THE EFFECT OF THE COVID-19 PANDEMIC ON EUROPEAN ECONOMIES

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Abstract

Purpose *– The study aimed to analyze the effect of the COVID-19 pandemic on the evolution of macroeconomic indicators: Gross Domestic Product, Gross Value Added, Final Consumption Expenditures and Net Export in the years 2018-2021.*

Methodology/approach *- To carry out the study, the existing data in the Eurostat database were processed, obtaining the weight of each country at the level of each indicator, the average value at the level of each year and finally the differences between years.*

Findings *– Following the comparative analysis, it was observed that the effect caused by the COVID-19 pandemic determined in some countries the increase but also the decrease at the level of the indicators.*

Research limitations/implications *– The paper analyzes the existing data without being able to associate the value differences with the anterior socio-economic conditions or to efforts of economic agents or governments by the pandemic period.*

Practical implications *– The paper allows tracking the changes at the level of each indicator and country, which determines an overview of the situation in the economies of the countries studied.*

Originality/value *– The analysis carried out compares the results obtained by the economies of several countries, which faced an unprecedented situation and which, according to the observed effects, managed differently.*

Key words: *economic situation, effects of the COVID-19 pandemic, evolution.*

Introduction

The design of workplaces has changed over time as a result of the evolution of information and communication systems, as well as organizational strategies and the nature of work, and currently the COVID-19 pandemic has led managers to rethink the way companies operate. The precautionary measures imposed by the COVID-19 pandemic, applied globally, have forced people to move away from headquarters to work remotely (Auray and Aurélien, 2020; Birinci at al., 2021; Pradyot et al., 2021; Hale et al., 2021). Later the changes continued by restricting the global flow of people, goods and services (Eggers, 2020, Brough et al., 2021; Phillipson et al., 2020). The unequal policies of suppressing socio-economic activities and the isolation measures taken by governments and economic agents to minimize socio-economic costs from 2019-2021 caused disproportionate negative effects among economies (Leite et al., 2020; Ivanov, 2020; Prentice et al., 2020; Mehrolia et al., 2021).

The business and management literature highlights the economic and social effects of the COVID-19 pandemic that have affected economies to a greater or lesser extent (Nayal et al., 2021; Donthu and Gustafsson, 2020; Verma and Gustafsson, 2020; George et al., 2020; Fairlie and Fossen, 2021).

However, it has been observed that certain enterprises called "creative enterprises" have managed the COVID-19 pandemic and its impact (He and Harris, 2020; Meyrick and Barnett, 2021). The dynamics of the impact has also been researched in the specialist literature and it has been observed that it varies significantly according to sectors, sub-sectors and countries (OECD, 2020; Dümcke, 2021).

In this study, an analysis of the evolution of economies over a period of 4 years, for 27 countries in Europe, was carried out through the following indicators: Gross Domestic Product, Gross Added Value, Final Consumption Expenditures and Net Export.

Material and method

The study included the period 2018-2021 for the following European countries: Belgium (BE), Bulgaria (BG), Czech Republic (CZ), Denmark (DK), Germany (DE), Estonia (EE), Ireland (IE), Greece (IL), Spain (ES), France (FR), Croatia (HR), Italy (IT), Cyprus (CY), Latvia (LV), Lithuania (LT), Luxembourg (LU), Hungary (HU), Malta (MT), Netherlands (NL), Austria (AT), Poland (PL), Portugal (PT), Romania (RO), Slovenia (SI), Slovakia (SK), Finland (FI), and Sweden (SE).

In this study, macroeconomic indicators were used for the analysis: gross domestic product at market prices, gross added value, final consumption expenditure, import of goods and services and export of goods and services. The statistical data were taken from the Eurostat database, which provides an overview of the economic situation of each country.

GDP at market prices is the final result of the production activity of resident productive units. This is an indicator that reflects the economic situation of a nation, obtained as the difference between the total value of all goods and services produced minus the value of goods and services used for intermediate consumption in their production.

Exports of goods and services consist of transactions of goods and services (sales, barter and gifts) from residents to non-residents. Imports of goods and services consist of transactions in goods and services (purchases, barter and gifts) from non-residents to residents. Imports and exports of goods occur when the economic ownership of goods changes between residents and non-residents.

To see the level reached by each country for each indicator, the average value of each indicator was calculated, according to formula (1).

$$Average = \frac{\sum_{i=1}^{27} c_i}{27} \quad (1)$$

Where: n - name of the indicator under study (n = 1 ÷ 4), c - indicator value for each country, i - name of the country under study (i = 1 - 27).

The statistical data were expressed in relative size by means of the share of each country in the total value at the level of each indicator, according to formula (2).

$$I_n = \frac{c_i}{\sum_{i=1}^{27} c_i} \quad (2)$$

The differences at the level of each indicator and country of the values related to the years 2021 and 2018 were calculated, according to formula (3).

$$Dif. = I_{n2021} - I_{n2018} \quad (3)$$

The net export value was calculated for 2018 and 2021, by subtracting the import value from the export value, according to formula (4).

$$Export\ net = Export - Import \quad (4)$$

Later, a comparative analysis of the countries was carried out based on the data obtained.

Results and discussions

Figure 1 shows the gross domestic product at market prices. From the analysis of Figure 1, it can be seen that the countries that recorded values above the average are only six: Germany, France, Italy, Spain, Holland and Poland, the other countries being with values below the average of 3.7%. It can also be observed that the year 2020 determined a decrease compared to the previous year in GDP in most countries (France, Italy, Spain, Belgium, Austria, Portugal, Czech Republic, Portugal, Greece, Hungary, Croatia), with the exception of Germany, the Netherlands , Poland, Sweden, Ireland, Denmark, Finland, Slovakia, Romania, Luxembourg, Bulgaria and Lithuania where decreases were recorded or Estonia,

Cyprus, Malta and Slovenia, where GDP remained at the same level. In 2021, it can be seen that the ranking remains at the level of the first six countries, most of them registering a slight decrease in GDP, with the exception of only France and Poland, which register an increase.

Figure 2 shows the gross added value indicator. At the level of this indicator, it can be observed that in 2020 the following countries are on the first places: Germany, France, Italy, Spain, Holland and Poland. In 2020, an increase of this indicator can be observed in Germany, the Netherlands and Poland, and a decrease in France, Italy and Spain. The year 2021 brings again a decrease in GDP in most countries except the Netherlands and Poland.

Figure 3 shows the evolution of the countries with regard to the "Expenditures with final consumption" indicator. From the analysis of Figure 3, it can be seen that the highest values are in countries such as Germany, France, Italy, Spain and Belgium. The values of this indicator vary in 2020 and 2021 as a result of the effects of the pandemic, there are countries that recorded decreases in certain years: Germany (increase in 2020 by 0.44% and decrease in 2021 by 0.5%), France (increase in 2020 0.07% and maintaining in 2021), Italy (decrease in 2020 by 0.56% and in 2021 by 0.09%), Spain (decrease in 2020 by 0.41% and in 2021 by 0.01%) and countries that registered increases: the Netherlands (in 2020 by 0.09% and in 2021 with 0.07%), Poland (in 2020 with 0.09% and in 2021 with 0.07%). Below average values are registered in countries such as: Sweden, Belgium, Austria, Denmark, Romania, Finland, Portugal, Greece, Czech Republic, Bulgaria, Ireland, Hungary, Slovakia, Croatia, Lithuania, Slovenia, Luxembourg, Latvia, Estonia, Cyprus and Malta.

Table 1 presents the comparative situation of the differences recorded in 2021 compared to 2018 for the three indicators: gross domestic product (GDP), gross value added (GVA) and final consumption expenditure (FCE). From the analysis of Table 1, it can be seen that the biggest negative differences in the indicators: Gross Domestic Product, Gross Added Value and Final Consumption Expenditures were recorded in the countries: Italy, Spain and France. Positive differences in the growth of Gross Domestic Product, Gross Value Added and Final Consumption Expenditure were recorded in Ireland, Poland and Sweden, which show us an improvement in the economic situation in these countries.

Figure 4 shows the evolution of the countries through the indicator 'Imports of goods and services' Above-average values of imports of goods and services are found in the following countries: Germany, France, Holland, Italy, Spain, Belgium, Ireland and Poland. Values below the average are recorded in the other countries. The biggest variations of this indicator are recorded in France (in 2020 compared to 2019 a decrease of 0.54% and of 0.2% in 2021), Spain (in 2020 compared to 2019 a decrease of 0.52% and an increase in 2021 compared to 2020 of 0.27%), Ireland (in 2020 compared to 2019 an increase of 0.51% and in 2021 compared to 2020 a decrease of 1.42%), Poland (in 2020 compared to 2019 an increase of 0.29% and in 2021 compared to 2020 an increase of 0.28%) and the Netherlands (in 2020 compared to 2019 an increase of 0.24% and in 2021 compared to 2020 a decrease of 0.23%).

Figure 5 shows the evolution of the countries for the 'Exports of goods and services' indicator. From the analysis of figure 5, it can be seen that the largest volume of exports, respectively values above the average, are obtained by the following countries: Germany, France, Holland, Italy, Ireland, Spain and Poland. The biggest variations in the export level are found in the following countries: Ireland (in 2020 compared to 2019 an increase of 1.36% and in 2021 compared to 2020 a decrease of 0.13%), France (in 2020 compared to 2019 a decrease of 0.99% and in 2021 compared to 2020 a decrease of 0.09%), Spain (in 2020 compared to 2019 a decrease of 0.79% and in 2021 compared to 2020 an increase of 0.25%), Poland (in 2020 compared to 2019 an increase of 0.43% and in 2021 compared to 2020 an increase of 0.06%) and Italy (in 2020 compared to 2019 a decrease of 0.38% and in 2021 compared to 2020 an increase of 0.11%).

Table 2 shows the net export situation taking into account the export and import values of the countries at the level of 2021.

From the analysis of Table 2, it can be seen that there are only 6 countries that recorded a trade surplus in 2021: Ireland, Germany, the Netherlands, Denmark, Sweden and Malta compared to 2018 when there was also Bulgaria and France, and the rest of the countries recorded a deficit. It can also be observed that compared to 2018 there are countries that recorded an increase in net export: Ireland, the Netherlands and Luxembourg.

Discussion and conclusions

The analysis of the macroeconomic indicators presented in this study shows us the situation of the countries' evolution before and after the COVID-19 pandemic, and the way in which these indicators underwent changes determines us to understand the result of the policies applied by managers and governments to face the situation created. From the analysis, it can be seen that the effects are multiple both at the level of the indicators: "Gross domestic product", "Gross value added" and "Expenditure with final consumption" as well as at the level of the Net Export indicator.

The obtained results allow us to say that there are countries that have recorded positive growth results in Gross Domestic Product, Gross Added Value and Final Consumption Expenditure, as a result of the activities carried out by economic agents (Ireland, Poland, Sweden and the Netherlands), but there are also countries where the results are decreasing (Italy, Spain and France). At the level of those countries where the results are negative at the GDP level, we can talk about a decrease in production or a stagnation that shows a worsening of the economic situation, this being also correlated with the "Gross added value" indicator. At the "Final consumption expenditure" indicator, we observe the combined effect given by the increase in the prices of raw materials and materials and the decrease in production, which determines the value of this indicator to have significant changes among the economies.

The impact created by the COVID-19 pandemic can be seen through the effects generated among the 'Net Export' indicator where we have more significant positive values increasing only in Ireland, the Netherlands and Luxembourg and also negative values in France, Belgium, Romania and Greece. The existence of a positive net export determines a trade surplus and thus an increase in the net flow of internal currency inflows from foreign markets and the control over the own currency through trade, and finally the consolidation of the own currency. Contrary to the trade surplus, the trade deficit registered by countries with negative values at the level of net export shows us a net outflow of national currency to foreign markets.

Notes

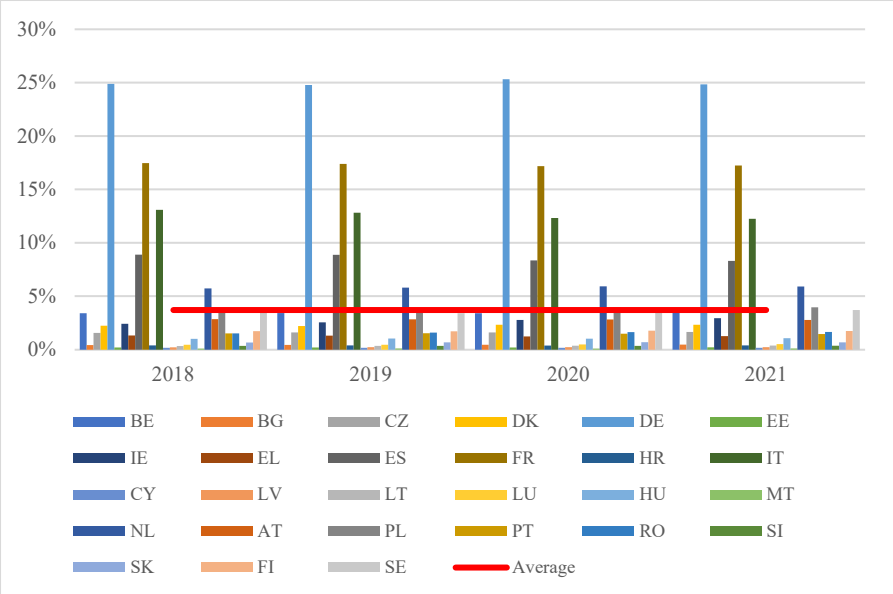

Figure 1. GDP current prices

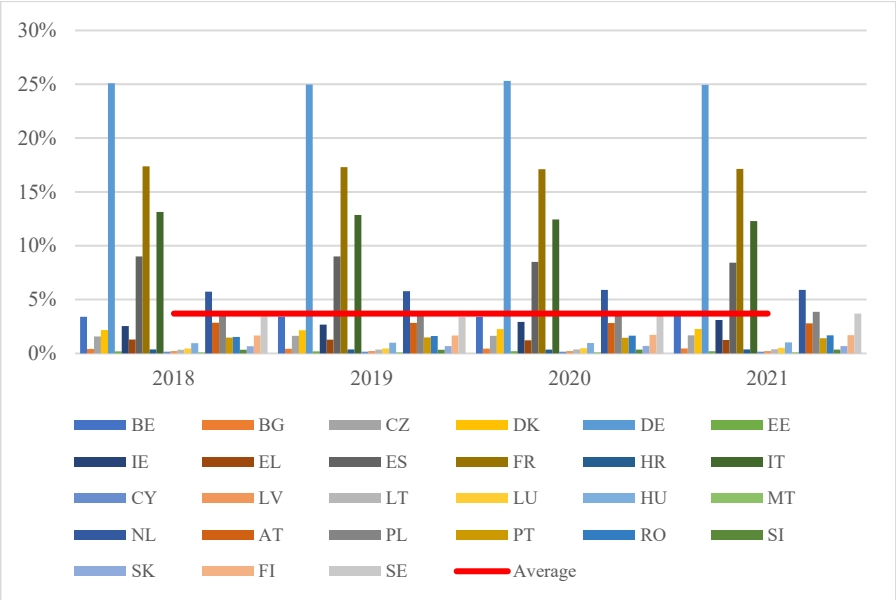

Figure 2. Value added, gross

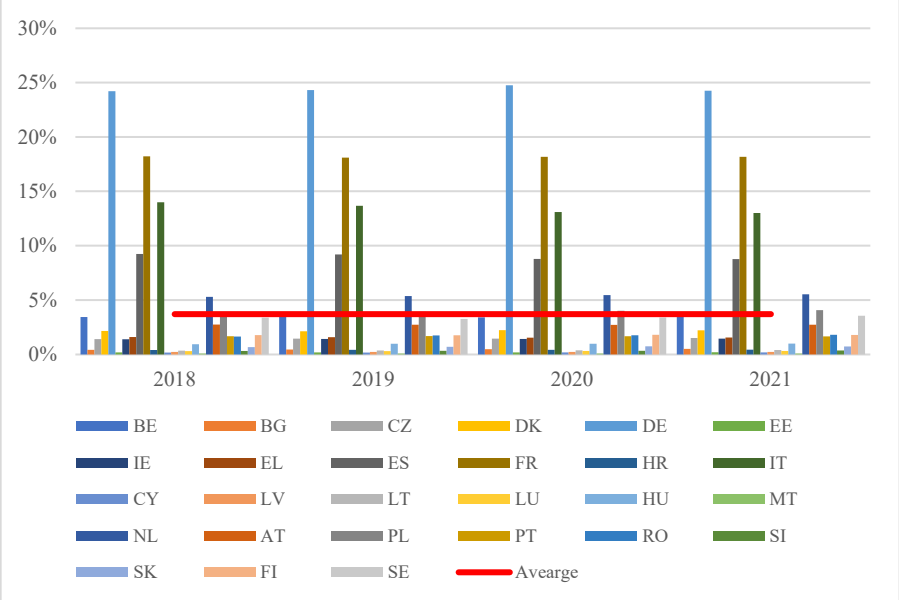

Figure 3. Final consumption expenditure

Table 1. Comparative situation of GDP

Country	Gross domestic product			Gross added value			Final consumption expenditure		
	2018	2021	Dif.	2018	2021	Dif.	2018	2021	Dif.
BE	3,40%	3,49%	0,09%	3,39%	3,49%	0,10%	3,44%	3,47%	0,02%
BG	0,42%	0,47%	0,05%	0,40%	0,46%	0,05%	0,43%	0,51%	0,08%
CZ	1,56%	1,64%	0,08%	1,57%	1,67%	0,10%	1,41%	1,50%	0,10%
DK	2,23%	2,32%	0,09%	2,17%	2,26%	0,09%	2,15%	2,22%	0,07%
DE	24,87%	24,83%	-0,05%	25,10%	24,94%	-0,15%	24,20%	24,25%	0,05%
EE	0,19%	0,21%	0,02%	0,19%	0,21%	0,02%	0,18%	0,20%	0,02%
IE	2,41%	2,94%	0,52%	2,53%	3,10%	0,57%	1,39%	1,45%	0,05%
EL	1,33%	1,26%	-0,07%	1,29%	1,23%	-0,05%	1,60%	1,56%	-0,04%
ES	8,89%	8,31%	-0,59%	9,00%	8,42%	-0,58%	9,23%	8,77%	-0,47%
FR	17,47%	17,24%	-0,23%	17,38%	17,14%	-0,24%	18,22%	18,17%	-0,04%
HR	0,39%	0,39%	0,00%	0,36%	0,37%	0,01%	0,41%	0,44%	0,03%

IT	13,09%	12,24%	-0,85%	13,14%	12,30%	-0,85%	13,99%	13,01%	-0,98%
CY	0,16%	0,16%	0,00%	0,16%	0,16%	0,00%	0,17%	0,18%	0,01%
LV	0,22%	0,23%	0,01%	0,21%	0,22%	0,01%	0,23%	0,23%	0,01%
LT	0,34%	0,38%	0,05%	0,34%	0,38%	0,04%	0,35%	0,40%	0,05%
LU	0,45%	0,51%	0,06%	0,45%	0,52%	0,06%	0,30%	0,32%	0,02%
HU	1,01%	1,06%	0,06%	0,95%	1,01%	0,06%	0,94%	1,00%	0,06%
MT	0,10%	0,10%	0,01%	0,09%	0,10%	0,01%	0,08%	0,09%	0,01%
NL	5,72%	5,90%	0,18%	5,73%	5,89%	0,17%	5,30%	5,52%	0,23%
AT	2,85%	2,78%	-0,07%	2,85%	2,78%	-0,07%	2,74%	2,73%	-0,01%
PL	3,68%	3,96%	0,28%	3,60%	3,86%	0,26%	3,79%	4,08%	0,29%
PT	1,52%	1,46%	-0,06%	1,47%	1,41%	-0,06%	1,67%	1,66%	0,00%
RO	1,51%	1,66%	0,14%	1,53%	1,68%	0,15%	1,65%	1,81%	0,16%
SI	0,34%	0,36%	0,02%	0,33%	0,35%	0,02%	0,32%	0,36%	0,03%
SK	0,66%	0,67%	0,01%	0,66%	0,67%	0,01%	0,67%	0,73%	0,06%
FI	1,73%	1,73%	0,01%	1,66%	1,69%	0,02%	1,77%	1,79%	0,02%
SE	3,48%	3,71%	0,23%	3,45%	3,69%	0,24%	3,37%	3,55%	0,18%

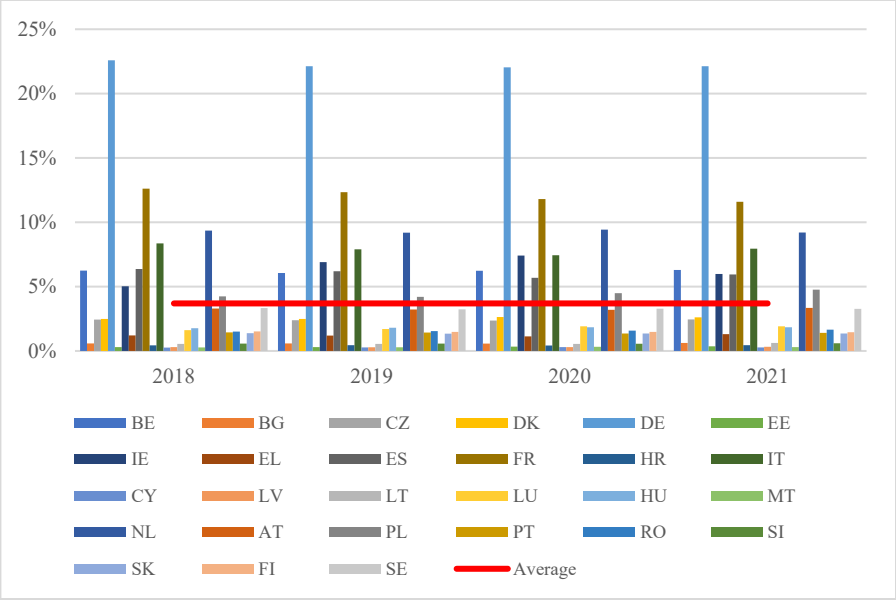

Figure 4. Goods and services, imports

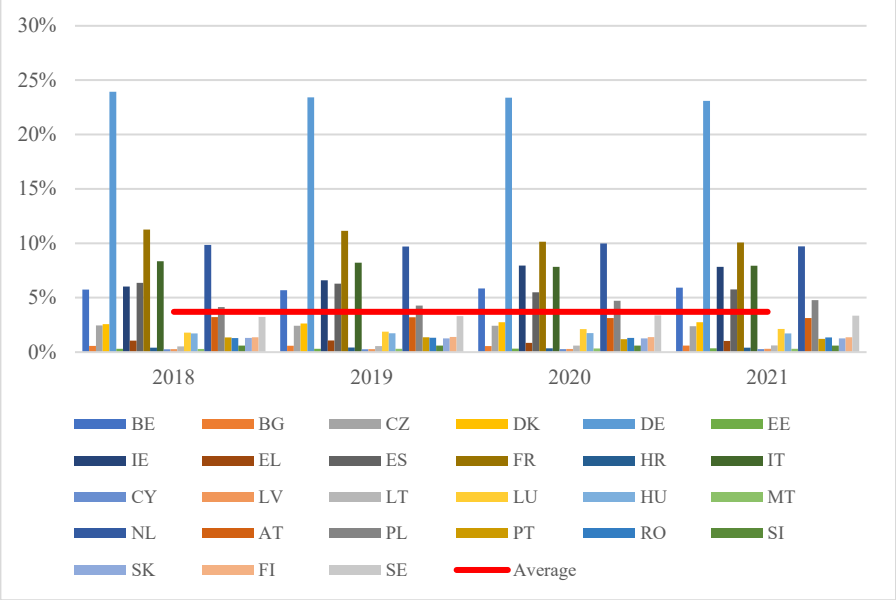

Figure 5. Goods and services, exports

Table 2. Comparative situation of net export

Country	Export		Import		Net Export		Country	Export		Import		Net Export	
	2018	2021	2018	2021	2018	2021		2018	2021	2018	2021	2018	2021
BE	5,74%	5,91%	6,25%	6,29%	-0,51%	-0,38%	LT	0,51%	0,61%	0,54%	0,62%	-0,03%	-0,01%
BG	0,55%	0,58%	0,58%	0,62%	-0,02%	-0,04%	LU	1,78%	2,12%	1,61%	1,91%	0,17%	0,21%
CZ	2,44%	2,37%	2,44%	2,45%	0,00%	-0,09%	HU	1,71%	1,71%	1,76%	1,83%	-0,05%	-0,12%
DK	2,57%	2,74%	2,48%	2,61%	0,08%	0,13%	MT	0,28%	0,30%	0,27%	0,29%	0,01%	0,01%
DE	23,93%	23,09%	22,58%	22,13%	1,34%	0,97%	NL	9,84%	9,71%	9,36%	9,20%	0,49%	0,51%
EE	0,29%	0,34%	0,30%	0,36%	-0,01%	-0,03%	AT	3,21%	3,12%	3,30%	3,34%	-0,09%	-0,23%
IE	6,02%	7,83%	5,02%	5,98%	1,00%	1,84%	PL	4,13%	4,77%	4,23%	4,77%	-0,10%	0,00%
EL	1,05%	1,01%	1,20%	1,31%	-0,15%	-0,30%	PT	1,34%	1,21%	1,44%	1,41%	-0,10%	-0,19%
ES	6,35%	5,75%	6,36%	5,95%	-0,01%	-0,20%	RO	1,29%	1,34%	1,51%	1,65%	-0,22%	-0,31%
FR	11,26%	10,06%	12,61%	11,59%	-1,35%	-1,53%	SI	0,58%	0,59%	0,57%	0,60%	0,01%	-0,01%
HR	0,39%	0,40%	0,43%	0,44%	-0,04%	-0,04%	SK	1,29%	1,25%	1,38%	1,36%	-0,08%	-0,11%
IT	8,34%	7,94%	8,36%	7,95%	-0,02%	-0,01%	FI	1,35%	1,35%	1,51%	1,45%	-0,16%	-0,10%
CY	0,24%	0,26%	0,26%	0,28%	-0,02%	-0,02%	SE	3,23%	3,34%	3,33%	3,27%	-0,10%	0,07%
LV	0,27%	0,29%	0,30%	0,32%	-0,03%	-0,03%							

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