.

The pace of the convergence process depends mostly on the rate of the region’s economic growth. In the period 2004-2017 Mazowieckie was growing at the highest annual average rate in the country 4.8% (in constant prices), with the EU co-financed investments being responsible for about 6.3% (0.3 p.p.) of the economic growth.\(^{10}\)

The expenditures earmarked from the EU Funds for infrastructure and for direct support of enterprises contribute to a noticeable revival of investment activity. It is estimated that in 2017 the voivodeship’s investment rate (ratio of gross fixed capital formation expenditures to the regional GDP) was higher by 2.6 p.p than under the counterfactual scenario (one which assumes lack of the discussed funds).

In 2003 (the year preceding Poland’s EU accession) the employment rate (among people aged 20-64) amounted in the Mazowieckie Voivodeship to 61.9%, however, by 2017 the analyzed indicator climbed to as much as 75% - with close to 16% (2.1 p.p.) of the improvement recorded in this period resulting from the presence of the EU Funds.

The beneficial effects of the European Cohesion Policy entail also creation of new jobs, improvement of employees skills and their better adaptation to the changing labor market conditions. As of 2017, the number of jobs created in the analyzed voivodeship thanks to the implementation of investments co-financed from the EU budget is estimated at almost 67.9 thousand.

The EU Funds are also conducive to lowering the unemployment rate. In the last pre-accession year (2003) the unemployment rate (for people aged 15 and over) had amounted in the Mazowieckie Voivodeship to 16.7%, while by 2017 it fell to 4.8%. The EU Funds have, to a certain extent, contributed to this achievement- it is estimated that they were responsible for 1.3 p.p. of the unemployment rate’s decline in the region.

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\(^{10}\) For the years 2004-2015 historical data from the Local Data Bank of the Central Statistical Office of Poland were used, while forecasts generated by the EUImpactMOD model were used for the period 2016-2017.
THE OPOLSKIE VOIVODESHIP

The Cohesion Policy financing for the Opolskie Voivodeship in the period 2004-2017

The cumulative value of funds disbursed from structural funds and the Cohesion Fund in the Opolskie Voivodeship until the end of 2017 amounted to PLN 8,229.3 million. In per capita terms and in relation to the region’s GDP these resources amounted in the period 2004-2017 to PLN 8,312 and 1.9% respectively. Expressed in per-capita terms these funds were lower than the respective national average (PLN 9 934), while in relation to the GDP they were at the level equal to the respective average (1.9%).

The undertakings financed from the EU Funds constitute significant part of public investments in the analyzed voivodeship - in 2016 they amounted to as much as 69.9% of total public investments in the region (as against the respective national average of 43.2%).

Impact of the Cohesion Policy in the Opolskie Voivodeship in the period 2004-2017

In 2016, the GDP per capita (in PPS) amounted in the Opolskie Voivodeship to 55% of the EU-28 average. In the period 2004-2016, the distance between the voivodeship and the above-mentioned EU average narrowed by 17 p.p. of which about 23% (3.9 p.p.) stemmed from the implementation of the Cohesion Policy. Therefore, the EU funds are conducive to the gradual bridging of the gap in economic development between the voivodeship and the EU-28 average level.

The pace of the convergence process depends mostly on the rate of the region’s economic growth. In the period 2004-2017 Opolskie was growing at the annual average rate of 2.4%\(^1\) (in constant prices), with the EU co-financed investments being responsible for about 15.5% (0.4 p.p.) of the economic growth.

The expenditures earmarked from the EU Funds for infrastructure and for direct support of enterprises contribute to a noticeable revival of investment activity. It is estimated that in 2017 the voivodeship’s investment rate (ratio of gross fixed capital formation expenditures to the regional GDP) was higher by 3.9 p.p. than under the counterfactual scenario (one which assumes lack of the discussed funds).

In 2003 (the year preceding Poland’s EU accession) the employment rate (among people aged 20-64) amounted in the Opolskie Voivodeship to 53.9%, however, by 2017 the analyzed indicator climbed to as much as 71.1% - with over 10% (1.8 p.p.) of the improvement recorded in this period stemming from the presence of the EU Funds.

The beneficial effects of the European Cohesion Policy entail also creation of new jobs, improvement of employees skills and their better adaptation to the changing labor market conditions. As of 2017, the number of jobs created in the analyzed voivodeship thanks to the implementation of investments co-financed from the EU budget is estimated at over 10.2 thousand.

The EU Funds are also conducive to lowering the unemployment rate. In the last pre-accession year (2003) the unemployment rate (for people aged 15 and over) had amounted in the Opolskie Voivodeship to as much as 20.1%, while by 2017 it fell to 4.3%. The EU Funds have, to a certain extent, contributed to this achievement- it is estimated that they were responsible for 1.2 p.p. of the unemployment rate’s decline in the region.

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\(^1\) For the years 2004-2015 historical data from the Local Data Bank of the Central Statistical Office of Poland were used, while forecasts generated by the EUImpactMOD model were used for the period 2016-2017.
THE PODKARPACKIE VOIVODESHIP

The Cohesion Policy financing for the Podkarpackie Voivodeship in the period 2004-2017

The cumulative value of funds disbursed from structural funds and the Cohesion Fund in the Podkarpackie Voivodeship until the end of 2017 amounted to PLN 25,564.4 million. In per capita terms and in relation to the region’s GDP these resources amounted in the period 2004-2017 to PLN 12,007 and 3.2% respectively. Both in per-capita terms and in relation to the regional GDP these values were significantly higher than the respective national averages (PLN 9934 and 1.9%).

The undertakings financed from the EU Funds constitute significant part of public investments in the analyzed voivodeship - in 2016 they amounted to as much as 68.3% of total public investments in the region (vis-a-vis the respective national average of 43.2%).

Impact of the Cohesion Policy in the Podkarpackie Voivodeship in the period 2004-2017

In 2016, the GDP per capita (in PPS) amounted in the Podkarpackie Voivodeship to 48% of the EU-28 average. In the period 2004-2016, the distance between the voivodeship and the above-mentioned EU average narrowed by 12 p.p., of which about 36% (4.3 p.p.) resulted from the implementation of the Cohesion Policy. Therefore, the EU Funds had been conducive in the past to the gradual bridging of the gap in economic development between the voivodeship and the EU-28 average level (though no progress has been recorded since 2013).

The pace of the convergence process depends mostly on the rate of the region’s economic growth. In the period 2004-2017 Podkarpackie was growing at the annual average rate of 3.8%\(^\text{12}\) (in constant prices), with the EU co-financed investments being responsible for about 15.3% (0.6 p.p.) of the economic growth.

The expenditures earmarked from the EU Funds for infrastructure and for direct support of enterprises contribute to a noticeable revival of investment activity. It is estimated that in 2017 the voivodeship’s investment rate (ratio of gross fixed capital formation expenditures to the regional GDP) was higher by 6.5 p.p. than under the counterfactual scenario (one which assumes the absence of the discussed funds).

In 2003 (the year preceding Poland’s EU accession) the employment rate (among people aged 20-64) amounted in the Podkarpackie Voivodeship to 59.3%, however, by 2017 the analyzed indicator climbed to 68.2% - with over 28% (2.5 p.p.) of the improvement recorded in this period resulting from the presence of the EU Funds.

The beneficial effects of the European Cohesion Policy entail also creation of new jobs, improvement of employees skills and their better adaptation to the changing labor market conditions. As of 2017, the number of jobs created in the analyzed voivodeship thanks to the implementation of investments co-financed from the EU budget is estimated at almost 30.4 thousand.

The EU Funds are also conducive to lowering the unemployment rate. In the last pre-accession year (2003) the unemployment rate (for people aged 15 and over) had amounted in the Podkarpackie Voivodeship to 18%, while by 2017 it declined to 8.4%. The EU Funds have, to a large extent, contributed to this achievement- it is estimated that they were responsible for 1.8 p.p. of the unemployment rate’s decline in the region.

\(^{12}\) For the years 2004-2015 historical data from the Local Data Bank of the Central Statistical Office of Poland were used, while forecasts generated by the EUImpactMOD model were used for the period 2016-2017.
THE PODLASKIE VOIVODESHIP

The Cohesion Policy financing for the Podlaskie Voivodeship in the period 2004-2017

The cumulative value of funds disbursed from structural funds and the Cohesion Fund in the Podlaskie Voivodeship until the end of 2017 amounted to PLN 12,642.2 million. In per capita terms and in relation to the region’s GDP these resources amounted in the period 2004-2017 to PLN 10,657 and 2.7% respectively. Both in per-capita terms and in relation to the regional GDP these values were significantly higher than the respective national averages (PLN 9934 and 1.9%).

The undertakings financed from the EU funds constitute significant part of public investments in the analyzed voivodeship - in 2016 they amounted to as much as 88.4% of total public investments in the region (vis-a-vis the respective national average of 43.2%).

Impact of the Cohesion Policy in the Podlaskie Voivodeship in the period 2004-2017

In 2016, the GDP per capita (in PPS) amounted in the Podlaskie Voivodeship to 48% of the EU-28 average. In the period 2004-2016, the distance between the voivodeship and the above-mentioned EU average narrowed by 12 p.p., of which about 32% (3.8 p.p.) resulted from the implementation of the Cohesion Policy. Therefore, the EU Funds had been conducive in the past to the gradual bridging of the gap in economic development between the voivodeship and the EU-28 average level, even in 2016 the distance towards the EU average has actually widened (by 1 p.p.).

The pace of the convergence process depends mostly on the rate of the region’s economic growth. In the period 2004-2017 Podlaskie was growing at the annual average rate of 2.7%\(^{13}\) (in constant prices), with the EU co-financed investments being responsible for about 19.3% (0.5 p.p.) of the economic growth.

The expenditures earmarked from the EU Funds for infrastructure and for direct support of enterprises contribute to a noticeable revival of investment activity. It is estimated that in 2017 the voivodeship’s investment rate (ratio of gross fixed capital formation expenditures to the regional GDP) was higher by 5.8 p.p. than under the counterfactual scenario (one which assumes the absence of the discussed funds).

In 2003 (the year preceding Poland’s EU accession) the employment rate (among people aged 20-64) amounted in the Podlaskie Voivodeship to 61.1%, however, by 2017 the analyzed indicator climbed to 71.1% - with over 22% (2.2 p.p.) of the improvement recorded in this period resulting from the presence of the EU Funds.

The beneficial effects of the European Cohesion Policy entail also creation of new jobs, improvement of employees skills and their better adaptation to the changing labor market conditions. As of 2017, the number of jobs created in the analyzed voivodeship thanks to the implementation of investments co-financed from the EU budget is estimated at over 15.1 thousand.

The EU funds are also conducive to lowering the unemployment rate. In the last pre-accession year (2003) the unemployment rate (for people aged 15 and over) had amounted in the Podlaskie Voivodeship to 17.4%, while by 2017 it declined to a mere 4.7%. The EU Funds have, to a large extent, contributed to this achievement - it is estimated that they were responsible for 1.5 p.p. of the unemployment rate’s decline in the region.

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\(^{13}\) For the years 2004-2015 historical data from the Local Data Bank of the Central Statistical Office of Poland were used, while forecasts generated by the EUImpactMOD model were used for the period 2016-2017.
THE POMORSKIE VOIVODESHIP

The Cohesion Policy financing for the Pomorskie Voivodeship in the period 2004-2017

The cumulative value of funds disbursed from structural funds and the Cohesion Fund in the Pomorskie Voivodeship until the end of 2017 amounted to PLN 25,812.4 million. In per capita terms and in relation to the region’s GDP these resources amounted in the period 2004-2017 to, respectively, PLN 11,106 and 2.2%. Both in per-capita terms and in relation to the regional GDP these values were higher than the respective national averages (PLN 9,934 and 1.9%).

The share of undertakings financed from the EU funds in the public investments is lower than on average in the national economy - in 2016 it amounted to 33.6% of total public investments in the region (vis-a-vis the respective national average of 43.2%).

Impact of the Cohesion Policy in the Pomorskie Voivodeship in the period 2004-2017

In 2016, the GDP per capita (in PPS) amounted in the Pomorskie Voivodeship to 66% of the EU-28 average. In the period 2004-2016, the distance between the voivodeship and the above-mentioned EU average narrowed by 18 p.p., of which about 23% (4.1 p.p.) resulted from the implementation of the Cohesion Policy. Therefore, the EU Funds had been conducive in the past to the gradual bridging of the gap in economic development between the voivodeship and the EU-28 average level. It should be underlined, however, that in 2015 the distance towards the EU average has actually widened (by 2 p.p.) over the level observed in 2014 (which in turn witnessed deterioration over the situation observed in the period 2012-2013).

The pace of the convergence process depends mostly on the rate of the region’s economic growth. In the period 2004-2017 Pomorskie was growing at the annual average rate of 4.3%\(^{14}\) (in constant prices), with the EU co-financed investments being responsible for about 9% (0.4 p.p.) of the economic growth.

The expenditures earmarked from the EU Funds for infrastructure and for direct support of enterprises contribute to a noticeable revival of investment activity. It is estimated that in 2017 the voivodeship’s investment rate (ratio of gross fixed capital formation expenditures to the regional GDP) was higher by 3.9 p.p. than under the counterfactual scenario (one which assumes the absence of the discussed funds).

In 2003 (the year preceding Poland’s EU accession) the employment rate (among people aged 20-64) amounted in the Pomorskie Voivodeship to 55.2%, however, by 2017 the analyzed indicator climbed to as much as 72.7% - with over 12% (2.2 p.p.) of the improvement recorded in this period stemming from the presence of the EU Funds.

The beneficial effects of the European Cohesion Policy entail also creation of new jobs, improvement of employees skills and their better adaptation to the changing labor market conditions. As of 2017, the number of jobs created in the analyzed voivodeship thanks to the implementation of investments co-financed from the EU budget is estimated at over 28.8 thousand.

The EU Funds are also conducive to lowering the unemployment rate. In the last pre-accession year (2003) the unemployment rate (for people aged 15 and over) had amounted in the Pomorskie Voivodeship to as much as 20.8%, while by 2017 it declined to 4.2%. The EU Funds have, to a large extent, contributed to this achievement - it is estimated that they were responsible for 1.4 p.p. of the unemployment rate’s decline in the region.

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\(^{14}\) For the years 2004-2015 historical data from the Local Data Bank of the Central Statistical Office of Poland were used, while forecasts generated by the EUImpactMOD model were used for the period 2016-2017.
THE ŚLĄSKIE VOIVODESHIP

The Cohesion Policy financing for the Śląskie Voivodeship in the period 2004-2017

The cumulative value of funds disbursed from structural funds and the Cohesion Fund in the Śląskie Voivodeship until the end of 2017 amounted to PLN 37,291 million. In per capita terms and in relation to the region’s GDP these resources amounted in the period 2004-2017 to PLN 8,199 and 1.4% respectively. Both in per-capita terms and in relation to the regional GDP these values were lower than the respective national averages (PLN 9,934 and 1.9%).

The share of undertakings financed from the EU funds in the public investments is not only lower than on average in the national economy, but also the lowest one among all voivodeships - in 2016 it amounted to mere 30.4% of total public investments in the region (as against the national average of 43.2%).

Impact of the Cohesion Policy in the Śląskie Voivodeship in the period 2004-2017

In 2016, the GDP per capita (in PPS) amounted in the Śląskie Voivodeship to 71% of the EU-28 average. In the period 2004-2016, the distance between the voivodeship and the above-mentioned EU average narrowed by 19 p.p., of which about 15% (2.8 p.p.) resulted from the implementation of the Cohesion Policy. Therefore, the EU Funds had been conducive in the past to the gradual bridging of the gap in economic development between the voivodeship and the EU-28 average level. It should be underlined, however, that in 2015 and in 2016 the said distance has actually been – following the short-lived deterioration of the analyzed indicator – the same as in 2012.

The pace of the convergence process depends mostly on the rate of the region’s economic growth. In the period 2004-2017 Śląskie was growing at the annual average rate of 4.0% (in constant prices), with the EU co-financed investments being responsible for about 6% (0.2 p.p.) of the economic growth.

The expenditures earmarked from the EU Funds for infrastructure and for direct support of enterprises contribute to a noticeable revival of investment activity. It is estimated that in 2017 the voivodeship’s investment rate (ratio of gross fixed capital formation expenditures to the regional GDP) was higher by 2.5 p.p. than under the counterfactual scenario (one which assumes the absence of the discussed funds).

In 2003 (the year preceding Poland’s EU accession) the employment rate (among people aged 20-64) amounted in the Śląskie Voivodeship to 52.9%, however, by 2017 the analyzed indicator climbed to as much as 68.6% - with over 9% (1.4 p.p.) of the improvement recorded in this period resulting from the presence of the EU Funds.

The beneficial effects of the European Cohesion Policy entail also creation of new jobs, improvement of employees skills and their better adaptation to the changing labor market conditions. As of 2017, the number of jobs created in the analyzed voivodeship thanks to the implementation of investments co-financed from the EU budget is estimated at about 38.7 thousand.

The EU Funds are also conducive to lowering the unemployment rate. In the last pre-accession year (2003) the unemployment rate (for people aged 15 and over) had amounted in the Śląskie Voivodeship to as much as 19.3%, while by 2017 it declined to 3.9%. The EU Funds have, to a large extent, contributed to this achievement- it is estimated that they were responsible for 1.0 p.p. of the unemployment rate’s decline in the region.

15 For the years 2004-2015 historical data from the Local Data Bank of the Central Statistical Office of Poland were used, while forecasts generated by the EUImpactMOD model were used for the period 2016-2017.
THE ŚWIĘTOKRZYSKIE VOIVODESHIP

The Cohesion Policy financing for the Świętokrzyskie Voivodeship in the period 2004-2017

The cumulative value of funds disbursed from structural funds and the Cohesion Fund in the Świętokrzyskie Voivodeship until the end of 2017 amounted to PLN 12,482.7 million. In per capita terms and in relation to the region’s GDP these resources amounted in the period 2004-2017 to PLN 10,004 and 2.4% respectively. Both in per-capita terms and in relation to the regional GDP these values were higher than the respective national averages (PLN 9,934 and 1.9%).

The undertakings financed from the EU funds constitute a significant part of the public investments in the region - in 2016 they amounted to 41.6% of total public investments in the region (as against the national average of 43.2%).

Impact of the Cohesion Policy in the Świętokrzyskie Voivodeship in the period 2004-2017

In 2016 (as well as in the years 2013-2015), the GDP per capita (in PPS) amounted in the Świętokrzyskie Voivodeship to 49% of the EU-28 average. In the period 2004-2016, the distance between the voivodeship and the above-mentioned EU average decreased by 10 p.p. of which about 31% (3.1 p.p.) resulted from the implementation of the Cohesion Policy. Therefore, the EU Funds had been conducive in the past to the gradual bridging of the gap in economic development between the voivodeship and the EU-28 average level. It should be underlined, however, that the analyzed distance not only has remained unchanged since 2013, but also is bigger than in the period 2011-2012 (when the voivodeship’s GDP per capita amounted to 50% of the EU-28 average).

The pace of the convergence process depends mostly on the rate of the region’s economic growth. In the period 2004-2017 Świętokrzyskie was growing at the annual average rate of 2.8%\(^{16}\) (in constant prices), with the EU co-financed investments being responsible for about 15.5% (0.4 p.p.) of the economic growth.

The expenditures earmarked from the EU Funds for infrastructure and for direct support of enterprises contribute to a noticeable revival of investment activity. It is estimated that in 2017 the voivodeship’s investment rate (ratio of gross fixed capital formation expenditures to the regional GDP) was higher by 4.5 p.p. than under the counterfactual scenario (which assumes the absence of the discussed funds).

In 2003 (the year preceding Poland’s EU accession) the employment rate (among people aged 20-64) amounted in the Świętokrzyskie Voivodeship to 56.7%, however, by 2017 the analyzed indicator climbed to 67.9% - with over 16% (1.8 p.p.) of the improvement recorded in this period resulting from the presence of the EU Funds.

The beneficial effects of the European Cohesion Policy entail also creation of new jobs, improvement of employees skills and their better adaptation to the changing labor market conditions. As of 2017, the number of jobs created in the analyzed voivodeship thanks to the implementation of investments co-financed from the EU budget is estimated at about 13.6 thousand.

The EU Funds are also conducive to lowering the unemployment rate. In the last pre-accession year (2003) the unemployment rate (for people aged 15 and over) had amounted in the Świętokrzyskie Voivodeship to as much as 18%, while by 2017 it declined to 7%. The EU Funds have, to a large extent, contributed to this achievement- it is estimated that they were responsible for 1.2 p.p. of the unemployment rate’s decline in the region.

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\(^{16}\) For the years 2004-2015 historical data from the Local Data Bank of the Central Statistical Office of Poland were used, while forecasts generated by the EUImpactMOD model were used for the period 2016-2017.
THE WARMIŃSKO-MAZURSKIE VOIVODESHP

The cumulative value of funds disbursed from structural funds and the Cohesion Fund in the Warmińsko-Mazurskie Voivodeship until the end of 2017 amounted to PLN 20,767 million. In per capita terms and in relation to the region’s GDP these resources amounted in the period 2004-2017 to PLN 14,482 and 3.7% respectively. Both in per-capita terms and in relation to the regional GDP these values were significantly higher than the respective national averages (PLN 9,934 and 1.9%).

The undertakings financed from the EU Funds constitute a significant part of the public investments in the region - in 2016 they amounted to 69.4% of total public investments in this voivodeship (as against the national average of 43.2%).

Impact of the Cohesion Policy in the Warmińsko-Mazurskie Voivodeship in the period 2004-2017

In 2016, the GDP per capita (in PPS) in the Warmińsko-Mazurskie Voivodeship to 49% of the EU-28 average. In the period 2004-2016, the distance between the voivodeship and the above-mentioned EU average decreased by 12 p.p., of which about half (5.6 p.p.) resulted from the implementation of the Cohesion Policy.

The pace of the convergence process depends mostly on the rate of the region’s economic growth. In the period 2004-2017 Warmińsko-Mazurskie was growing at the annual average rate of 2.8% (in constant prices), with the EU co-financed investments being responsible for about 27% (0.8 p.p.) of the economic growth.

The expenditures earmarked from the EU Funds for infrastructure and for direct support of enterprises contribute to a noticeable revival of investment activity. It is estimated that in 2017 the voivodeship’s investment rate (ratio of gross fixed capital formation expenditures to the regional GDP) was higher by 9.1 p.p. than under the counterfactual scenario (which assumes the absence of the discussed funds). Therefore, in case of this region the EU Funds’ impact on the said indicator is the most pronounced among all Polish voivodeships.

In 2003 (the year preceding Poland’s EU accession) the employment rate (among people aged 20-64) amounted in the Warmińsko-Mazurskie Voivodeship to 51.1%, however, by 2017 the analyzed indicator climbed to 65.6% - with over 21% (3.0 p.p.) of the improvement recorded in this period resulting from the presence of the EU Funds.

The beneficial effects of the European Cohesion Policy entail also creation of new jobs, improvement of employees skills and their better adaptation to the changing labor market conditions. As of 2017, the number of jobs created in the analyzed voivodeship thanks to the implementation of investments co-financed from the EU budget is estimated at over 24.9 thousand.

The EU funds are also conducive to lowering the unemployment rate. In the last pre-accession year (2003) the unemployment rate (for people aged 15 and over) had amounted in the Warmińsko-Mazurskie Voivodeship to as much as 25%, while by 2017 it declined to 7.2%. The EU Funds have, to a large extent, contributed to this achievement- it is estimated that they were responsible for 2.2 p.p. of the unemployment rate’s decline in the region.

\[17\] For the years 2004-2015 historical data from the Local Data Bank of the Central Statistical Office of Poland were used, while forecasts generated by the EUImpactMOD model were used for the period 2016-2017.
THE WIELKOPOLSKIE VOIVODESHIP

The Cohesion Policy financing for the Wielkopolskie Voivodeship in the period 2004-2017

The cumulative value of funds disbursed from structural funds and the Cohesion Fund in the Wielkopolskie Voivodeship until the end of 2017 amounted to PLN 26,940.3 million. In per capita terms and in relation to the region’s GDP these resources amounted in the period 2004-2017 to PLN 7,721 and 1.4% respectively. Both in per-capita terms and in relation to the regional GDP these values were significantly lower than the respective national averages (PLN 9,934 and 1.9%).

The share of undertakings financed from the EU funds in the public investments is slightly lower than on average in the national economy - in 2016 it amounted to 40.1% of total public investments in the region (as against the national average of 43.2%).

Impact of the Cohesion Policy in the Wielkopolskie Voivodeship in the period 2004-2017

In 2016, the GDP per capita (in PPS) amounted in the Wielkopolskie Voivodeship to 75% of the EU-28 average. In the period 2004-2016, the distance between the voivodeship and the above-mentioned EU average narrowed by 24 pp, of which about 14% (3.4 p.p.) resulted from the implementation of the Cohesion Policy. Therefore, the EU Funds are conducive to the gradual bridging of the gap in economic development between the voivodeship and the EU-28 average level.

The pace of the convergence process depends mostly on the rate of the region’s economic growth. In the period 2004-2017 Wielkopolskie was growing at the annual average rate of 4.1% (in constant prices), with the EU co-financed investments being responsible for about 6% (0.2 p.p.) of the economic growth.

The expenditures earmarked from the EU Funds for infrastructure and for direct support of enterprises contribute to a noticeable revival of investment activity. It is estimated that in 2017 the voivodeship’s investment rate (ratio of gross fixed capital formation expenditures to the regional GDP) was higher by 2.7 p.p. than under the counterfactual scenario (one which assumes the absence of the discussed funds).

In 2003 (the year preceding Poland’s EU accession) the employment rate (among people aged 20-64) amounted in the Wielkopolskie Voivodeship to 61.2%, however, by 2017 the analyzed indicator climbed to as much as 74% - with over 11.5% (1.5 p.p.) of the improvement recorded in this period resulting from the presence of the EU Funds.

The beneficial effects of the European Cohesion Policy entail also creation of new jobs, improvement of employees skills and their better adaptation to the changing labor market conditions. As of 2017, the number of jobs created in the analyzed voivodeship thanks to the implementation of investments co-financed from the EU budget is estimated at over 31.7 thousand.

The EU Funds are also conducive to reducing the unemployment rate. In the last pre-accession year (2003) the unemployment rate (for people aged 15 and over) had amounted in the Wielkopolskie Voivodeship to as much as 16.1%, while by 2017 it declined to a mere 3.1%. The EU Funds have, to a certain extent, contributed to this achievement - it is estimated that they were responsible for about 1.0 p.p. of the unemployment rate’s decline in the region.

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18 For the years 2004-2015 historical data from the Local Data Bank of the Central Statistical Office of Poland were used, while forecasts generated by the EUImpactMOD model were used for the period 2016-2017.
THE ZACHODNIOPOMORSKIE VOIVODESHIP

The Cohesion Policy financing for the Zachodniopomorskie Voivodeship in the period 2004-2017

The cumulative value of funds disbursed from structural funds and the Cohesion Fund in the Zachodniopomorskie Voivodeship until the end of 2017 amounted to PLN 17,507.7 million. In per capita terms and in relation to the region’s GDP these resources amounted in the period 2004-2017 to PLN 10,265 and 2.2% respectively. Both in per-capita terms and in relation to the regional GDP these values were higher than the respective national averages (PLN 9,934 and 1.9%).

The share of undertakings financed from the EU funds in the public investments is slightly lower than on average in the national economy - in 2016 it amounted to 40.5% of total public investments in the region (as against the national average of 43.2%).

Impact of the Cohesion Policy in the Zachodniopomorskie Voivodeship in the period 2004-2017

In 2016, the GDP per capita (in PPS) amounted in the Zachodniopomorskie Voivodeship to 57% of the EU-28 average. In the period 2004-2016, the distance between the voivodeship and the above-mentioned EU average narrowed by 12 pp, of which about 30% (3.6 p.p.) resulted from the implementation of the Cohesion Policy. Therefore, the EU Funds are conducive to the gradual bridging of the gap in economic development between the voivodeship and the EU-28 average level, even though in 2016 situation was slightly worse than in 2015 (when the regional GDP per capita reached 58% of the EU average).

The pace of the convergence process depends mostly on the rate of the region’s economic growth. In the period 2004-2017 Zachodniopomorskie was growing at the annual average rate of 2.9%\(^{19}\) (in constant prices), with the EU co-financed investments being responsible for about 14% (0.4 p.p.) of the economic growth.

The expenditures earmarked from the EU Funds for infrastructure and for direct support of enterprises contribute to a noticeable revival of investment activity. It is estimated that in 2017 the voivodeship’s investment rate (ratio of gross fixed capital formation expenditures to the regional GDP) was higher by 4.4 p.p. than under the counterfactual scenario (one which assumes the absence of the discussed funds).

In 2003 (the year preceding Poland’s EU accession) the employment rate (among people aged 20-64) amounted in the Zachodniopomorskie Voivodeship to 51.9%, however, by 2017 the analyzed indicator climbed to 67.5% - with over 13% (2.2 p.p.) of the improvement recorded in this period resulting from the presence of the EU Funds.

The beneficial effects of the European Cohesion Policy entail also creation of new jobs, improvement of employees skills and their better adaptation to the changing labor market conditions. As of 2017, the number of jobs created in the analyzed voivodeship thanks to the implementation of investments co-financed from the EU budget is estimated at over 20.3 thousand.

The EU Funds are also conducive to lowering the unemployment rate. In the last pre-accession year (2003) the unemployment rate (for people aged 15 and over) had amounted in the Zachodniopomorskie Voivodeship to as much as 26.7%, while by 2017 it declined to a mere 4.6%. The EU Funds have, to a certain extent, contributed to this progress- it is estimated that they were responsible for about 1.5 p.p. of the unemployment rate’s decline in the region.

\(^{19}\) For the years 2004-2015 historical data from the Local Data Bank of the Central Statistical Office of Poland were used, while forecasts generated by the EUImpactMOD model were used for the period 2016-2017.
Sources:

- The evaluation of the impact of the Cohesion Policy on the development of selected macroeconomic indicators on the national and regional level with the use of the EUImpactMod model, IMAPP and the Institute for Structural Research, June 2018.
- The Central Statistical Office of Poland, the National Bank of Poland, Eurostat.

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