

THE IMPACT OF COVID-19 ON LABOUR COSTS

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Abstract

Labour costs comprise one of the basic indicators of labour market competitiveness and can be monitored with respect to three aspects: labour costs, share of labour costs and unit labour costs. In 2020, a previously unknown disease known as Covid-19 broke out worldwide. This article applies the quasi-experimental difference-in-differences method to determine the impact of the Covid-19 disease on the labour markets of European Union countries. To date, only the first year of the occurrence of the Covid-19 disease has been evaluated due to a two-year delay in the publishing of the relevant data. The countries that acceded to the EU after 2004 and the countries classified as PIIGS had the most difficulties coping with Covid-19. In essence, however, the Covid-19 disease negatively affected almost all the member countries of the European Union. Nevertheless, it is possible to conclude that the impact of Covid-19 was not as significant an external shock as, for example, the financial crisis of 2008.

Keywords

Competitiveness, COVID-19, Labour Costs, Share of Labour Costs, Unit Labour Costs

I. Introduction

The aim of the article is to identify, based on calculated labour market indicator values, the extent to which the Covid-19 pandemic affected the labour markets of selected countries, the member states of the European Union. The European Union as a whole is the third largest economic unit (after the United States and China) in the world economy. In terms of population, it is also the world's third most important player (after China and India). Unlike the above countries, however, the European Union does not have characteristics that are typical of individual states. It is a community of 27 autonomous countries that have given up their competences in some areas in favour of a greater whole. The European Union can, therefore, be seen as an entity that has, in part, the powers of an international organisation and, partly, those of one united country. This has resulted, however, in strong internal conflicts that are not typical of geographically larger states. The member states of the EU are in fact both partners and rivals. The aim of the European Union is to achieve a combination of sustainable development based on balanced economic growth and price stability, a highly-competitive market economy with full employment and social progress, and environmental protection.

Covid-19 severely disrupted the expansionary part of the economic cycle and represented the biggest external economic shock for over a decade. This disease affected not only the economic development of EU member countries, but also the behaviour of society as a whole. While the economic impacts are gradually being quantified, the social consequences for individuals and society, including the cultural consequences, will probably require another ten years or so. The statistics required for the calculation of the various indicators of labour costs are, however, available after a significantly shorter two-year delay,² i.e. 2020 values have recently become available. The article does not address the measures adopted by the fiscal authorities of the selected countries, rather it examines the overall impact on the various labour market indicators in the monitored countries.

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² It is possible to find sub-analyses that focus on micro-regions, market segments or industries. However, such conclusions cannot be applied to the entire European Union or the economies of the member countries.

In 2021, the author of this article calculated labour costs for the years 2008 to 2019 and provided a prediction for 2020 based on previous values, Beran (2021). This article compares the predicted values for 2020 with the calculated real labour cost indicator values for 2020 that became available in 2022. The values shown in the tables provided in this article commence with 2010.

II. Literature Review

The article applies labour costs methodology and the difference-in-differences method. Firstly, labour costs were approximated, followed by the application of the difference-in-differences method.

Labour costs were calculated using a range of varying methodologies at different times. This was due principally to differences in terms of the relevant statistics and the fact that, for many years, no statistics were available in this area. At the International Labour Office in Geneva, Van Ark and Monnikhof (2000) compiled a study in which labour costs were calculated according to industry (based on estimates) and Holý (2002) compiled a similar study with respect to conditions in the Czech Republic. Further, Andersen (2003) compiled a study on labour costs for the European Commission. Subsequently, statistics on labour costs were processed by Eurostat in the form we know today; minor methodological adjustments are introduced on a relatively regular basis.

Researchers then began to use this data in the search for answers to questions that had previously been unanswerable. For example, research on the link between labour costs and economic growth conducted by Hájek and Mihuka (2009). Opinions are common in both the economic and public spheres that reducing labour costs through wage cuts (especially in the PIIGS countries and countries that acceded to the EU after 2004) is the best way to achieve competitiveness. However, Storm and Naastepad (2014) subsequently presented evidence of the irrationality of such an approach. For example, Žuk et al. (2018) examined whether the countries that acceded after 2004 managed to take advantage of the opportunities available, thus contributing to the convergence of the economies and labour markets of the EU's member countries.

The difference-in-differences method was applied to determine the impact of Covid-19 on the labour markets of the monitored countries. As pointed out by Wing et al. (2018), this method is considered to be a quasi-experimental research approach. According to Callaway and Sant'Anna (2018), the difference-in-differences method comprises one of the most important and popular approaches to the evaluation of the causal effects of policy changes. They applied the difference-in-differences method to the minimum wage in their research. In terms of the counter-factual analysis context, this method comprises a non-equivalent comparison approach. Several variations exist in terms of the application of the difference-in-differences method. This article applies a comparison of predicted values (unaffected by an external shock) and actual values (affected by an external shock). The impact of Covid-19 on the labour markets of the monitored countries can be estimated based on the differences.

The application of the difference-in-differences method in this case takes into account the final results; however, it does not take into account those factors that may have affected the extent of the final results. This is the consequence of a lack of input variables rather than a weakness of the method. There are many factors that influence the result. The first of the three fundamental factors that concern the European Union has already been mentioned in the introduction, i.e. the countries of the European Union are independent states. The fiscal authorities of the member countries do not necessarily adopt the same intervention measures; moreover, they prioritise those measures that help their own economies.¹ The second important factor that affects the labour markets of the given countries concerns the ability of the various economic entities to react to external shocks.

¹ The bearers of such measures are usually the fiscal authorities of large states. They have the power and the financial resources to enforce their intervention. The fiscal authorities of smaller countries usually subsequently apply similar intervention measures or combinations of measures used in large countries. It is not uncommon for these measures to be less effective in smaller countries than in large countries.

Responsiveness varies according to the size and capitalisation of the economic entity and the country in which it is located. It is influenced significantly by the inclusion of economic entities that make up part of the global production system and global trade chains. The third important factor comprises the influence of economic entities on the fiscal authority, whether it be in the form of lobbying or corruption.

III. Labour Costs

The evaluation of labour costs provides an opportunity to determine the general state of competitiveness in terms of the price of labour within the European Union. Labour cost indicators generally include labour costs, the share of labour in costs and unit labour costs.

The first indicator is labour costs. From the macro-economic point of view, labour costs represent the sum of the costs associated with the functioning of the labour production factor and the reproduction of economic and social relations (Kozelský and Vlach, 2011).

The second indicator is the share of labour in costs. The share of labour costs of total costs indicator is particularly important with respect to those economies that traditionally have low labour costs. This indicator is not monitored by any international institutions.

The calculation is as follows:

$$SLCTC = \frac{\frac{NEC}{emp}}{\frac{C}{emm}} \times 100 = \frac{\frac{NEC}{emp}}{\frac{IC}{emm} + \frac{NEC}{emp} + \frac{D}{emm}} \times 100 = \frac{\frac{NEC}{emp}}{\frac{MS}{emm} + \frac{NEC}{emp} + \frac{GOS-NOS}{emm}} \times 100 \quad (1)$$

where *SLCTC* is the share of labour costs of total costs, *NEC* is nominal employee compensation, *emp* is the number of employees, *C* is costs at current prices, *emm* is total employment (workers), *IC* is intermediate consumption at current prices, *D* is depreciation at current prices, *GOS* is the gross operating surplus at current prices and *NOS* is the net operating surplus.

The final indicator is unit labour costs. The unit labour costs indicator is a composite expression of cost pressures in a given economy exerted by the labour force (Jilek and Vojta, 2001). Central banks monitor this indicator for the prediction of both the inflation rate (inflation cost factor) and the effective exchange rate. It is also used as an indicator of the competitiveness of the economy and one of the factors employed in deciding upon foreign direct investment.

The calculation is as follows:

$$UNC = \frac{\frac{NEC}{emp}}{\frac{GDP}{emm}} \times 100 \quad (2)$$

where *UNC* is unit labour costs, *NEC* is nominal employee compensation, *emp* is the number of employees, *GDP* is gross domestic product and *emm* is total employment (workers).

IV. Empirical Results

The following text presents the results of the analysis of the three monitored indicators (accompanied by a commentary on each): labour costs, share of labour costs of total costs and unit labour costs. The results are presented in tabular form; 2020 is listed twice. The first figure is indicated with an asterisk (2020*). This figure represents the prediction made in 2021. The second figure is the real calculation by the author of the article based on available Eurostat data. While, strictly speaking, the United Kingdom should also be listed during the monitored time interval since it was still a member of the European Union, unfortunately Eurostat no longer publishes or provides data on the UK. Therefore, it was not possible to calculate the values of all three indicators for the UK.

The analysis includes the monitoring of the differences between the predicted and the actual values. The predicted values represent developments that would have occurred if the Covid-19 pandemic had not happened, including the policies implemented by the respective fiscal authorities to protect

the economy or the labour market. The actual value includes the impacts of Covid-19. It is interesting to determine which labour market indicators acted against the typical development up to that time and which evinced the same development, and whether they acted with greater or lesser intensity.

Labour costs include wages and salaries (including wages in kind included in earnings), wage compensation for non-worked hours, social benefits, social costs and expenses (statutory and voluntary) and the various personnel costs, taxes and subsidies related to employment. As far as this article is concerned, labour costs are expressed in Euro per month worked per employee, see Table 1.

Table 1 Labour costs in Euro per month worked per employee in the period 2010-2020

GEO/TIME	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020*	2020
Belgium	35.3	36.3	38.0	38.8	39.0	39.1	38.6	39.1	39.7	40.5	41.6	41.1
Bulgaria	3.1	3.3	3.4	3.6	3.8	4.1	4.5	5.0	5.4	6.0	5.8	6.5
Czechia	9.8	10.5	10.0	9.7	9.4	9.8	10.3	11.3	12.7	13.5	12.5	14.1
Denmark	36.7	37.3	39.4	39.9	40.6	41.2	41.3	42.8	43.9	44.8	45.7	45.3
Germany	28.8	29.6	30.5	30.9	31.4	32.2	32.8	33.8	34.6	35.6	35.8	36.7
Estonia	7.6	7.9	8.6	9.2	9.8	10.3	10.8	11.6	12.4	13.4	13.2	13.6
Ireland	28.9	28.7	29.8	29.8	29.8	30.0	30.6	31.2	32.1	33.2	32.4	32.4
Greece	17.0	16.2	15.7	14.5	14.5	14.1	15.2	15.6	16.0	16.4	15.0	16.9
Spain	20.7	21.2	21.1	21.2	21.1	21.2	21.2	21.2	21.3	21.9	21.9	23
France	32.6	33.6	34.3	34.4	34.7	35.1	34.5	34.9	35.9	36.5	36.8	37.4
Croatia	8.6	8.7	9.5	9.5	9.4	9.6	9.5	10.1	10.8	11.1	10.8	10.8
Italy	26.8	27.2	27.7	28.1	28.3	28.1	27.6	27.7	28.3	28.7	29.0	29.7
Cyprus	17.7	18.0	16.8	16.3	15.8	15.7	15.7	15.9	16.6	17.5	16.1	17.3
Latvia	5.5	5.7	5.9	6.2	6.6	7.1	7.7	8.2	9.3	9.9	9.5	10.5
Lithuania	5.4	5.5	5.9	6.2	6.5	6.8	7.4	8.1	9.0	9.4	9.1	10.1
Luxembourg	32.9	33.9	33.9	35.1	36.2	36.3	38.7	39.9	40.8	41.9	42.4	42.2
Hungary	7.0	7.3	7.4	7.7	7.7	7.9	7.8	8.7	9.2	9.9	9.3	9.9
Malta	11.9	12.2	11.8	12.3	12.8	13.2	14.2	14.6	15.1	15.2	15.5	16.8
Netherlands	31.1	31.6	32.5	33.2	33.7	34.0	34.5	35.1	35.8	36.5	37.0	37.4
Austria	28.0	29.0	29.7	30.6	31.4	32.4	32.5	33.0	33.8	34.6	35.5	37.1
Poland	7.2	7.3	7.9	8.1	8.3	8.6	8.7	9.5	10.1	10.7	10.5	11
Portugal	12.6	12.6	13.3	13.3	13.2	13.4	13.6	14.0	14.2	14.4	14.5	15.7
Romania	4.1	4.2	4.1	4.4	4.6	4.9	5.3	6.2	7.0	7.7	7.1	8.2
Slovenia	14.6	14.9	15.6	15.3	15.6	15.8	16.8	17.6	18.1	19.0	18.7	19.9
Slovakia	7.7	8.0	8.9	9.2	9.7	10.0	10.2	10.9	11.6	12.5	12.4	13.4
Finland	28.8	29.5	31.3	32.0	32.5	33.0	33.7	33.2	33.6	34.1	35.6	33.8
Sweden	33.6	36.4	37.3	38.2	37.3	37.4	37.7	38.1	36.7	36.5	39.4	37.3

Source: Eurostat (2022), own presentation.

Table 1 illustrates the fundamental changes in labour costs caused by the outbreak of Covid-19. The overall impact on the monitored countries consisted of an increase in labour costs. The predicted average increase in labour costs for the countries under review was 6 cents. However, the reality was, on average, ten times higher, i.e. 62 cents. Only two countries showed agreement between the predicted and real values, i.e. Ireland and Croatia. Five countries evinced higher prediction values

than the reality, namely Sweden, Finland, Belgium, Denmark and Luxembourg¹, whereas twenty countries had higher real than predicted values. The first three places were occupied by Greece (the difference was almost 2 euros), Austria and the Czech Republic. Twelve countries showed a difference of one euro or more.

The problem with using absolute values is that the initial amounts of labour costs in the monitored countries were at different levels. It is already evident that Covid-19 exerted a significant impact on the growth of labour costs. Moreover, it is unusual for such changes to occur from year to year. In order to take into account the differing initial levels, the effect is monitored in percentage terms. When the percentage change is taken into account, the results are the same; however, the values are relative to their bases. Hence, the first four countries show a change in excess of ten percent. The order is as follows: Romania, the Czech Republic, Greece and Bulgaria. Countries that acceded after 2004 usually experienced higher percentage changes than the original fifteen member countries.² The situation can also be considered from the geographical and demographic points of view. The countries that were affected by higher increases in labour costs than predicted were geographically smaller countries and, demographically, countries that have populations roughly equal to that of the Czech Republic³.

From the point of view of the labour costs indicator, it can be stated that the external shock caused by the Covid-19 pandemic affected the labour markets of a number of the monitored countries. However, they were no extreme fluctuations in terms of the overall economic histories of those countries that acceded to the EU after 2004, most of which have experienced comparable increases several times over their histories. This phenomenon is consistent with the economic theory of convergence. On the other hand, the values caused by the Covid-19 disease were almost unprecedented in the original 15 countries of the European Union. Greece and Portugal experienced such a year-on-year increase for the first time in their histories, due mainly to pre-existing internal macroeconomic problems that were reflected in their labour markets.

An increase in labour cost values as in 2020 would pose a problem if they grew at a similar level or higher in the following year. It would lead to the impact of Covid-19 being felt in several countries. The original member countries of the European Union include countries that have structural problems, including Spain and Italy. The Covid-19 pandemic demonstrated to the more advanced European Union countries that it is not prepared for a threat of this type; indeed none of the societies or economies of the EU were prepared for this type of external shock. Moreover, no-one knew at that time what to expect from the outbreak of a disease of this type, which explains the differences in the measures taken by the various governments, which were often chaotic and, above all, which exerted different effects. Based on the results of the labour cost indicator, it is not possible to state whether countries such as Sweden, Finland, Belgium, Denmark and Luxembourg coped better with the Covid-19 disease than did the other member countries. In terms of labour costs, however, Covid-19 did not exert a negative impact.

The share of labour costs provides for an alternative view of labour costs with concern to the same issue. This indicator relates labour costs to total production costs and clearly shows the percentage of the share of labour in the total costs of production. With respect to this indicator, it is always necessary to take into account the specialisations of the given economy and the sectors to which production refers.

¹ The countries are ranked from the highest to the lowest difference.

² The exceptions are Greece and Portugal.

³ The only exception is Romania.

Table 2 Share of labour costs of total costs in the period 2010-2020 in percent

GEO/TIME	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020*	2020
Belgium	30.7	29.6	30.0	30.8	31.0	31.0	31.1	30.8	30.4	30.7	30.8	31.2
Bulgaria	27.0	25.9	26.3	28.5	28.0	28.5	30.6	31.0	31.1	31.4	32.5	32.9
Czechia	23.1	22.6	23.1	23.1	22.8	23.0	23.8	24.1	24.8	25.6	24.8	26.8
Denmark	35.2	34.3	33.7	34.2	34.5	34.6	34.8	34.4	34.1	34.2	34.3	34.6
Germany	32.8	32.0	32.8	33.3	33.5	33.9	34.1	33.9	33.9	34.6	34.6	35.2
Estonia	28.5	26.9	26.8	27.0	28.0	29.1	28.9	29.4	29.7	30.5	29.1	31.6
Ireland	27.2	29.2	25.7	25.0	24.9	22.0	21.7	22.2	21.5	21.9	20.5	20.5
Greece	38.2	38.2	37.1	35.4	35.7	35.8	36.8	36.0	35.8	36.4	35.3	38.8
Spain	35.0	34.4	33.9	34.0	33.8	34.2	34.7	34.0	33.6	33.9	34.0	34.5
France	35.3	34.9	35.1	35.5	35.7	35.9	36.1	35.6	35.3	35.0	35.7	35.8
Croatia	37.8	36.9	36.2	35.9	35.4	35.5	34.9	34.4	34.4	33.7	33.8	35.0
Italy	30.6	30.0	30.3	30.6	30.6	30.8	31.4	30.8	30.8	31.2	31.2	31.7
Cyprus	34.5	35.1	35.4	34.2	33.1	31.8	31.3	30.9	30.6	30.8	30.4	29.8
Latvia	25.2	23.8	23.8	24.9	26.3	28.4	30.8	30.8	31.2	32.0	31.2	33.8
Lithuania	31.1	29.8	30.2	30.7	31.8	33.1	34.8	34.6	33.9	34.0	34.2	35.6
Luxembourg	20.5	20.1	19.6	18.7	16.8	15.8	16.4	16.5	17.0	17.0	15.2	16.5
Hungary	26.0	25.5	26.3	25.9	25.8	25.7	26.3	26.5	26.3	25.8	25.9	26.3
Malta	20.4	19.9	19.8	20.3	20.5	19.9	20.4	20.0	20.5	20.5	20.2	21.0
Netherlands	33.7	32.7	32.6	32.8	32.8	32.4	32.8	32.3	32.0	32.4	31.9	34.0
Austria	32.3	31.5	31.4	31.6	32.3	32.6	33.3	32.7	32.4	32.6	32.7	33.6
Poland	28.4	27.3	27.6	27.6	28.0	27.9	28.2	28.0	28.0	28.2	28.0	29.3
Portugal	33.6	32.4	32.1	32.8	32.5	32.5	32.8	32.2	32.2	32.3	32.1	34.2
Romania	29.8	26.4	26.0	26.0	26.4	26.1	28.4	29.9	30.2	31.2	28.5	31.9
Slovenia	33.5	33.0	33.1	33.2	33.0	33.1	33.9	33.3	33.3	34.3	33.9	36.3
Slovakia	22.9	22.1	22.0	22.7	22.7	22.5	22.9	23.3	23.1	24.1	23.5	26.3
Finland	31.8	31.0	31.3	31.6	31.7	32.3	32.2	31.0	30.6	30.4	31.2	30.9
Sweden	31.0	30.9	31.6	32.4	32.5	32.6	32.9	32.5	32.0	32.4	33.1	32.8

Source: Eurostat (2022), own presentation.

One of the most interesting features of the share of work in costs indicator comprises the concentration of the resulting values in a very narrow interval. The lowest levels were attained by tax haven countries (Luxembourg, Ireland and Malta), followed by the countries that acceded to the EU after 2004, finally followed by the rest of the original member countries. The distribution of countries into these groups in terms of the work in costs indicator has been valid since the accession year of 2004. When analysing the results, it is necessary to take into account the base levels of the various countries. In general, however, it can be stated that the structure of this indicator is unchanging. The initial setup became the standard for subsequent years. This is a very common phenomenon, from which top politicians and officials at the European Union level should learn and try to avoid. Unfortunately, this error is repeated all too often. The initial decision creates a relationship that is subsequently maintained as the status quo. No natural correction is permitted over time, as if the initial setting were considered binding indefinitely. One can only speculate whether the natural development of this factor is being intentionally retarded.

The values in Table 2 are shown as percentages, which suffices for the calculation of their differences. The subsequent results shown are not percentages but percentage points (p.p.). Concerning the share

of labour in costs, it can be stated that the growth in their real value prevailed over predicted values in the monitored countries. Only four countries did not evince a growth trend. Cyprus, Sweden and Finland evinced “negative zero”¹. Ireland was the only country with no difference between the real and predicted value, i.e. the result was zero. Although increases were evident in the share of labour in costs for twenty-three countries, eight of them can be described as “positive zero” increases. However, a number of countries experienced higher increases in the share of labour in costs, i.e. Greece (3.5 p.p.), Romania (3.4 p.p.) and Slovakia (2.8 p.p.). The sizes and influence of these countries indicates that Covid-19 strongly influenced those countries that are not among the economically and politically influential countries of the EU. Again, as with labour costs, the impact was strongest for economically weaker and geographically and demographically smaller countries. This is logical since economically stronger countries usually cope better and more rapidly with external shocks, whereas economically weaker countries are affected twice by the external shock effect. It can be stated that at the EU-wide level there was no dramatic change despite the fact that year-on-year the share of labour in costs increased by at least twice as much as the average of previous year-on-year changes.

It cannot yet be determined whether the effect of Covid-19 intensified in 2021 or not. However, despite all the measures adopted by the various governments, it can be expected that the harshest impact will be evident in those countries that felt the effects of Covid-19 more intensely in 2020. At the same time, Covid-19 is exacerbating the structural problems of a number of countries. For those countries that were already experiencing, or on the verge of, such problems, it can be expected that Covid-19 will only act to intensify the trend. Higher increases in the share of labour in costs in economically weaker countries will act to disrupt those production and supply chains that require cheap labour. Moreover, this will exert an immediate negative impact on those countries whose producers withdraw from such chains. Developments over the longer term cannot be predicted due to the large number of potential scenarios.

The unit labour costs indicator is expressed in two tables, i.e. at the national price level and according to the purchasing power standard. Both unit labour cost values are provided for all the member countries of the European Union (EU-28) and for the original member countries (EU-15). As mentioned above, Eurostat no longer publishes or maintains data on the UK. Therefore, it is not possible to create aggregated statistics for the European Union.

¹ The difference between the real and predicted values is negligible, practically zero.

Table 3. Unit labour costs as a percentage based on national price levels in the period 2010-2020 in percent

GEO/TIME	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020*	2020
Belgium	60.7	61.3	61.8	62.0	61.3	59.9	59.1	59.1	59.0	59.1	58.8	60.8
Bulgaria	50.1	48.2	49.7	54.0	55.9	55.7	55.6	58.1	59.4	58.4	61.3	61.0
Czechia	48.8	49.2	50.1	49.5	48.8	48.0	48.8	49.9	51.6	51.8	51.0	53.3
Denmark	56.4	56.0	55.2	55.1	54.9	55.1	54.8	54.4	54.6	54.8	53.8	55.5
Germany	56.7	56.2	57.3	57.5	57.3	57.5	57.5	57.4	58.0	58.5	58.4	59.6
Estonia	51.3	49.2	49.2	49.9	50.6	52.4	51.0	53.1	53.8	55.0	52.8	57.9
Ireland	50.4	48.2	47.6	47.3	45.1	35.4	36.6	35.3	34.0	33.0	29.7	31.9
Greece	53.8	54.9	54.7	52.3	52.4	50.9	51.2	50.9	51.8	51.9	51.0	54.6
Spain	57.2	56.2	54.9	54.1	54.2	53.8	53.2	52.7	52.7	53.2	51.6	56.4
France	57.5	57.5	58.1	58.4	58.5	58.0	58.1	58.2	58.1	57.0	58.3	58.0
Croatia	62.2	61.1	59.5	57.1	55.7	55.4	53.9	52.9	53.7	53.9	51.2	57.2
Italy	53.8	53.3	53.2	53.1	52.7	52.7	52.3	51.9	52.4	52.6	52.1	52.9
Cyprus	54.3	54.6	54.6	52.7	51.4	50.2	49.1	49.6	49.6	50.1	48.6	51.4
Latvia	48.4	44.4	44.9	46.5	48.4	50.8	52.6	53.2	54.0	56.3	53.6	59.3
Lithuania	45.9	43.8	43.6	44.4	45.4	47.7	49.8	49.9	50.7	52.3	50.1	54.7
Luxembourg	52.7	51.5	52.5	51.9	51.4	51.4	50.6	52.1	52.8	52.6	51.6	52.9
Hungary	47.3	47.4	48.6	47.1	45.9	44.8	46.0	46.3	45.6	44.8	44.3	45.1
Malta	48.1	50.5	50.4	49.5	48.1	46.4	48.8	47.8	48.9	49.7	48.3	53.5
Netherlands	57.9	58.4	59.2	58.9	58.8	57.6	57.9	57.5	57.4	57.3	57.7	61.1
Austria	54.6	53.9	54.5	55.0	55.0	54.5	54.5	54.5	54.6	55.1	55.0	57.7
Poland	48.9	47.8	47.8	47.8	47.9	47.2	48.1	48.3	49.3	48.9	48.2	50.6
Portugal	56.6	55.5	54.0	53.6	52.6	51.5	51.0	51.3	52.1	52.1	49.9	56.5
Romania	54.1	48.5	47.9	46.3	47.0	44.5	47.3	49.6	50.5	50.3	47.4	50.8
Slovenia	63.8	62.5	62.7	61.9	61.0	60.7	61.3	61.1	61.5	62.6	61.5	66.5
Slovakia	43.9	43.5	43.3	43.5	43.9	44.4	45.8	47.2	48.2	49.5	48.5	51.3
Finland	55.4	55.4	56.5	55.9	55.5	55.1	54.3	52.1	52.4	52.6	52.8	52.3
Sweden	47.9	48.4	50.1	50.5	50.1	48.9	49.4	49.3	49.8	49.4	49.8	50.0

Source: Eurostat (2022), own presentation.

A trend towards decreasing unit labour costs is evident for most of the original member countries during the monitored interval. While, concerning those member countries that acceded after 2004, the trend comprised increasing unit labour costs. This represents a fundamental difference between the monitored countries.

Table 3 shows unit labour costs at the national price level in percentage terms. Again, the differences in the results are in percentage points. Concerning unit labour costs, in all cases the reality differed from the predictions in the order of units of percentage points¹; in more than half of the monitored countries, these values were above standard from the historical point of view. It can be summarised that Covid-19 exerted a more significant effect on unit labour costs than did the other two labour costs considered. The prediction of unit labour costs anticipated a decrease in unit labour costs in the monitored period even for some of the countries that acceded to the EU after 2004. The reality, however, turned out to be pro-growth for most member countries.

¹ The average increase in unit labour costs was 3 p.p.

The largest increase in unit labour costs was recorded in Portugal (6.6 p.p.), Croatia (6.0 p.p.) and Latvia (5.7 p.p.). A further three countries reached values of above 5 p.p. A year-on-year change in unit labour costs of more than 5 p.p. is enough to exert a significant impact.

This value serves as an indicator of competitiveness and is one of the factors considered when deciding on foreign direct investment. The increase in unit labour costs caused by Covid-19 is not a positive phenomenon from any point of view. Higher increases in this indicator were, again, experienced by the countries that acceded after 2004. The author of this article is a long-term critic of the strategy of competition through cheap labour, e.g. Beran (2021). On the other hand, the growth of unit labour costs due to a significant external shock cannot be considered to be the best solution to this situation; it only means a decrease in competitiveness.

A growth in unit labour costs is perceived particularly negatively by economic entities. If this growth trend were to remain the same or reach even higher values in the monitored countries in the future, their international trade position would be threatened, especially for those countries that acceded after 2004. It is necessary to realise that this indicator is expressed in percentage terms and that each country has a different base position¹. In relative comparison terms, an increase in unit labour costs represents a decrease in their competitive advantage and discourages investment in the respective country. At the same time, investors are interested in other factors that influence the competitiveness of a country's labour market. Historically, it was not unusual for a country that was losing its competitive advantage in the form of unit labour costs to adopt a strategy of attracting investors with incentives to invest. In the case of economically weaker countries, such investment incentives have generally turned out to be disadvantageous, and their consequences are still being addressed today.

In order to obtain a more accurate picture of unit labour costs, it is necessary to look at their expression in terms of the purchasing power standard, which is an artificial currency that reflects the differences in national price levels that are not captured by exchange rates. It expresses the exchange rate between two currencies at which the same amount of goods can be purchased in both countries. This unit allows for the volume comparison of economic indicators between countries; therefore, it is also a suitable approach to comparing unit labour costs that eliminates the influence of the exchange rate. The resulting values show the extent to which the compared countries differ.

¹ The original member countries evinced a higher level with respect to this indicator.

Table 4. Unit labour costs as a percentage based on purchasing power standards in the period 2010-2020 in percent

GEO/TIME	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020*	2020
Belgium	66.3	67.6	67.2	68.0	66.5	63.7	64.6	65.5	65.3	65.3	64.4	67.8
Bulgaria	22.6	22.9	23.3	25.6	25.7	25.7	26.5	28.7	30.0	30.4	31.0	32.9
Czechia	34.5	35.4	35.0	33.2	30.5	30.3	31.8	33.7	36.1	36.9	34.2	38.6
Denmark	75.1	74.4	74.2	73.9	73.2	71.8	73.0	71.8	71.8	71.2	70.1	73.9
Germany	59.6	58.8	59.7	60.6	59.7	59.5	60.5	61.1	61.9	63.3	62.3	65.9
Estonia	34.3	33.3	33.9	35.5	36.2	37.5	37.7	40.6	42.1	43.7	41.8	46.5
Ireland	56.0	53.1	51.8	52.2	50.1	38.1	40.7	40.0	38.9	38.9	32.9	38.3
Greece	50.8	51.9	49.5	44.9	43.4	41.2	42.2	41.8	42.3	41.9	39.7	45.2
Spain	54.3	53.2	50.4	49.7	48.6	47.6	47.8	47.5	48.2	48.5	46.0	52.9
France	64.2	64.1	64.8	64.5	64.1	62.3	63.4	64.1	63.6	60.7	62.6	63.1
Croatia	43.2	40.9	38.3	36.6	35.1	34.0	33.9	33.7	34.6	34.6	31.4	36.9
Italy	54.4	53.6	52.7	53.3	52.9	51.8	51.3	51.2	51.5	51.3	50.8	52.6
Cyprus	49.7	50.5	51.0	49.3	47.4	44.2	42.8	43.6	43.7	44.4	42.9	47.1
Latvia	30.6	29.2	30.3	31.7	32.7	33.6	35.7	36.9	38.4	40.7	37.5	43.8
Lithuania	27.0	26.3	26.1	26.8	27.3	28.3	30.6	31.6	32.8	34.3	32.0	37.3
Luxembourg	63.8	61.8	63.0	63.3	61.7	60.2	60.4	63.1	64.7	64.9	63.4	68.4
Hungary	28.4	28.0	27.9	27.0	26.1	25.5	27.3	29.1	28.8	28.8	27.0	28.6
Malta	36.0	38.4	38.7	38.9	38.3	37.0	39.8	40.1	41.3	41.8	41.6	47.0
Netherlands	64.6	64.8	64.6	64.0	64.5	62.1	64.5	64.3	64.4	65.6	64.9	70.8
Austria	60.0	59.4	58.6	59.6	59.5	57.9	59.2	60.3	60.4	61.3	60.3	66.0
Poland	28.9	27.7	27.1	27.3	27.4	26.5	26.8	28.3	29.2	29.3	27.4	30.5
Portugal	46.1	45.9	43.3	42.6	41.3	40.1	40.8	42.2	43.1	42.8	40.4	48.0
Romania	25.8	23.5	22.2	22.9	23.4	22.1	23.6	25.0	26.2	26.1	24.1	26.8
Slovenia	53.2	51.7	50.3	49.7	48.9	48.1	49.5	49.8	50.6	51.4	49.7	55.9
Slovakia	28.8	29.2	28.9	29.1	28.9	29.0	32.2	34.8	36.3	38.2	36.3	41.3
Finland	65.2	65.9	67.9	68.9	68.3	66.5	66.9	64.3	64.6	64.7	66.2	66.1
Sweden	59.2	62.8	65.8	68.3	65.2	61.6	64.4	64.7	62.2	60.3	65.4	62.4

Source: Eurostat (2022), own presentation.

Table 4 clearly demonstrates the extent of the differences between the member countries of the European Union in terms of unit labour costs or, alternatively, just how far apart are the labour markets of the various member states. These values confirm the reference to competitiveness in terms of unit labour costs at the national price level as converted to euros. Each country has differing levels of unit labour costs. Moreover, the pattern concerning the division of the European Union into its original (15) member countries and those countries that acceded after 2004 is confirmed. Concerning the latter, if their unit labour costs expressed in the purchasing power standard exceeded a threshold of 40%, they suffered from macroeconomic imbalances (lower production, lower gross domestic product, lower involvement in international trade, etc.) relative to the other countries considered.

Unit labour costs expressed in terms of the purchasing power standard increased in twenty-five countries, and the rate of growth is shown to be even higher than indicated at national price levels. Only two countries reported a decrease, namely Sweden (-3.0 p.p.) and Finland (-0.1 p.p.)¹. Portugal

¹ This value can be considered to be “negative zero”.

(7.6 p.p.), Spain (6.9 p.p.) and Latvia (6.3 p.p.) recorded the three largest increases compared to the prediction. Moreover, a further ten countries reported increases in unit labour cost values in the purchasing power standard of 5 p.p. more than the calculated prediction. Increases were also recorded in the countries that acceded after 2004. However, this indicator illustrated a phenomenon that was not revealed by the previous results. Of the original member states, Covid-19 affected not only the south of Europe and those countries referred to as PIIGS, but also, surprisingly, a number of countries where it was unexpected, for example the Netherlands, Austria, Luxembourg, Denmark and Germany. This presents a problem in that Covid-19 significantly affected market economies in such a way that their labour markets were unable to cope with this external shock. Covid-19 provides proof of the unpreparedness (non-resilience) of even advanced economies for such an external shock. Nevertheless, even in the case of unit labour costs, no changes were revealed by the purchasing power standard data that could act to change or destabilise the established system in the European Union.

V. Conclusion

Covid-19 presented an external shock that the European Union had never faced before. It was not a standard economic phenomenon, rather it was a health problem that spilled over into society and the economy. The main problem with Covid-19 was that mainstream society was not prepared for this type of shock and the extent of its economic influence. It was an unknown disease, concerning which no-one knew what to expect. In the Czech Republic, pandemic response scenarios were outdated. Although they were quickly modified to deal with the Covid-19 outbreak, Czech society had to learn as it went along, as did most of the other EU member states.

In essence, the resulting situation can, paradoxically, be considered to be one of the “advantages” of this disease for the economies of EU member countries since they were all caught off guard and unprepared. No member country secured a better economic position or competitive advantage at the expense of the others, a scenario that has the potential to cause conflicts that the European Union would have difficulties resolving. At least during the first year of Covid-19, practically all EU countries reported no major changes in terms of labour costs, the share of labour in costs and unit labour costs at the national price level, and no major change occurred in the positions of EU countries concerning the ranking of competitiveness. In other words, there were no surprises in terms of countries moving a few rungs higher on the competitiveness ladder.

The negative impact of Covid-19 was, however, proven by the unit labour cost indicator in the purchasing power standard. While member states maintained their positions in terms of this indicator (as with the other indicators considered), a significant overall deterioration was evident in the level of this indicator. Not only those countries that acceded to the EU after 2004 and the so-called PIIGS countries were affected, as with the previous indicators; indeed Covid-19 also affected those countries that are considered to be very advanced (developed) and stable. Nevertheless, it is important to note that, in general, their labour markets manage to absorb external shocks more rapidly and without incurring significant additional costs. The impacts of Covid-19 demonstrate why it is necessary to monitor the whole range of labour costs indicators. This is the only approach to obtaining a comprehensive picture of the development of the labour markets of the EU member states following the outbreak of Covid-19.

The results of the analysis indicate that, overall, Covid-19 had the greatest impact on the labour markets of Latvia, Portugal and the Czech Republic. Conversely, it exerted the least impact on the labour markets of Sweden, Finland and France. Due to the closeness of the indicator values and the resulting unchanged economic ranking of the countries of the EU, Covid-19 does not appear to have posed a major threat to the bloc’s labour markets. It certainly does not rival the impact on labour markets that resulted from, for example, the financial crisis that commenced in 2008. Nevertheless, it is important to consider to what extent Covid-19 affected labour markets

since this disease continues to represent a threat to the economies of EU member states due, not least, to the likelihood of the emergence of new mutations.

However, this article considered the impacts of Covid-19 only for the first year of its occurrence (2020). If this situation continued into the second year of the pandemic, it will be possible to study the impacts no sooner than in 2023. The continuous monitoring of labour costs is essential. If the development of the considered indicators did not slow down in those countries that suffered most from Covid-19 in the first year, they will be increasingly threatened with a loss of competitiveness, an outflow of investors (or at least a reduction in the inflow of foreign capital), higher unemployment, etc. going forward. Such a scenario should be feared particularly by the countries that acceded to the EU after 2004 and the so-called PIIGS countries.

A further fact is that Covid-19 has exerted a significant impact on the public finances of all the countries considered in the analysis. The resulting poor condition of public finances (public debt) must, naturally, be reflected in labour markets. While this transfer channel will be time delayed, it has the potential to exert a further significant negative impact.

It would be nice to hope that no such external shock will be repeated in the future. However, given the development of the globalisation of the world economy and the various diseases that exist worldwide, this is a naïve expectation. The need to impose further lockdowns due to the emergence of a more dangerous disease than Covid-19 may arise sooner than we imagine. Thus, the testing of the functioning of economies following an external shock should be considered a “rehearsal” for potential future developments.

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