

## BUSINESS ACTIVITY INTENSIFICATION PROCESSES IN EUROPEAN UNION MEMBER STATES, INCLUDING POLAND

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**Abstract:** The article presents results of research covering a fourteen-year time period (2004-2018) in which changes of the labour productivity level occurring in EU Member States were analysed. The results of the said research characterise progress of these countries in the business activity intensification process, i.e. improvement of applied technical and organisational methods, and the economic structure. Labour productivity was analysed in the paper from the macroeconomic perspective, i.e. measured with gross value added (GVA) per worker in the total economy, including three sectors: agricultural, industry and construction, and services. A scale of a labour productivity change as part of the Community and a group of 15 countries of the former EU, and a group of 12 new Member States and individual countries, were determined in this range. Tendencies of changes taking place in the years 2004-2018 with regard to the productivity diversity across 28 EU Member States and the development of cross-sectoral productivity relations, as well as changes in positions of respective countries as part of the Community in terms of the productivity level were determined.

**Keywords:** EU countries, labour productivity diversity, dynamic perspective, sectoral relations, position of countries in the EU.

### 1. Introduction

The ability of individual countries to increase prosperity and improve living conditions depends on economic development (progress), which is not only limited to quantitative changes in GDP, but is also oriented towards a long-term process of qualitative changes in the economy and its surroundings. Such multifaceted transformations should ensure a gradual process of activity intensification, necessary to increase the efficiency of the use of existing resources, i.e. increase their productivity.

Due to a gradual exhaustion of many natural resources and a limitation of access thereto, as well as unfavourable demographic tendencies present in a number of countries, *per capita* income and competitiveness of a given economy at an international scale are ever more

dependent on the productivity of resources, in particular on labour (Baer-Nawrocka, and Markiewicz, 2012). Progress in this area requires the development of knowledge and different types of practical skills necessary to improve applied techniques and technologies, and ways of organising manufacturing processes, as well as shifting to more productive, often new activities (Hidalgo, and Hausmann, 2009; Felipe et al., 2012).

In countries aiming at reducing the development gap in relation to highly developed countries, there is a need to implement such structural transformations in the economy that would ensure a high efficiency growth rate. They should involve, inter alia, diversification of the economy structure and development of new specialisations to guarantee an increase in the share of production and the export offer, technologically advanced products with a large contribution of highly specialised labour and knowledge, i.e. added value. Nowadays, the need for such transformations refers to the production activity and services. In the era of globalisation and development of IT and telecommunications techniques, likewise in production, there is a process going on which involves fragmentation of service processes and possible delegation and provision of the same kind of services remotely (e.g. in the form of *offshoring*), which contributes to the formation of many new knowledge-based service specialisations (Szymaniak, 2008; Adamczyk-Łojewska, 2017).

Conclusions resulting from neoclassical growth theories indicate that overcoming the economic gap in economically less advanced countries depends not only on the volume of investment outlays, but also on numerous endogenic conditions, such as R&D potential, the level of human and social capital development, as well as the development of technical, social and institutional infrastructure, etc. Usually, these conditions change slowly and require complex, multifaceted social and economic transformations (Siwiński, 2005; Michałek et al., 2007; Tokarski, 2007). The development of desirable transformations may be accelerated by a properly oriented and effective social and economic policy implemented in a given country. Processes of economic integration and external opening, including international capital flow, may also be important in this regard, as indicated by many authors (Ben-David, and Loewy, 2003; Barro, and Sala-I-Martin, 2004). By facilitating the technical progress diffusion, imitation and adaptation of various innovations and institutional solutions, these processes may contribute to increasing the efficiency of manufacturing factors, including labour. Within the European Union, a conscious structural policy is also undertaken and significant financial outlays are incurred to reduce gaps in economic development conditions for individual countries.

The purpose of this paper was to present results of research covering a fourteen-year time period (2004-2018), in which changes of the labour productivity level occurring in EU Member States were analysed. The results of the said research indirectly characterise the progress of individual countries and their separate groups, e.g. new Member States in the complex activity intensification process, i.e. improvement of applied technical and organisational methods, and the economy structure.

## 2. Method and sources

Analysed labour productivity (efficiency), generally understood as the effect of labour (achieved in a specific time, e.g. an hour or a year) per labour unit (e.g. an employee or a worker), may be presented and measured in a different way, depending on the analysis level and purpose, and sometimes also on the availability of data (Bukowski et al. 2006; Wąsowicz, 2013; Jarmołowicz, and Knapińska, 2014). In the presented research, labour productivity analysed at the level of countries and their groups – for international comparisons – is measured with gross value added (GVA) per worker. It is calculated in a given year as the average for the total economy or three separate sectors: I – agricultural (including forestry and fishing), II – total industry and construction, and III – services (separated as the rest).

The research made it possible to determine:

- changes in the level of labour productivity in the years 2004-2018 at the Community scale<sup>1</sup>, including a group of 15 countries of the former EU and a group of 12 new Member States<sup>2</sup>, and in individual countries,
- changes in the scale of differences in labour productivity across 28 countries of the EU, as well as in the shaping of cross-sectoral productivity level relations,
- the relative position (rank) of individual countries in relation to the remaining Member States in terms of the productivity level (in the total economy and three analysed sectors), and changes in this position in the years 2004-2018.

Eurostat output data was used in the research and gross added value (GAV) per worker<sup>3</sup>, mainly expressed in EUR at the exchange rate, was analysed, since such expressed productivity was recognised to be one of essential factors determining the competitiveness level of countries on the international market (Bieńkowski et al., 2008), unlike GAV expressed while taking into account Purchasing Power Parity (PPP) of respective currencies, which first of all gives information on economic basis of the living standard in a given country.

In partial analyses, productivity calculated in a different way was applied: at fixed prices (base prices of 2010) when determining changes over time and growth dynamics, and at current prices – when determining diversification and cross-sectoral relations, and when establishing the relative position of individual countries in relation to the remaining Member States in given years (2004 and 2008).

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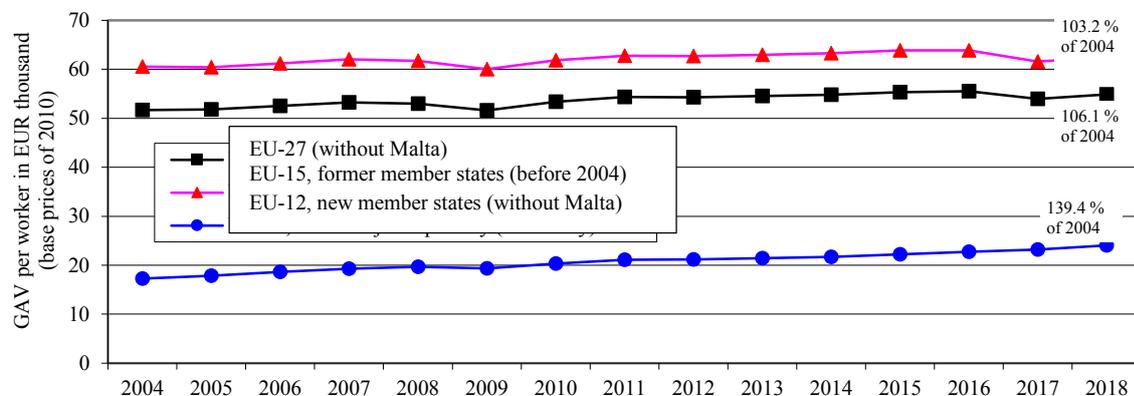
<sup>1</sup> The Community of 27 countries, excluding Malta, due to the lack of data on gross added value, calculated at basic prices of 2010, necessary to define changes in labour productivity of that country in the years 2004-2018.

<sup>2</sup> Countries joining the EU in 2004 or later (without Malta, for the above reasons).

<sup>3</sup> When calculating productivity, the average number of workers in a given year was considered.

## 2. Changes in the productivity level in the total economy

Average labour productivity in the European Union<sup>4</sup>, measured with GAV per worker in the total economy (expressed in EUR and at fixed prices), indicated a growing tendency in the analysed fourteen-year time period (2004-2018), despite slight fluctuations. The regress of productivity calculated in such a way occurred in the period of the financial and economic crisis (2008-2009) and in the last two analysed years (2017-2018). In 2018, however, the productivity level (at fixed prices) was higher by 6.1% than in 2004. Progress in this respect was made with an increase of the total number of workers (by approx. 14% in the years 2004-2018) and an even greater (by approx. 21%) increase in gross added value created (Fig. 1, Table 1).



**Figure 1.** Labour productivity (measured with GAV per worker, fixed prices) in EU countries in the years 2004-2018. Source: calculations and own work on the basis of EUROSTAT data.

A relatively lower increase in labour productivity in the analysed period was observed in the group of 15 countries of the former EU (EU-15), where productivity in 2018 increased in relation to that of 2004 by 3.2%, with an increase in the number of workers by approx. 15% and gross added value by 18.5%. In the group of these countries, a spectacularly large increase of labour productivity was observed in Ireland (an increase by approx. 60%), while in Sweden the productivity increase was 14%, in Portugal, Spain, Denmark and the Netherlands – within the range of 9-10%. On the other hand, in a few countries, mainly in Luxembourg, Italy and Greece, there was a regress observed in the analysed scope (Fig. 2).

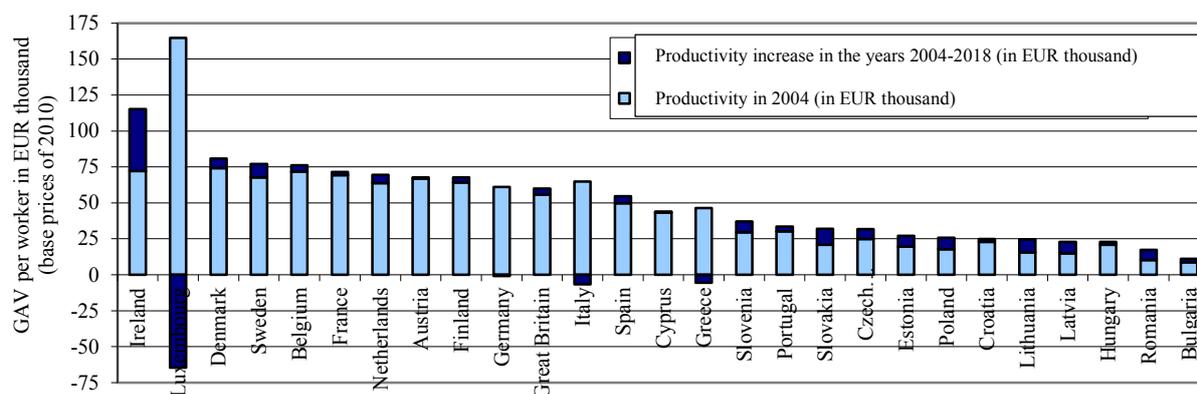
<sup>4</sup> In the analysis of gross added value per worker, calculated at fixed prices (of 2010), 27 EU countries were considered (without Malta) due to the lack of proper data for that country.

**Table 1.**

*Labour productivity dynamics, the number of workers and gross added value in groups of EU countries in the years 2004-2018 (2004 = 100)*

Description	27 EU countries (without Malta)	15 countries of the former EU (before 2004)	12 new countries of the EU (without Malta)
Labour productivity	106.1	103.2	139.4
Number of workers	113.9	114.8	110.2
Gross added value	120.9	118.5	153.7

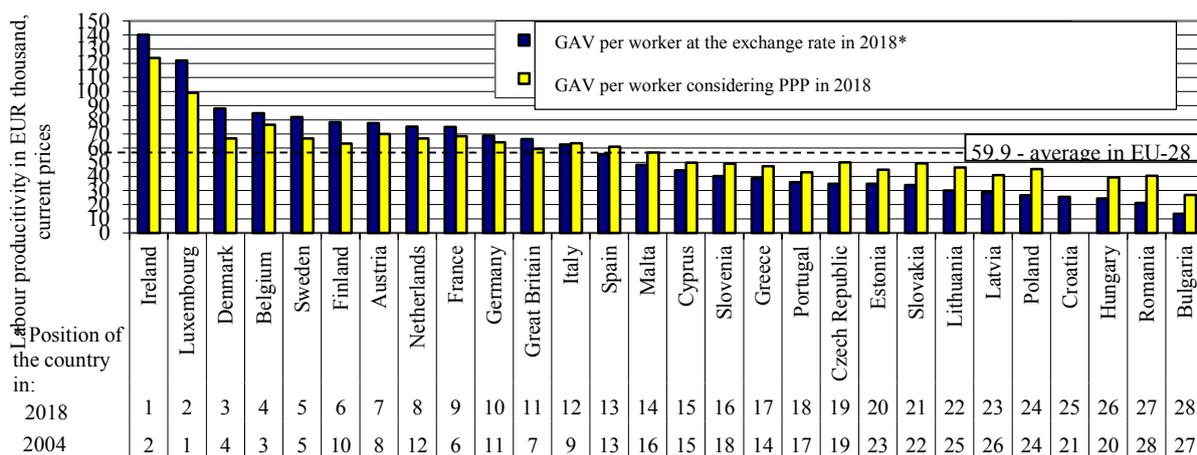
Source: own work on the basis of Eurostat data.



**Figure 2.** Changes in the labour productivity level (measured with GAV per worker, at fixed prices) for the total economy of 27 EU countries (*descending order of countries as per productivity level in 2018*) (without Malta) in the years 2004-2018. Source: own calculations on the basis of EUROSTAT data.

In the total analysed group of 12 new Member States (joining the Community in 2004 or later), the total number of workers increased in 2018 in relation to 2004 to a relatively small extent (by 10.2%), whereas generated gross added value (GAV) - to a major extent (by 53.7%). As a result, in the discussed group of countries (EU-12), labour productivity increased most dynamically in the analysed period, in the entire fourteen-year time period it increased by 39.4% on average, including in Romania (by 70%), Lithuania (by 59.8%), Latvia (by 54.4%), Slovakia (by 52%) and Poland (by 43.6%) (Table 1, Figure 2).

Despite the observed convergence tendency and decreasing disproportions between EU countries in the analysed scope, the international diversification of the labour productivity level was still very high in 2018, in particular with the expression of GAV/worker in EUR (at the exchange rate), and lower with regard to Purchasing Power Parity. The ratio of minimum labour productivity (in Bulgaria) to maximum productivity (in Ireland) was 1:10.4 in the first variant and 1:4.6 in the second one. Productivity (calculated in EUR at the exchange rate) higher than the average one in the Community was characteristic for the majority of countries of the so-called former UE-15 (except for Portugal, Greece and Spain). Particularly high productivity was observed in Ireland and Luxembourg (Fig. 3).



**Figure 3.** Labour productivity expressed in EUR thousand, while considering exchange rates and Purchasing Power Parity (PPP) for the total economy of 28 EU countries (*order of countries as per GAV/worker (in EUR at the exchange rate) in 2018*) in 2018, and the position of individual countries as per GAV/worker (at the exchange rate) in 2004 and 2018. Source: calculations and own work on the basis of EUROSTAT data.

In all twelve analysed new Member States and in Portugal, Greece and Spain, labour productivity (expressed in EUR at the exchange rate) in 2018 was lower than the average one in EU-28, at the same time in six countries (in Bulgaria, Romania, Hungary, Croatia, Poland and Latvia) it did not exceed the level of 50% of that average (Fig. 2).

The different rate of positive changes in individual countries, relating, but not limited to, the progress in applied techniques and technologies, as well as organisational and structural transformations involving an increase in the share of sectors and divisions characterised by higher productivity in the economy (in the employment structure and generated gross added value), contributed to a change in the position of some of these EU countries in terms of the labour productivity level of the economy in total. In the fourteen-year time period (2004-2018), the position of Finland and the Netherlands, as well as of Estonia, Lithuania and Latvia improved significantly (by four places for Finland and the Netherlands, and by three places for Estonia, Lithuania and Latvia, respectively) in this regard. On the other hand, the position of the following countries deteriorated significantly: by as many as six places for Hungary, by four places for the Great Britain and Croatia, and by three places for France, Italy and Greece (Fig. 3).

In Poland, labour productivity in the total economy (at fixed prices) increased in the analysed fourteen-year time period by EUR 7.8 thousand/worker, i.e. by 44% (by 39.4% in the EU on average). However, the position of Poland in terms of labour productivity in the total economy did not change in the analysed years and it was ranked 24<sup>th</sup> among 28 countries. In the years 2004-2018, two countries overtook Poland in this respect: Lithuania and Latvia, and at the same time the position of two countries deteriorated leaving them behind Poland: Hungary and Croatia (Fig. 3).

#### 4. Changes in the labour productivity level and diversification by sector

The rate of positive development changes relating to the business activity intensification process and an increase of labour productivity was much diversified by sector. Particularly high labour productivity increase dynamics was observed in the manufacturing sectors, the agricultural sector, and in the total industry and construction sector. Labour productivity (measured with GAV per worker) increased (in 2018 in relation to 2004) in EU-27 in the agricultural sector by 30.5% and in the total industry and construction sector – by 26.4%, including, in particular, in the analysed group of the new Member States to a large extent (by 40.1% and 55.3%, respectively) (Table 2).

**Table 2.**

*Sector diversification of factors characterising labour productivity dynamics, gross added value (GAV) and number of workers in EU-27 (without Malta), including in the group of the former and the new Member States in the years 2004-2018 (2004=100)*

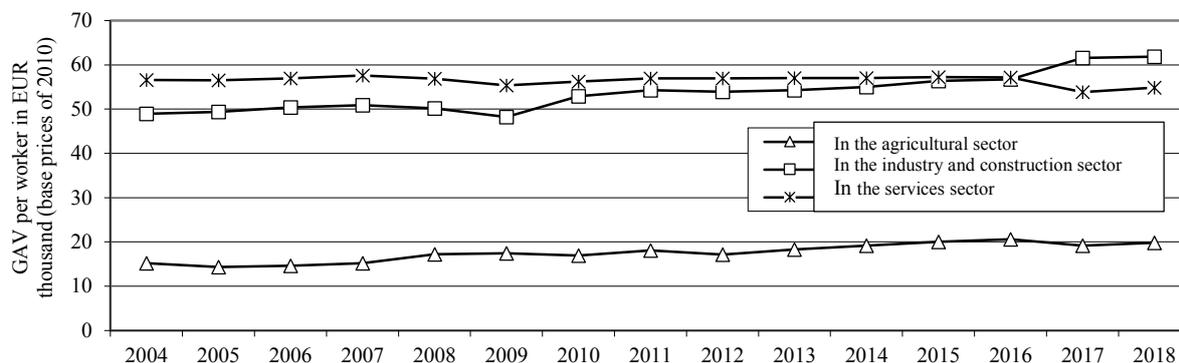
Description		EU-27	EU-15	EU-12 new Member States
Labour productivity dynamics (calculated in EUR, at fixed prices)	total	106.1	103.2	139.4
	sector1	130.5	120.3	140.1
	sector 2	126.4	128.0	155.3
	sector 3	96.9	95.1	121.4
GAV dynamics (calculated in EUR, at fixed prices)	total	120.9	118.5	153.7
	sector1	101.6	101.7	101.0
	sector 2	113.0	108.7	162.5
	sector 3	124.3	122.2	153.3
Dynamics of the number of workers	total	113.9	114.8	110.4
	sector1	72.1	78.2	66.8
	sector 2	89.5	84.9	104.6
	sector 3	128.3	128.7	126.3

Source: own work on the basis of Eurostat data.

In the agricultural sector, the increase in labour productivity was mainly a result of a decrease in the number of workers (by 27% in EU-27), including in the group of 15 countries of the former EU (by approx. 22%), and to an even greater extent in the group of the new Member States (by 33%), since global GAV generated in this sector was subject to significant fluctuations and did not show any substantial growth tendencies. What is particularly important, the labour productivity level, despite the growing tendency, was still relatively low in the sector in question. On average, in the EU it did not exceed 36% of the average level in non-agricultural sectors (Fig. 4).

Labour productivity in the total industry and construction sector, despite fluctuations observed in the analysed period, also indicated a distinct growing tendency (Fig. 4). Productivity increased in this sector (likewise in the agricultural one) with a decrease of the number of workers (in EU-27 by 10.5% and in EU-15 by approx. 15%). In percentage terms, the decrease in the number of workers, however, was much lower here than in the agricultural

sector, and for the new Member States there was even a slight increase of the number of workers (by approx. 5%) (Table 2).

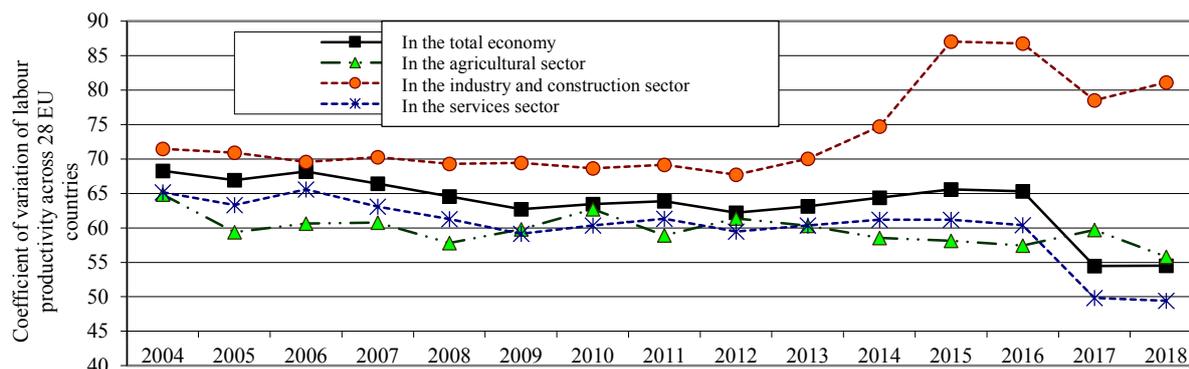


**Figure 4.** Labour productivity (measured in EUR thousand and at fixed prices) in three sectors in EU-27 countries (without Malta) in the years 2004-2018. Source: own calculations on the basis of EUROSTAT data.

Within the three analysed sectors, the lowest labour productivity increase dynamics was observed in services. The initially high productivity level in this sector was systematically decreasing in relation to the average one in the economy and from 2017 it was already lower than in the industry and construction sector. Labour productivity in services was reduced in the analysed period by 3% in EU-27 on average, including in UE-15 by approx. 5%, and only in the new Member States it increased by 21%. A large increase in the number of workers in this sector (by 28% in EU-27 on average) was accompanied by an increase in generated global gross added value (by 24% in EU-27), particularly high in the new Member States (by 53%) (Table 2, Fig. 4). It was an expression of the accelerated process of transformations taking place in the economic structure of the new Member States. At the current stage of development of these countries, involving an increase in the share of services, it was reflected first of all in the structure of added value, and to a smaller extent in the employment structure<sup>5</sup>.

Positive transformations occurring relatively fast in the economic structure of the new Member States contributed (as already indicated in the previous paragraph) to decreasing diversities in the analysed range. The diversification of labour productivity measured with the coefficient of variation across 28 EU countries, despite observed fluctuations, decreased substantially for the total economy, including in services and in the agricultural sector (in 2018, the coefficient of variation was 49% and 56%, respectively). What should be emphasised is a relatively high labour productivity diversification growing in the recent years in the industry and construction sector (in 2018, the coefficient of variation was 81%) (Fig. 5).

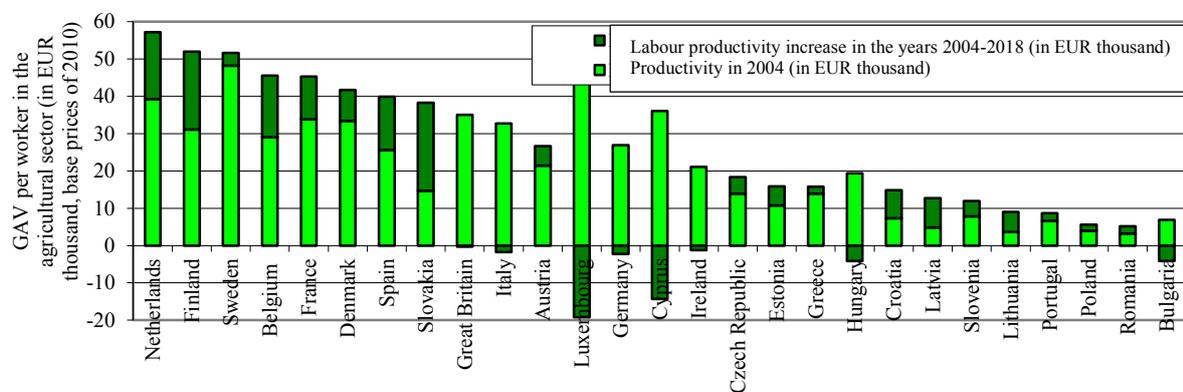
<sup>5</sup> The share of services in GAV increased in 2018 in the group of 13 new Member States up to 64.6% (in EU-15 up to 74.1%), whereas in the employment structure up to 59.0% (in EU-15 up to 77.4%). Eurostat data.



**Figure 5.** Diversification of labour productivity across 28 EU countries (measured with GAV per worker in EUR at current prices) in the years 2004-2018. Source: own calculations on the basis of EUROSTAT data.

In the years 2004-2018, the gap between the majority of the new Member States and economically developed countries of the Western Europe decreased in terms of the labour productivity level. However, the progress of individual countries in the analysed period varied, as in the group of 15 countries of the former European Union.

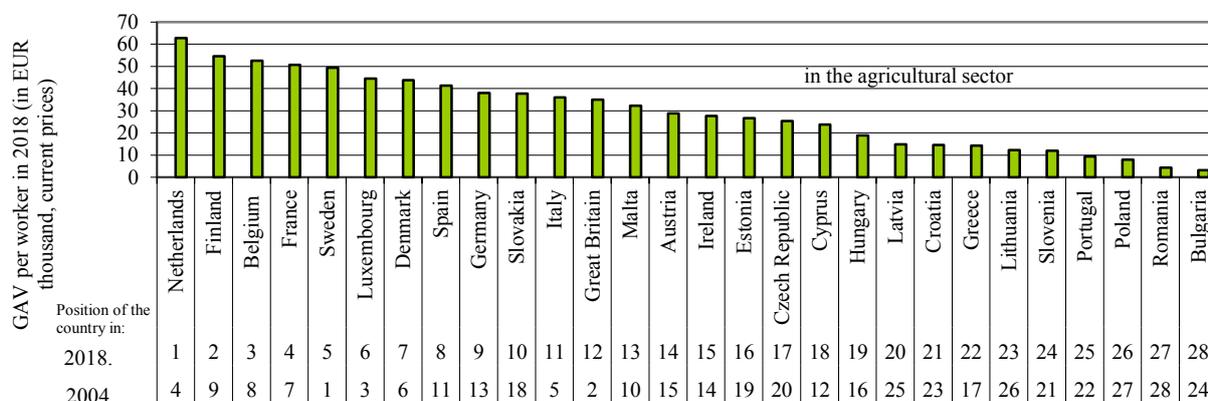
In the broadly defined agricultural sector, an increase of labour productivity was observed in the majority of Member States. The productivity level decreased (in 2018 in relation to 2004) only in few former Member States (in particular in Luxembourg, and to a smaller extent in Germany, Italy and Ireland), and among the new Member States (in Cyprus, Hungary and Bulgaria) (Fig. 6).



**Figure 6.** Changes in the labour productivity level (measured at fixed prices) in the agricultural sector in 27 EU countries (order of countries as per productivity level in 2018) (without Malta) in the years 2004-2018. Source: calculations and own work on the basis of EUROSTAT data.

The highest productivity growth dynamics in the said sector, expressed as a percentage, was observed in most of the new Member States, in particular in: Latvia (an increase by 163%), Slovakia (by 162%), Lithuania (by 146%) or Croatia (by 103%), in which the input productivity level (in 2004) was generally relatively low, since the highest increase of productivity measured in EUR thousand (at fixed prices) was observed in Slovakia (EUR 23.6 thousand/worker), and in a number of countries of the former EU, in particular in Finland, the Netherlands, and in Belgium and Spain (Fig. 6).

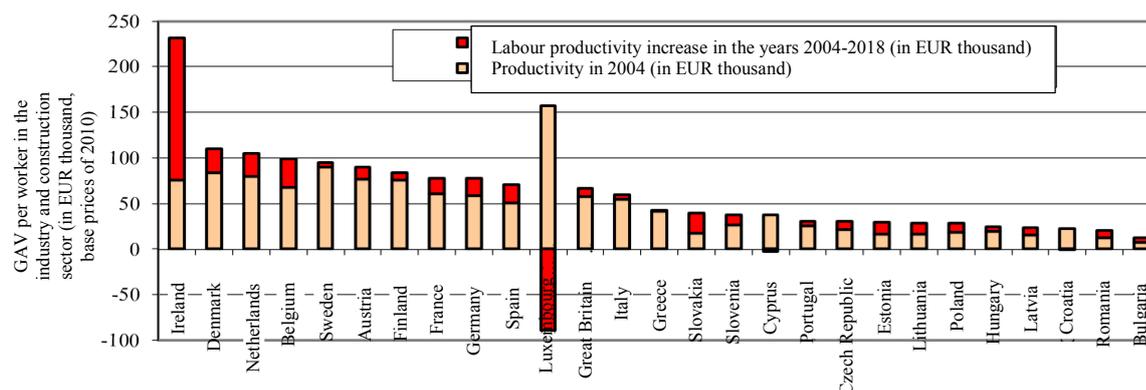
In 2018 (in relation to 2004), the most significant improvement in the Community in terms of the productivity level in the agricultural sector was observed in the position of Slovakia (by eight places), Finland (by seven places), Belgium and Latvia (by five places), whereas the following countries ranked low with their position having decreased significantly: Great Britain (by ten places), Italy and Cyprus (by six places), and Greece (by five places) (Fig. 7).



**Figure 7.** Labour productivity (in EUR thousand, current prices) in the agricultural sector of 28 EU countries (order of countries as per productivity level in 2018) in 2018, and the position of individual countries due to the productivity level in this sector in 2004 and 2018. Source: calculations and own work on the basis of EUROSTAT data.

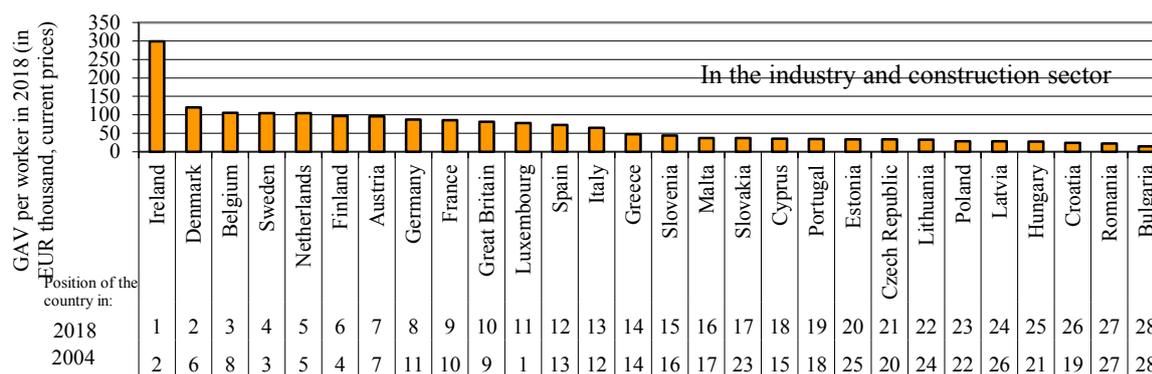
Labour productivity in the Polish agricultural sector (expressed in EUR and at fixed prices) increased in the years 2004-2018 by EUR 1.6 thousand/worker, i.e. by 41% (by 39.4% in the new Member States of EU-12 on average). The gap between Poland and highly developed countries decreased, while in 2004, labour productivity in this sector (expressed in EUR and at current prices) was thirteen times lower than in the Netherlands (i.e. in a country of high productivity) in 2018 it was only eight times lower. In terms of labour productivity in the agricultural sector, Poland still ranked 26<sup>th</sup> among 28 countries of the Community (before Romania and Bulgaria). In the years 2004-2018, the process of narrowing the gap between Poland and other developing countries (Slovakia, Latvia or Lithuania) in the above respect was relatively slow (Fig. 7).

In the total industry and construction sector, an exceptionally high and spectacular increase of labour productivity was observed in Ireland (an increase by EUR 156 thousand, i.e. by 204%) in the analysed time period (2004-2018). An increase of productivity also took place in many other countries of the Community, including a relatively high in Belgium (by EUR 31 thousand, i.e. by 45%), Denmark (by EUR 27 thousand, i.e. by 32%) and the Netherlands (by EUR 25 thousand, i.e. by 32%), and in the group of the new Member States also in Slovakia (by EUR 21.5 thousand, i.e. by 122%). In the analysed years, the productivity level decreased only in three countries: mainly in Luxembourg, and to a minor extent in Cyprus and Croatia (Fig. 8).



**Figure 8.** Changes in the labour productivity level (measured at fixed prices) in the total industry and construction sector in 27 EU countries (*order of countries as per productivity level in 2018*) (without Malta) in the years 2004-2018. Source: calculations and own work on the basis of EUROSTAT data.

In terms of the labour productivity level in the industry and construction sector, the position of the following countries improved significantly: Slovakia (by 6 places), Belgium and Estonia (by 5 places), whereas the position of the following countries decreased significantly: Luxembourg (from the 1<sup>st</sup> to the 11<sup>th</sup> position), Croatia (by 7 places) and Hungary (by 4 places) (Fig. 9).

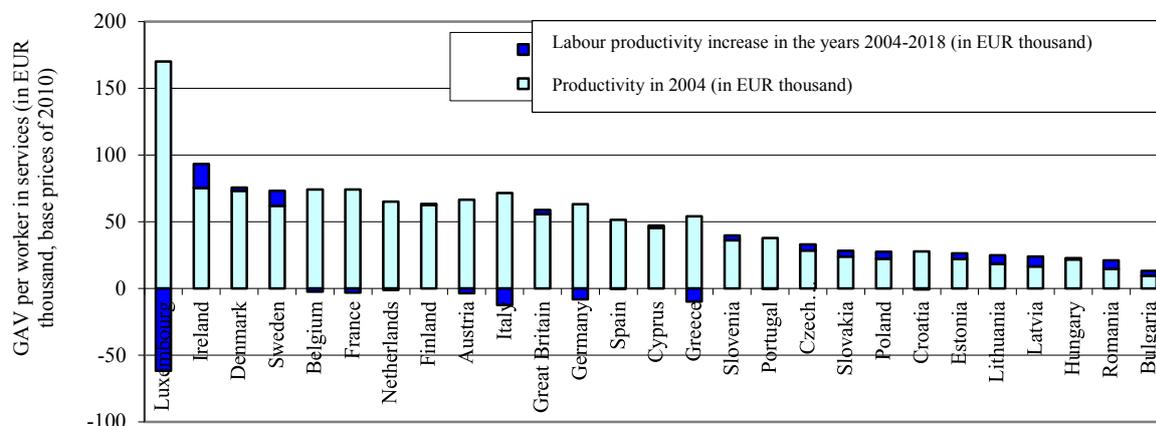


**Figure 9.** Labour productivity (in EUR thousand, current prices) in the total industry and construction sectors of 28 EU countries (*order of countries as per GAV/worker expressed in EUR (at the exchange rate) in 2018*) in 2018, and the position of individual countries due to the productivity level in this sector in 2004 and 2018. Source: calculations and own work on the basis of EUROSTAT data.

Poland, despite the substantial increase of labour productivity in the total industry and construction sector in the years 2004-2018 – by EUR 9.8 thousand/worker, i.e. by 53% (by 55% in EU-12 on average), ranked 23<sup>rd</sup> in terms of the productivity level (in 2004 – 22<sup>nd</sup>). In the analysed period, Poland was overtaken by such countries as Slovakia, Estonia and Lithuania (Table 2, Fig. 9).

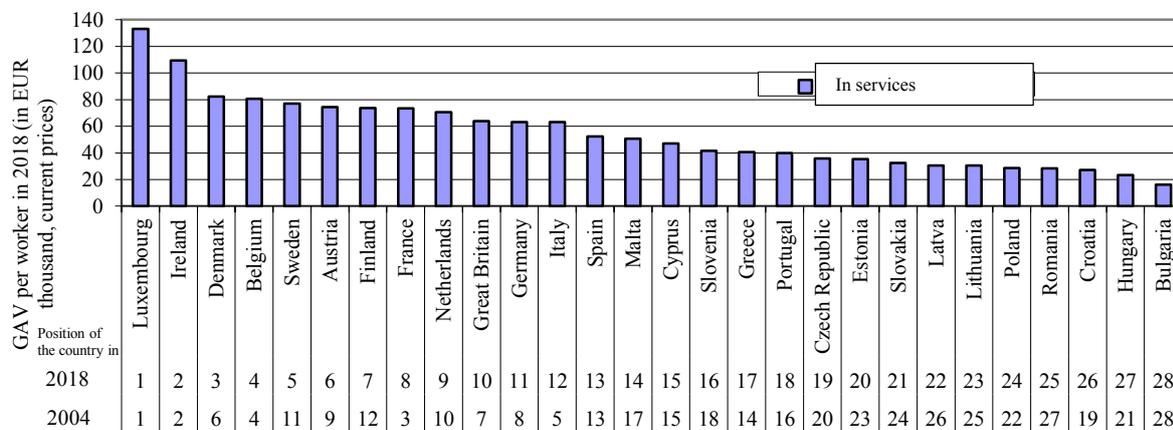
In services, the labour productivity growth dynamics was the lowest in the analysed years (as already indicated), in particular in the group of 15 countries of the former EU. In the group of these countries, productivity (calculated at fixed prices) increased in services only in 5 countries, to the most extent in Ireland (by EUR 18 thousand/worker) and Sweden (by EUR 11 thousand/worker), and to a much lesser extent in Great Britain, Denmark and Finland. In the remaining ten countries of the above group, labour productivity in this sector

decreased in the years 2004-2018, while in the majority of the new Member States (except Croatia), productivity in sectors increased, mostly in Latvia (by EUR 7.3 thousand/worker), Lithuania (by EUR 6.5 thousand) and Romania (by EUR 6.4 thousand) (Table 10).



**Figure 10.** Changes in the labour productivity level (measured at fixed prices) in services of 27 EU countries (order of countries as per productivity level in 2018) (without Malta) in the years 2004-2018. Source: calculations and own work on the basis of EUROSTAT data.

Considering changes in the relative labour productivity level in services (calculated in EUR and at current prices), the position of the following countries improved most among 28 EU countries: Sweden (by 6 places), Finland (by 5 places) and Latvia (by 4 places), whereas the following countries unfavourably went down in ranks: Italy and Croatia (by 7 places), Hungary (by 6 places) and France (by 5 places) (Fig. 11).



**Figure 11.** Labour productivity (in EUR thousand, current prices) in services of 28 EU countries (order of countries as per GAV/worker expressed in EUR (at the exchange rate) in 2018) in 2018, and the position of individual countries due to the productivity level in this sector in 2004 and 2018. Source: calculations and own work on the basis of EUROSTAT data.

In Poland, labour productivity in services (calculated at fixed prices) increased in the analysed fourteen-year time period by EUR 5.4 thousand/worker, i.e. by 25% (by 21% in EU-12 on average). In 2018, due to the level of this productivity (calculated in EUR and at current prices), Poland was ranked 24<sup>th</sup> among 28 countries of the Community (in 2004 – 22<sup>nd</sup>). In terms of the labour productivity level in this sector, Poland was overtaken by four countries

(Estonia, Slovakia, Latvia and Lithuania), whereas the position of two countries in relation to Poland deteriorated (Hungary and Croatia) (Fig. 11).

## Summary

The analysis of labour productivity in EU countries (measured with GAV per worker) carried out for the years 2004-2018 resulted in the following findings:

- Labour productivity in the total economy increased in the analysed fourteen-year time period by 6.1% in EU-27 on average, the productivity increase expressed as a percentage was particularly high in the group of 12 new Member States (by approx. 40%) and much lower in the group of 15 countries of the former EU (by 3.2%).
- Disproportions between countries in terms of labour productivity were reduced. The gap between the minimum and maximum level of this productivity in the total economy was like 1:22 in 2004 and 1:10 in 2018. Despite the observed convergence tendency, productivity higher than the average one was still observed in 2018 only in the former countries of EU-15 (except for Portugal, Greece and Spain), and lower than the average one – in all new Member States.
- In the analysed years, the increase of labour productivity was diversified by sector, relatively high in the manufacturing sectors (on average, productivity in the agricultural sector in EU-27 increased by 30%, and in the industry and construction sector – by 26%) and low in services (a drop by 3% in EU-27). In all three sectors, higher productivity dynamics was characteristic on average for the group of the new Member States (an increase by 40%, 55% and 21%, respectively).
- Despite relatively high labour productivity dynamics in the agricultural sector, its average level in the EU was maintained at a low level (< 40% of the average level in the total economy), whereas in non-agricultural activity cross-sectoral relations were changing in favour of the growth of productivity in the total industry and construction sector.
- Progress in terms of the productivity growth was diversified in individual countries, both in the group EU-15 and in the group of the new Member States. What deserves particular attention is the very high increase of labour productivity in the Irish economy (by EUR 43 thousand/worker, at fixed prices) in the analysed years, including mainly in the industry and construction sector and in services, and the exceptionally high productivity level in that country in 2018 (EUR 140 thousand/worker in the total economy, at current prices). On the other hand, in the group of the new Member States, Slovakia stands out with an increase of productivity in the total economy (an increase by EUR 11 thousand/worker), particularly high in the agricultural sector and lower in

the industry and construction sector. In that last group of countries, however, what draws one's attention is the unfavourable change of the position of Hungary within the analysed range.

- In the analysed years, in conditions of the deepening of integration processes and implementation of a joint consistency policy, disproportions in labour productivity decreased in the European Union, in particular between developed countries of the former EU and the new Member States. At the same time, observed significant differences between individual countries within both groups (EU-15 and the new Member States) in stimulating labour productivity indicate a strong influence of endogenic (domestic) factors in this regard. This enables the conclusion that for an increase in labour productivity, thus income and broadly defined prosperity, the ability to create proper conditions within the country, i.e. institutional conditions and a social and economic policy, including implementation of effective instruments focused on stimulating technological and organisational progress, and economy structure transformations beneficial from the discussed point of view, is important.

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