



XXIX International Scientific Conference  
**Strategic Management**  
 and Decision Support Systems  
 in Strategic Management  
**SM2024**

Subotica (Serbia), 17-18 May, 2024

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## **INFLATIONARY PRESSURES IN THE CONDITIONS OF GLOBAL UNCERTAINTIES: EVIDENCE FROM DEVELOPED EUROPEAN ECONOMIES<sup>1</sup>**

**Abstract:** This paper analyzes the key macroeconomic consequences that are directly determined by the pandemic and geopolitical crisis in the form of growing inflationary pressures, reflecting a high level of uncertainty during decision-making and planning at the individual, business and macroeconomic level. The subject of the econometric analysis aims to see how the movement of oil prices affects the consumer price index (*CPI*) on a sample of 15 developed European economies in the period from 2020q1-2023q4. Using heterogeneous panel models, specifically Mean Group (MG), and Pooled Mean Group (PMG) methods positive and heterogeneous impact of the increase in the price of crude oil on *CPI* is detected. Research indicates that the long-run relationship and speed of adjustment of individual economies to the long-run equilibrium relationship is heterogeneous during the analyzed period, indicating that the effect of macroeconomic uncertainties represented in crude oil price increase had different magnitude of influence in developed European economies. Individual adjustments were the most intensive in Greece, France, and Portugal, meaning that those economies were more exposed to higher inflationary pressures, while a slower intensity of adjustment and lower inflationary pressures were present in Austria, Belgium, Finland, and Luxembourg. Detected vulnerability of developed European economies in the circumstances of global uncertainties is expected due to absence of mechanisms to achieve countercyclical effects on the growth of inflation.

**Keywords:** consumer price index, crude oil price, heterogeneous panels, developed European economies.

### **1. INTRODUCTION**

One of the crucial macroeconomic indicators that reflects the economic strength of the national economy and manifests the purchasing power and living standards of the population is the Consumer Price Index (*CPI*) - proxy for inflationary pressures. Economic policymakers will agree that stable and low inflation rates are the primary goal of any monetary policy. When inflation becomes prevalent within the economy, the expectation of further increases in price levels becomes a major concern in the minds of consumers and businesses. There are various indicators that lead to an increase in the price level within an economy. On the one hand, an increase in the price

<sup>1</sup> The research is funded by the Provincial Secretariat for Higher Education and Scientific Research, Autonomous Province of Vojvodina, Republic of Serbia within the project: Coordination of Economic Policies in the Function of European Integration, number 142-451-3436/2023-03.

level can be generated by increased consumer demand, while on the other hand, inflation can also grow based on developments that have no direct connection with economic preconditions, such as, for example, restrictions related to oil production and problems in the supply chain (Trunin and Perewyshin 2023).

Analyzing the harmfulness of the phenomenon of a general increase in price levels, it is necessary to consider whether the increase in inflation leads to negative repercussions and causes problems in the functioning of the economic system, or whether it is a matter of controlled price growth that can lead to higher wages and new jobs. Also, it is important to point out that inflationary pressure does not affect all categories of the population with the same intensity. In addition to the dynamics of the price level increase, it is important to point out that inflation has the strongest effect on those categories of the population that achieve the lowest level of income - the poorest. However, the current circumstances, which are a reflection of the exogenous health shock (2020) caused by the pandemic crisis COVID-19 and geopolitical turbulence in the relationship between Russia and Ukraine (2022), have created inflationary pressures and drastically reduced the chance of economic recovery for the largest number of countries (Greenwood and Hanke 2022). Mention period is precisely focus of this paper, from escalation of COVID-19 crisis – first quarter of 2020, to the last available data – fourth quarter of 2023. Since that majority of economies were attacked by reduction of aggregate demand during the pandemic crisis, broken supply chains, and reduction of aggregate supply during geopolitical crisis, consequence was inflationary pressures. The most important factor which could be trigger of the inflation is increase of crude oil price, which rose during all analyzed period, achieving pick in the second quarter of 2022, right after the beginning of Russian-Ukraine war. Economies that were especially exposed to the influence of crude oil price rise were European economies, traditionally dependent of foreign crude oil sources, i.e. European economies are with the relatively highest degree of import dependence in the global economy (Stojkov, Beker Pucar, & Sekulić, 2023). Special interest in this paper is on developed European economies and how vulnerable those economies were in the period of global uncertainty, particularly in the context of inflationary pressures created as the reaction of crude oil price growth. The sample contains 15 developed European economies, that correspond former EU-15<sup>2</sup>. Although it seems that sample is relatively homogeneous, we are aware that heterogeneous aspects exist in the sample: they are all European economies, but they are not all member of European Union (EU), if they are members of the EU, some of them are not member of Eurozone, therefore those economies do not have common monetary, nor fiscal policy. Therefore, heterogeneous panel models are implemented in this paper, in order to account for potential differences which determines inflationary pressures.

The paper contains threefold objectives: (1) to indicate and interpret the harmfulness of the sudden rise in price levels in a sample of 15 European developed countries in the period 2020q1 -2023q4, which was caused by the pandemic and geopolitical crisis, (2) to descriptive statistics show the movement of the oil price level and the observed consumer price index. on a sample of 15 European developed countries in the period 2020q1 -2023q4, (3) and to apply heterogeneous panel models in order to determine whether there is a long-run equilibrium relationship between the consumer price index, which systematizes inflationary pressures, and the price of crude oil in a sample of 15 European developed countries in the period 2020q1 - 2023q4, as well as for assessing the speed of adjustments of individual economies to the long-run equilibrium relationship. The hypotheses analyzed in the paper are as follows:

*H<sub>1</sub>: The long-run equilibrium relationship between the growth of crude oil prices and the consumer price indices that systematizes inflationary pressures exists in a sample of 15 European developed economies in the period 2020q1-2023q4.*

*H<sub>2</sub>: Long-run equilibrium relationship and speed of adjustments of individual economies to the long-run equilibrium relationship are heterogeneous in a sample of 15 European developed economies in the period 2020q1-2023q4.*

The rest of this paper is organized as follows: after the introduction, the second section presents a review of the literature, the third section presents a descriptive analysis of the consumer price index and crude oil prices, the fourth section presents an empirical analysis of key determinant of inflation, based on Polled Menag Group /Mean Group estimators. The last section of the paper outlines conclusions.

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<sup>2</sup> Austria, Belgium, Denmark, Finland, France, Germany, United Kingdom, Greece, Ireland, Italy, Luxemburg, Netherlands, Portugal, Spain, Sweden.

## 2. LITERATURE REVIEW

Pronounced, dynamic and persistent growth of inflation is an indispensable macroeconomic topic that is hotly debated. Inflation at the global level has reached multi-decade highs, far exceeding the targets of monetary goals as well as the forecasts of economic policy makers. This paper presents different views of economists who point to the enormous harm of monetary instability viewed through a sudden rise in price levels during the functioning of the entire economic system. Also, indicating that rising inflation is not the only macroeconomic problem affecting the global economy. Ascari, Bonham and Smadu (2024) point out that the main trigger of the price level increase within the Eurozone was caused by a "broken" supply chain, delays in the delivery of goods and insufficient energy raw materials during the pandemic crisis, which was then prolonged by geopolitical instability. Verbrugge and Zaman (2023) indicate that curbing inflation is one of the key challenges for economic policymakers around the world in 2022. As a result, the central banks suppressed the growing inflationary pressures by tightening the monetary policy. A strong response in the form of restrictive monetary policy and rising interest rates occurred in those countries whose economies faced inflationary pressures caused not only on the supply side, but also on the demand side. Lydon (2023) indicates that the COVID-19 epidemic combined with the war in Ukraine contributed to record high inflation rates in Europe. Analyzing the movement of real wages, the resilience of the household was tested by a sharp rise in prices. Conducted research indicates that inflation caused a burdensome effect on those households with limited savings, where food and energy consumption had a dominant position in the consumption structure. Dreger (2023) indicates in his paper that the period of price stability was present from 2008 and the global financial crisis, until the current world turbulence. Based on the structural VAR model, during the pandemic crisis (2020-2022), he points out that demand-side shocks were dominant in the economy of the United States of America (USA) and explained approximately 75% of inflationary growth, while supply-side inflationary shocks were generated mostly by narrow throats in global supply chains and make up the remaining 25% of inflation growth. According to the author, a similar scenario was seen on the territory of Europe. Cline (2023) points out in his work that the current war escalation between Russia and Ukraine has produced almost the highest rate of inflation in the last four decades, both in the USA and in other countries throughout Europe. The focus of the research is on the movement of inflation in conditions of supply shortage and increased demand. Lutz and Zhou (2023) point out that it is necessary to distinguish between crude oil and electricity as an integral component of any economy, indicating that electricity represents an essential cost component in any economy. In their research, they claim that the energy price shock cannot be seen as a one-time event, as in the case of oil price shocks during the 70s of the last century, but that it is a far more complex component in the functioning of the modern economy.

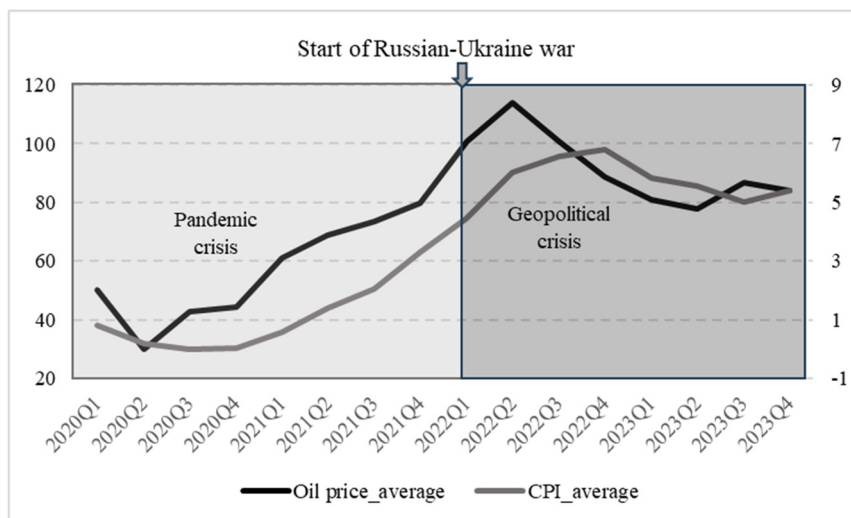
Knuth (2023) interprets that the increase in price levels is not the only anomaly facing the global economy. After three years of uncertainty caused by the pandemic, the crisis deepened in the sphere of geopolitical circumstances, and in response to the war actions in the territory of Ukraine, economic sanctions were introduced that were aimed at Russia, and actually dramatically affected the European economy. Analyzing the labor market in the period from February 2020 to June 2022, there is an increase in the unemployment rate, which is accompanied by more modest economic activities, i.e. a negative rate of economic growth in the most developed economy of the European Union, especially in Germany. Benabed and Bulgaru (2023) indicate that global economic growth observed in the last three years has been extremely unstable. The long-run effects of the pandemic, limited energy supply, unstable geopolitical circumstances, presented economic policy makers with two potential alternatives: (1) rising inflation and continuous decline in the purchasing power of the population, accompanied by investment uncertainties or (2) the return of the inflation rate within the framework of monetary targets, followed by lower macro performance. Based on the decisions made and the restrictive monetary policy implemented, presented by the growth of interest rates, the economies accepted the achievement of monetary goals at the expense of fiscal goals. Binduja (2023) indicates in his work that supply shocks can have more far-reaching negative effects on fiscal policy objectives. Higher interest rates and restrictive monetary policy can dampen inflation due to their adverse effect on the demand side. However, supply factors are beyond the control of central banks. Therefore, if the monetary policy were too restrictive, the economic environment could simultaneously face lower rates of economic growth, which in economic theory would potentially indicate the presence of stagflation. Dierks (2023) predicts that the simultaneous combination of economic stagnation and rising inflation will probably be present in a small number of economies throughout the Eurozone, but due to the unique position of the European Central Bank in the form of a tightening of monetary policy, which should harmonize current inflation and monetary expectations regarding this indicator, will be at the expense of lower economic growth and rising unemployment. Moreover, in their research Pejčić, Glavaški, & Sekulić (2022) showed that not only inflationary pressures, but as

well recessionary pressures existed in the period of pandemic and geopolitical crisis in 18 developed economies. The contribution of this paper is to fill a gap in the literature that analyzes the existence of a long-run equilibrium relationship between the growth of the price of crude oil and the consumer price index, as well as the dynamics of adjustment of individual economies to the long-run equilibrium in a sample of fifteen European developed countries during the analyzed period 2020q1-2023q4.

### 3. DESCRIPTIVE ANALYSIS – INFLATIONARY PRESSURES

The essential question arises, what causes the rise in inflation? If a short-run time interval is taken into analysis, rising inflation may be the result of a "hot" economy - one in which the population has excess cash or has economical access to credit, and wants to spend more. If the level of demand from consumers is high enough when buying goods and services, companies can decide to raise the price level and thereby directly improve their profit status, without losing customers. On the other hand, if it is a longer-run factor, which is of a structural nature or represents a certain discontinuity, such as a pandemic or current geopolitical crisis, then the situation is incomparably more complex and is reflected in reduced production, limited supply, which implies a rise in prices. The price of electricity, agricultural - food products and crude oil reached their maximum during the crisis period. Therefore, we can conclude that the sharp rise in energy prices has far-reaching consequences, not only on end consumers but also on the economy as a whole.

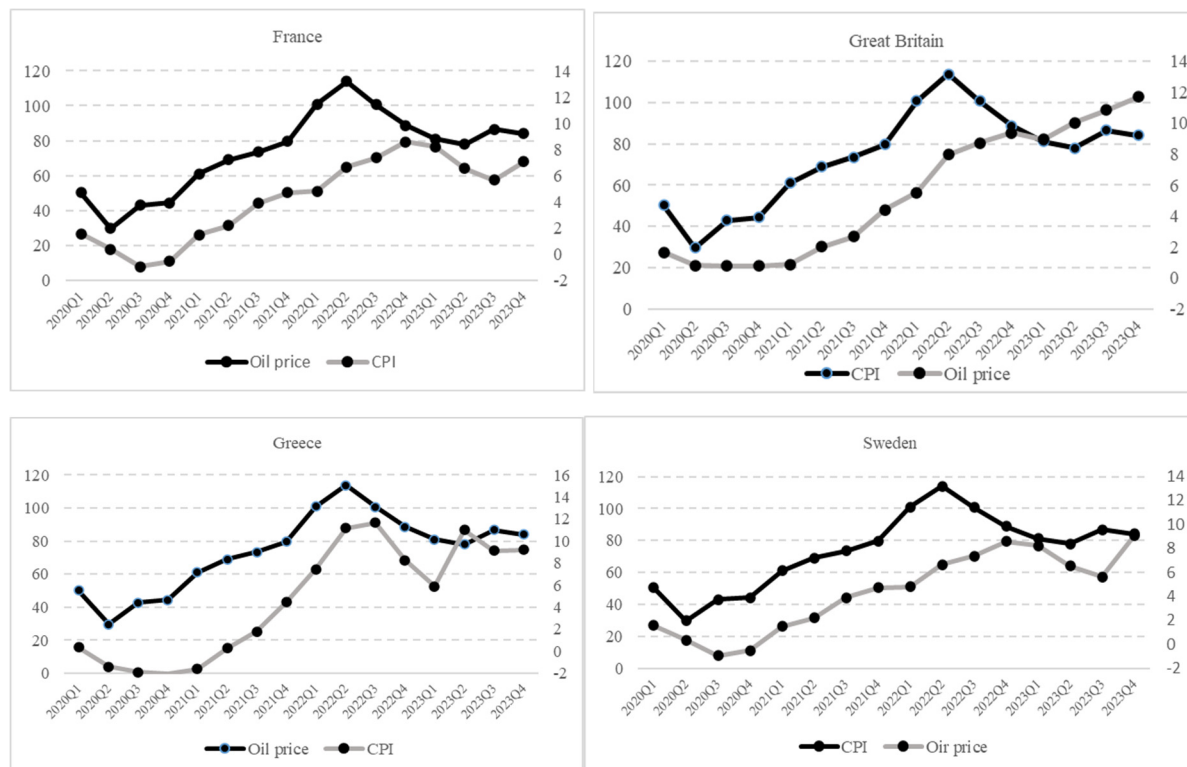
Figure 1 shows the movement of the average price of crude oil and the average consumer price index in a sample of 15 European countries in the period from 2020q1-2023q4<sup>3</sup>. Timeline is separated in two parts, first, at the left side during the pandemic crisis, and second, on the right side, showing effects during geopolitical crisis. The pandemic crisis has restricted movement globally, resulting in a drop in demand of more than 30 million barrels of oil in early April 2020 (International Energy Agency, 2020). In the context of oil price, war between Russia and Saudi Arabia, supply chain blockades, restrictions of production and business activities, caused the steepest drop in oil prices in history. After that historical minimum in the second quarter of 2020 (\$37.63 per barrel), there has been an exponential growth in the price of crude oil, which had impact on the consumer price index growth. Namely, trends of those variables are similar, confirming that rise of crude oil price is one of the most important determinants of inflation. After the beginning of Russian-Ukraine war, oil price continued to grow, while the highest level of the price of crude oil was recorded in the second quarter of 2022, after which it began to decline slightly. Similar trend but with time-lag of about two quarters (fourth quarter of 2022) had average inflation, when average inflation started to decline.



**Figure 1:** Average crude oil price movement and average *CPI* in 15 developed European economies (2020q1-2023q4)  
**Source:** Authors according to FRED.

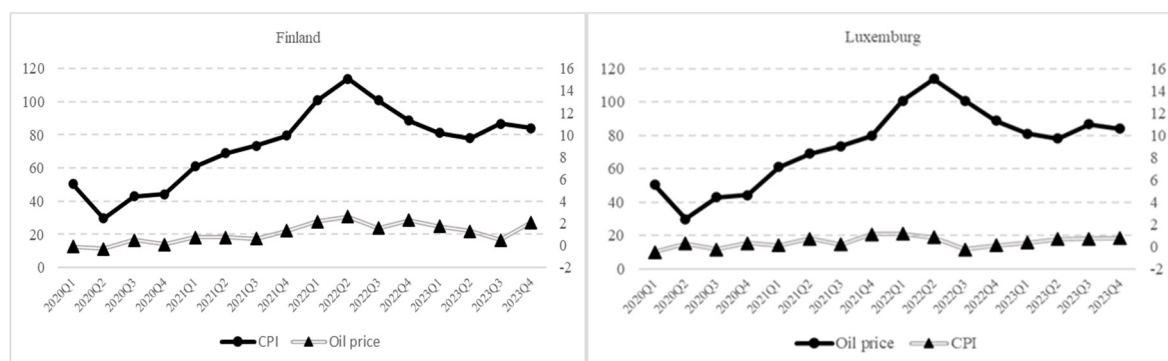
<sup>3</sup> Source of data: Federal Reserve Economic Data (FRED). <https://fred.stlouisfed.org/>

Although, decline in *CPI* on average has started in 2023, that is not a case in all European developed economies. Namely, the same change of oil prices effected differently on *CPI* indices, i.e. depending on other factors that generated further grow of inflation. Figure 2 show inflationary pressures measured by *CPI* in selected economies from the sample (France, Great Britain, Sweden, Greece) in which inflationary pressure existed until the fourth quarter of 2023.



**Figure 2:** High inflationary pressures in France, United Kingdom, Greece, Sweden in the period 2020q1-2023q4  
**Source:** Authors, according to FRED.

On the other hand, common rise of crude oil prices did not affect the creation of inflationary pressures, for example, in Finland and Luxemburg. In those economies, *CPI* indices were stable not only during pandemic crisis, but as well during geopolitical crisis (Figure 3). Belgium is different example, since that Belgium was exposed to inflationary pressures from the first quarter of 2021 till fourth quarter of 2022 (*CPI* value 11.08), however, those effects were neutralized till 2023q4 (*CPI* value 0.822).



**Figure 3:** Low inflationary pressures in Finland and Luxemburg in the period 2020q1-2023q4  
**Source:** Authors according to FRED.

According to descriptive analysis, France, United Kingdom, Sweden and Greece recorded a sharp increase in the price level directly caused by the increase in the price of crude oil, while in Finland and Luxembourg the increase in the price of oil did not play a crucial role in the increase of consumer price index in the observed period. Therefore, we could conclude that effects of common growth of crude oil prices had heterogeneous impact on inflationary pressures determination.

#### 4. EMPIRICAL ANALYSIS IN DEVELOPED EUROPEAN ECONOMIES

Empirical analysis is based on panel analysis containing of 15 cross-sectional units (15 developed European economies) during the period 2020q1-2023q4. Therefore, the number of observations included in the panel is 240, where the variable *CPI* represents the consumer price index used as dependent variable. Large differences in the case of minimum *versus* maximum values of the consumer price index exist. The lowest *CPI* level was recorded in the 4th quarter of 2020 in Greece (-2.051), while the highest *CPI* level was achieved in Ireland in the 4th quarter of 2023 (12.7668). The variable *OILPRICES* refers to the price of crude oil, the mean value of which is 74.01239. The price of crude oil during the observed period recorded progressive dynamics, reaching its maximum in the 2nd quarter of 2022, amounting to 113.8352.

The procedure for determining the long-run and short-run equilibrium relationship between *CPI* and *OILPRICES* consists of the following empirical steps (Blackburne & Frank 2007). Cross-sectional dependency in the sample (Beck & Katz, 1995), conditioned the use of second generation of panel unit root test – Pesaran CIPS test (2007). Table 1 shows Pesaran CD, Pesaran CIPS and Westerlund cointegration test. Based on the Pesaran CD test, we conclude that there is a dependency of the because the analyzed countries are mutually dependent. Based on unit root tests (Im et al. 2003), the analyzed variables: consumer price index and crude oil price are non-stationary, i.e. panel unit root tests fail to reject the null hypothesis of variable non-stationarity at the 5% significance level, which means that the variables *CPI* and *OILPRICES* are non-stationary. Then, the stationarity of the first differences of variables is tested. The results of the Pesaran CIPS test showed the stationarity of the variables first differences, that is, all the variables in the model are integrated of the first order, which is the basis for the cointegration relationship. In applying Westerlund's (2007) cointegration test, an important assumption is based on the assumptions of the test. Due to the fact that cross-sectional dependence exists in the panel, Westerlund's (2007) test could provide a relevant conclusion, but only after a bootstrapping procedure. Robust p-values are calculated using a 400-step bootstrap procedure. The conclusion related to the Westerlund test using group mean tests (Gt and Ga) and pooled panel tests (Pt and Pa) is that at least one panel unit or all panel units are cointegrated, and therefore it is necessary to estimate heterogeneous coefficients to determine in which panel units (countries) there is a cointegration relationship, and in which countries it does not exist. The null hypothesis indicates that there is no cointegrating relationship, compared to the alternative relationship that indicates the existence of cointegration between non-stationary variables. The results based on the Westerlund test show that the null hypothesis is rejected, which means that *CPI* and *OILPRICES* are cointegrated. The Mean Group (MG) and Pooled Mean Group (PMG) methods defined by Pesaran et al. (1997, 1999) are further used to estimate the long-run equilibrium relationship between the consumer price index and the price of crude oil, as well as the speed of adjustment of individual economies to the long-run relationship.

**Table 1:** Pesaran CD test, Pesaran CIPS test and Westerlund cointegration test

Variables	Pesaran CD test	p-values	Lags	CIPS panel unit root test in the level	p-values	CIPS test at the first differences	p-values	Westerlund cointegration test		Robust p-values (bootstrap)
			0	-13.16	0.041	-9.865	0.000	Gt	-1.072	0.031
<i>CPI</i>	30.92	0.000	1	-3.444	0.059	-7.345	0.000	Ga	-1.508	0.005
			2	-3.221	0.821	-3.556	0.000			
			0	43.476	0.003	37.568	0.000			
<i>OILPRICES</i>	40.99	0.000	1	98.932	0.061	26.981	0.000	Pt	-5.069	0.032
			2	153.116	0.093	18.935	0.000	Pa	-0.507	0.0385

Source: Author's calculation.

In Table 2, using the MG and PMG methods, the existence of a long-run equilibrium relationship between the consumer price index and the price of crude oil is assessed, as well as the dynamics of adjustment of individual economies to the long-run equilibrium relationship. Based on the obtained results of homogeneous coefficients in both cases, the cointegration relationship is statistically significant and positive: 0.413 in the MG model, and 0.637 in the PMG model. In the comparison of the two methods, a higher long-run coefficient is estimated in the Pooled Mean Group (PMG) method. Given that the error correction parameter is significant and negative, showing the speed of adjustment towards long-run equilibrium, the total adjustment in the MG model is -0.3664, indicating that 36.64% of the deviation is corrected in one year, while the adjustment in the PMG model is -0.0547, indicating that 5.47% of deviations were corrected on average in one year. However, Hausman's test for long-run homogeneity of the relationship showed that the MG method provides an optimal specification, with consistent and efficient estimates, given the heterogeneous structure of the entire economic environment of the observed countries.

**Table 2:** Results of PMG and MG estimator for homogeneous coefficient for 15 developed European economies in the period from 2020q1-2023q4

Dependent Variable <i>CPI</i>	Long-Run Equilibrium		Error-Correction		$\Delta OILPRICES$		$\mu_i$	
	Coef.	p-value	Coef.	p-value	Coef.	p-value	Coef.	p-value
PMG	0.637	0.000	-0.0547	0.000	0.0014	0.874	1.8386	0.088
MG	0.413	0.000	-0.366	0.001	0.021	0.002	1.0763	0.428
Hausman test statistic	20.74							

Source: Author's calculation.

Table 3, shows the heterogeneous impact of crude oil price growth on the consumer price index using the MG method. Based on the obtained results, we conclude that there is a heterogeneous long-run equilibrium relationship between the growth of the consumer price index and the growth of crude oil prices. The stated effect was the most pronounced in Italy, the Netherlands, Austria, Germany, Spain and Greece, while a weaker, but statistically significant effect was present in Denmark, Finland, Ireland, France, Portugal, Belgium and Sweden.

**Table 3:** Results of the MG Estimator for the heterogeneous coefficient in the 15 developed European economies in the period from 2020q1-2023q4

MG ESTIMATOR	Long-run		Error-Correction		$\Delta OILPRICES$		$\mu_i$	
	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
ITALY	<b>0.6612</b>	<b>0.046</b>	-0.0848	0.104	-0.0424	0.115	6.3511	0.217
GERMANY	<b>0.7503</b>	<b>0.000</b>	-0.0546	0.000	-0.058	0.006	-3.047	0.015
FRANCES	<b>0.1445</b>	<b>0.000</b>	<b>-0.6055</b>	<b>0.003</b>	-0.5067	0.004	-2.987	0.001
PORTUGAL	<b>0.4135</b>	<b>0.006</b>	<b>-0.5854</b>	<b>0.000</b>	-0.4565	0.000	12.445	0.064
GREECE	<b>0.633</b>	<b>0.000</b>	<b>-0.7129</b>	<b>0.000</b>	-0.7865	0.000	-6.342	0.001
SPAIN	<b>0.6098</b>	<b>0.009</b>	-1.3538	0.001	0.1763	0.029	-0.3345	0.491
BELGIUM	<b>0.1554</b>	<b>0.000</b>	<b>-0.1147</b>	<b>0.002</b>	-0.009	0.043	-2.916	0.004
NETHERLANDS	<b>0.5918</b>	<b>0.010</b>	-0.1122	0.061	-0.041	0.214	9.584	0.057
UNITED KINGDOM	0.4892	0.123	-0.987	0.226	0.1059	0.226	3.334	0.490
LUXEMBOURG	0.0701	0.340	<b>-0.045</b>	<b>0.000</b>	-0.1132	0.003	0.039	0.10
FINLAND	<b>0.0987</b>	<b>0.045</b>	<b>-0.3429</b>	<b>0.012</b>	-0.054	0.017	3.084	0.274
SWEDEN	<b>0.4197</b>	<b>0.014</b>	-0.0704	0.058	0.0082	0.089	-1.824	0.000
AUSTRIA	<b>0.6876</b>	<b>0.005</b>	<b>-0.0983</b>	<b>0.004</b>	-0.069	0.014	-2.456	0.113
DENMARK	<b>0.1415</b>	<b>0.011</b>	-0.3620	0.112	-0.0139	0.796	3.1425	0.440
IRELAND	<b>0.0960</b>	<b>0.039</b>	-0.0145	0.201	-0.01344	0.567	2.593	0.000

Source: Author's calculation

Also, Table 2 shows that the speed of adjustment of individual economies to the long-run equilibrium relationship is different. For example, individual adjustment to the long-run equilibrium relationship was the most intensive in Greece, France, and Portugal, meaning that those economies were more exposed to higher inflationary pressures, while a slower intensity of adjustment and lower inflationary pressures were present in Austria, Belgium, Finland, and Luxembourg. The conclusion is that almost all former EU-15 member countries in the observed period of 2020q1-2023q4 experienced an increase in the consumer price index, but with different intensity. The reasons that directly argue the interpreted results are: (1) the heterogeneous fiscal policy, which is based only on coordination between EU member states, in the form of public spending and taxes, which is not unique; (2) monetary policy that is only partially unique, namely, some analyzed economies are not members of

the Eurozone (Czech Republic, Denmark and Sweden) which reflects on heterogeneous impacts; (3) exit of United Kingdom from the European Union - Brexit (2020) and orientation toward sovereign economic policies. Therefore, the structure of the economic environment of the member countries is of a heterogeneous nature. For instance, Germany is a manufacturing-industrial country, which indicates that any stagnation in the sphere of production, limited supply of oil derivatives or electricity, directly reflects negative repercussions on macroeconomic indicators. While Belgium, for example, is targeted as a "country of EU institutions", where the largest number of EU institutions exist legally and commercially, but despite this, it is known at a high level for the development of energy, metallurgy, and food production. Finally, we conclude that hypothesis 1 and hypothesis 2 are confirmed, i.e. that there is a long-run equilibrium relationship between the growth of crude oil prices and the consumer price index, as well as that the dynamics of adjustment of individual economies to the long-run equilibrium relationship during the analyzed period 2020q1-2023q4 on a sample of developed European countries is different.

## 5. CONCLUSION

After achieving historical minimum in the second quarter of 2020, the sudden increase in the price of crude oil occurred and lasted till the second quarter of 2022. In that period increase of the oil prices had positively effects on the growth of the consumer price index. The analyzed period in this paper, covering period 2020q1-2023q4, beside oil price growth was characterized by aggregate demand contraction and broken supply chains during pandemic crisis, while restrictions in the production and delivery of petroleum products during geopolitical crisis. Although, those effects together with macroeconomic policy reactions in context of fiscal expansion in the period of pandemic and monetary restrictions in the period of geopolitical crisis had impact on inflation, the focus of this paper was on specific effect of crude oil price on inflationary pressures. The econometric analysis applied in the paper, which is based on the use of a heterogeneous panel models, specifically the MG and PMG methods, showed that there is a long-run equilibrium relationship between the growth of crude oil prices and the growth of consumer prices indices on a sample of 15 European developed countries in the period 2020q1-2023q4, i.e. we can conclude that Hypothesis ( $H_1$ ) is accepted. In addition, Hypothesis ( $H_2$ ) is also accepted, indicating heterogeneous long-run equilibrium relationships and heterogeneous speed of adjustments of individual economies to the long-run equilibrium relationship. Heterogeneity of these relations is the consequence of functioning of the European developed economies (without common fiscal policy and partially common monetary policy in the sample), namely, not all countries were faced the growth of the consumer price index with the same intensity due to the increase in the price of crude oil. Individual adjustment to the long-run equilibrium relationship was the most intensive in Greece, France, and Portugal, meaning that those economies were more exposed to higher inflationary pressures, while a slower intensity of adjustment and lower inflationary pressures were present in Austria, Belgium, Finland, and Luxembourg. Detected vulnerability in the circumstances of global uncertainty is expected due to absence of mechanisms to achieve countercyclical effects on the growth of inflation. Therefore, the recommendation is oriented towards increase of renewable energy sources, especially in times of unstable supply of fossil fuels due to geopolitical instability, which represents the main goals and challenges of policy makers in the period ahead.

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