

Impact of Global Geopolitical Tension and Economic Uncertainty on Economic Growth in 3 Countries OIC

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Abstract

Purpose: The study aims to examine the impact of geopolitical tension and global economic uncertainty on economic growth. The dependent variable in this study is GDP Growth, while the independent variables in this study are Geopolitical Risk Index (GPR), World Uncertainty Index (WUI), Oil Prices, and Gold Prices).

Methodology: This study uses a quantitative panel data analysis method in three OIC countries (Saudi Arabia, Indonesia, and Malaysia) for the period 2020 M01-2024 M12.

Results: The Best model in this study is Fixed Effect Model (FEM). The results show that World Uncertainty Index (WUI) and Oil Prices have a positive and significant effect on economic growth, while Gold Prices have a negative and significant effect. Meanwhile, GPR has no significant effect on economic growth.

Applications/Originality/Value: Results of this study can be a suggestion for government to maintain economic growth with implication expansionary fiscal policies such as increasing Infrastructure spending, creating labor intensive programs, and providing energy subsidies.

Introduction Section

Economic growth is a key indicator for assessing a country's well-being. Data from the World Bank (2024) shows relatively stable global economic growth, but historically low levels. Global economic growth reached 2.6%, a figure not significantly different from the previous year due to a structural slowdown experienced by several countries as a result of geopolitical uncertainty and high global economic uncertainty. This also occurred in OIC member countries such as Saudi Arabia, Indonesia, and Malaysia. Saudi Arabia's economic growth was around 4.1%, followed by Indonesia's at around 5.0%, and Malaysia's at 3.4-3.6% (World Bank, 2024). Although economic growth in these three countries is relatively stable, increasing geopolitical and global uncertainty has caused their economic growth rates to slow.

In recent years, there have been geopolitical risks and global economic uncertainty caused by events in 2022, such as the Ukrainian war. Russia's invasion of Ukraine caused a spike in energy and food prices and increased global economic uncertainty (Bremmer & Kupchan, 2024). The conflict between Russia and Ukraine significantly impacted countries dependent on energy imports, such as Indonesia and Malaysia. Furthermore, tensions in the Middle East stemming from the Israeli-Palestinian conflict has had a significant impact on various things, including oil and gold (Prayoga et al., 2024). In addition tensions between Iran and Western countries caused pressure on the global economy and increased geopolitical uncertainty in the region (Caldara & Iacoviello, 2022). This condition impacted Saudi Arabia's economic growth, given its strategic position in international politics and trade. Furthermore, the worsening relations between the United States and China in recent years have also added to global uncertainty. Competition in the trade sector between the two parties has had a significant impact on countries highly dependent on global trade, such as Indonesia and Malaysia (Bremmer & Kupchan, 2024).

Oil prices also have a strategic role in determining global economic growth because oil is one of the main commodities as a resource for various sectors, so that the increase in oil prices will increase the costs of production and distribution as well as services, this can reduce people's desire for consumption and investment so that the country's economic growth will slow down, but for countries with high levels of oil production can benefit from this, so that economic growth depends on the commodity trade position of each country. Table 1 shows 5 countries that have high oil production in the Organization of Islamic Cooperation in 2020-2024. Based on data from EIA (2023) in Table 1, the selection of 3 OIC countries, including Saudi Arabia, Indonesia and Malaysia in this study because these 3 countries are the highest oil producers and have highest oil prices among other OIC member countries.

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Table 1. Top 5 Countries with highest oil production

Countries	Year				
	2020	2021	2022	2023	2024
Saudi Arabia	10,914	10,777	12,142	11,215	10,710
Indonesia	895	858	834	881	868
Malaysia	656	609	603	597	571
Turkmenistan	240	253	255	275	275
Bahrain	185	189	202	193	187

Source : EIA (2023)

Gold prices have a key role in economic growth, as a safe haven asset that investors prioritize in the face of global uncertainty. Therefore, gold price movements also influence economic growth in OIC member countries such as Saudi Arabia, Indonesia, and Malaysia. These three countries also experience the impact of changes in gold prices as a tool for coping with global uncertainty.

Previous research by Kang, et al. (2020) showed that global uncertainty has a significant impact on global inflation growth and output. The effect of this global uncertainty is much greater than the uncertainty of a single country such as the US. In addition, Olalere & Petersen (2023) proved that increasing geopolitical risk (GPR) and economic policy uncertainty (EPU) significantly reduce economic stability in BRICS countries. The interaction between GPR and EPU exacerbates the negative impact on economic stability, especially through disruptions in credit flows and increased market volatility.

Although research conducted by Kang, et al. (2020) and Olalere & Petersen (2023) has examined the impact of global uncertainty on the world economy, the research by Kang, et al. (2020) focuses more on the effects of global uncertainty on aggregate growth and inflation in developed and developing countries in general, without specifically highlighting the dynamics occurring in OIC countries that have unique economic structures, such as oil prices and gold prices. The 3 countries are major exporters of oil compared to other countries, where oil exports are the main source of income for these 3 countries, which will affect economic growth. Meanwhile, gold in these 3 countries plays a greater role in ensuring stability and supporting mineral export against turmoil caused by global uncertainty. In addition, research by Olalere & Petersen (2023) only highlights the impact of geopolitical risk (GPR) and economic policy uncertainty (EPU) on economic stability in BRICS countries. However, the study does not highlight the role of global commodity prices such as oil and gold which are very relevant to the economies of OIC countries. Accordingly, it is very important to conduct studies that highlight the influence of geopolitical risk, global uncertainty, oil and gold prices on economic growth in OIC countries. Accordingly, this study conducts a deeper analysis of the impact of geopolitical uncertainty and global economic uncertainty by adding commodity price variables such as oil and gold which focus on 3 member countries of the Organization of Islamic Cooperation, namely Saudi Arabia, Indonesia and Malaysia.

This study aims to analyze the impact of geopolitical risks and global economic instability on the economic growth of OIC countries. Using the dependent variable, Gross Domestic Product (GDP), and Geopolitical Risk Index (GPR), World Uncertainty Index (WUI), oil prices, and gold prices as independent variables, this study can provide insight into the impact of external factors on the economies of OIC countries in 2020-2024.

Literature Review

Economic Growth

Economic growth is a development or series of activities within the economy that results in an increase in goods and services produced within a society and increased prosperity (Sukirno, 2010). Meanwhile, modern economic growth theory, according Solow & Swan (1956), explains that economic growth is influenced by capital accumulation, workforce growth, and technological progress. In this context, several external factors, such as geopolitical risk and global economic uncertainty, disrupt the process of capital accumulation and productivity, thus negatively impacting economic growth. Research by Baker, et al. (2016) reveals that external factors such as economic uncertainty and geopolitical risk significantly influence economic growth. When economic uncertainty increases, both producers and consumers tend to delay investment and consumption. This directly impedes economic growth, as these two components are the main

components of Gross Domestic Product. Meanwhile, other external factors, such as geopolitical risk, cause a decrease in real output, which can significantly slow the rate of economic growth.

Gross Domestic Product

Gross Domestic Product (GDP) Growth, the dependent variable in this study, is a calculation used by a country as the primary measure of national economic activity. According to Sukirno (2010), GDP growth is defined as the growth in the value of goods and services within a country produced by factors of production owned by the country's citizens and foreign citizens. The goods and services produced are not only by domestic companies but also by residents of other countries who still operate in the country.

Geopolitical Risk Index

The Geopolitical Risk Index is a tool for measuring the level of risk associated with hostilities, terrorist movements, and tensions between countries, which can impact normal and secure international relations (Caldara & Iacoviello, 2022). Figure 1 shows that the geopolitical uncertainty that has occurred in recent years has caused a spike in the geopolitical risk index. Research by Baur & Smales (2020) revealed that geopolitical risk directly impacts market confidence, disrupting investment flows and encouraging a shift in capital to safer assets such as gold. Countries that rely on oil commodity exports as their largest economic activity are highly vulnerable to geopolitical turmoil, which impacts economic growth. Research by Akadiri, et al. (2020) states that when geopolitical risk increases due to conflict or high tension, it has an impact on real economic activity. This is evident in the decline in industrial output and Gross Domestic Product. Furthermore, high geopolitical risk causes high uncertainty, leading consumers to reduce consumption, which ultimately hinders economic growth.

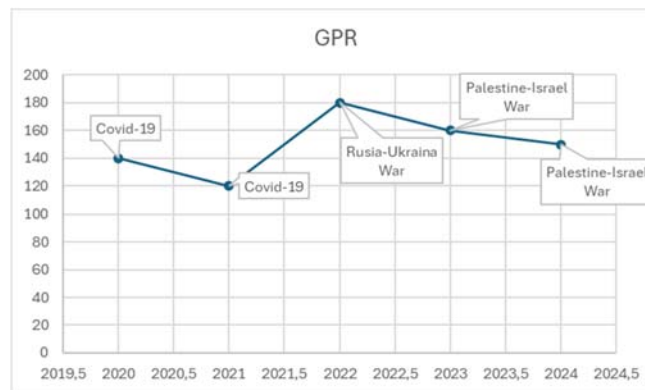


Fig 1. Geopolitical Risk Index (GPR)
Source: Caldara & Iacoviello (2022)

World Uncertainty Index

World Uncertainty Index (WUI) is an index used to measure the level of global economic uncertainty in individual countries. The WUI is calculated using country reports from the European Union, then the frequency of words indicating uncertainty is calculated, and then normalized and scaled (Ahir et al., 2018). Research by Yalçinkaya & Çelik (2021) revealed that increased global uncertainty has resulted in a contraction in US Gross Domestic Product. This occurs because increased uncertainty causes economic actors, both producers and consumers, to delay consumption, ultimately reducing aggregate demand. Although significant, this negative effect is temporary, and the economy will return to its initial state in the medium term.

Oil Price

Crude oil, or crude oil as it is commonly known, is a natural liquid consisting of several hydrocarbon liquids and other organic compounds found beneath the earth's surface and extracted through oil refineries to produce usable products, such as gasoline, diesel, and so on. West Texas Intermediate (WTI) and Brent are the standards used to measure Crude Oil Prices. The highest quality crude oil is sold by WTI, making it suitable for use as a fuel source. Therefore, WTI is used as

a reference, guideline, and benchmark in conducting oil trade worldwide (Situmorang & Barika, 2025). In their research, Deyshappriya, et al. (2023) stated that one of the factors influencing economic growth is oil prices. The results of the study showed that rising oil prices had a negative impact on economic growth in 38 OECD member countries. Rising oil prices caused people to reduce consumption or purchases of oil, which ultimately hampered the rate of economic growth.

Gold Price

Gold is an asset that is not in the form of currency but rather in the form of bars, plates, and blocks. The price of gold is a set value for gold that is influenced by several factors such as supply, demand, global economic conditions, and so on (Isnin & Zulfa, 2024). Research by Su (2024) states that there is a positive and significant relationship between gold prices and GDP. This means that when gold prices increase, GDP also tends to increase. This is because gold is a safe asset and functions as a hedge against economic and geopolitical risks. Rising gold prices can reflect economic uncertainty, which in turn can impact GDP growth.

Research Framework

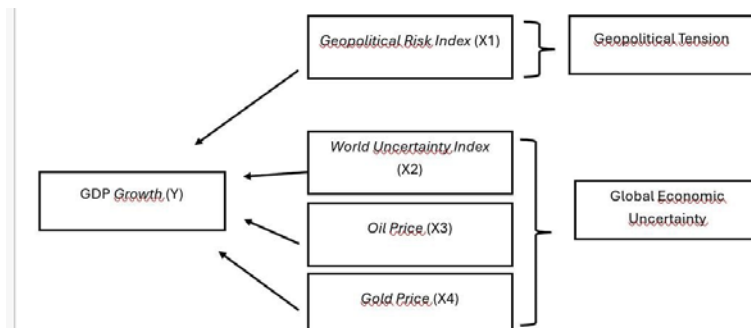


Fig 2. Research Framework

In this study, the dependent variable is economic growth measured using Gross Domestic Product Growth (economic growth) which is influenced by several external factors such as geopolitical dynamics and global economic uncertainty. Geopolitical uncertainty is measured using the geopolitical risk index (GPR), which shows that geopolitical risk arises from tensions between countries. Increased geopolitical risk tends to create uncertainty in the market, thus negatively impacting economic growth. Global economic uncertainty is measured using the World Uncertainty Index (WUI), Oil Prices (OP), and Gold Prices (GP). According to Baker, et al. (2016), high global economic uncertainty can cause economic actors to reduce consumption and investment, which ultimately impacted economic growth. In addition, commodity prices such as oil and gold prices are additional indicators of global economic uncertainty because fluctuating oil prices can affect energy production and consumption, which directly impacts economic growth. While fluctuating gold prices indicate unstable market conditions, which also impact economic growth. Thus, each independent variable has a direct influence on Economic Growth (GDP Growth).

Hypothesis

H0 : Geopolitical Uncertainty (GPR) and global economic uncertainty (WUI, Oil Prices & Gold Prices) does'nt have a significant effect on economic growth (GDP Growth) in the 3 OIC member countries.

Ha : Geopolitical Uncertainty (GPR) and global economic uncertainty (WUI, Oil Prices & Gold Prices) have a significant effect on economic growth (GDP Growth) in 3 OIC member countries.

Methodology

This study using a quantitative method and numerical data. It can be considered a scientific method because it meets concrete or empirical scientific principles, is objective, measurable, rational, and systematic (Soegiyono, 2022). The data in this study uses secondary data with panel data type, the panel data in this study combines time series data from 2020 M01 to 2024 M04 and cross-sections covering 3 member countries of the Organization of Islamic Cooperation (OIC), namely Saudi Arabia, Indonesia and Malaysia. The GDP growth data is interpolated data obtained from the original annual GDP growth data, which is interpolated into monthly data. The selection of 3 countries was based on the key role of these 3 countries in the global and the OIC countries, these 3 countries are the largest oil producers in the OIC and are highly sensitive to global energy geopolitical tension. They also represent highly open and export oriented economies, by comparing 3 countries, this study can analyze how the transmission mechanism of global uncertainty affects the different types of economies in 3 countries. These data were obtained from several sources, including the World Bank, Economic Policy Uncertainty, and the Ministry of Energy and Mineral Resources.

The dependent variable in this study is Gross Domestic Product, while the independent variables are the Geopolitical Risk Index (GPR), the World Uncertainty Index (WUI), crude oil prices, and gold prices in the three OIC countries, monthly, from 2020 to 2024. The econometric equation in this study is as follows:

$$GDPGrowth_{it} = \beta_0 + \beta_1 GPR_{it} + \beta_2 WUI_{it} + \beta_3 OP_{it} + \beta_4 GP_{it} + \varepsilon_{it} \quad (1)$$

Explanation of the variables in this study is listed in Table 2.

Table 2. Variable Definition

Variable	Definition	Unit	Source
$GDPGrowth_{it}$	Describing the Economic Growth of 3 OIC member countries 2020-2024 (monthly)	Percentage	World bank
GPR_{it}	Describing the Geopolitical Risk Index of OIC member countries 2020-2024 (monthly)	The index is measured using a score calculated based on media coverage of geopolitical events.	Economic Policy Uncertainty
WUI_{it}	Describing the global uncertainty index of OIC member countries 2020-2024 (monthly)	The index is measured using a score calculated based on global economic and policy uncertainty.	Economic Policy Uncertainty
OP_{it}	Crude oil prices of OIC member countries 2020-2024 (monthly)	Barrel/ USD	Word Bank & ESDM Ministry
GP_{it}	Gold prices of OIC member countries 2020-2024 (monthly)	Troy/ Ounce/ USD	World Bank

The research stages were carried out by collecting data from various sources according to table 2. Panel data regression was carried out by selecting the best model using the Chow test to choose between the Common Effect Model (CEM) and the Fixed Effect Model (FEM), then the Hausman test was carried out to choose between the Fixed Effect Model (FEM) and the Random Effect Model (REM). After conducting the regression and selecting the best model, an F test needs to be carried out to determine whether there is an influence of the independent variables together on the dependent variable. H₀ in the F test is that the independent variables together have no effect on Gross Domestic Product Growth. H₀ will be rejected if the probability of the F-statistic < α .

Then, a t-test is also needed to determine whether the independent variables individually have a significant effect on the dependent variable. H₀ in the t-test states that $\beta_i = 0$ (i = 1-4), which means the Geopolitical Risk Index, World Uncertainty Index, Crude Oil Prices, and Gold Prices doesn't have a significant effect on GDP. Meanwhile, H_A states that $\beta_i < 0$, which means that each independent variable have a significant effect on Gross Domestic Product Growth. H₀ is rejected if the probability of the t-statistic is less than α .

Results and Discussion

Results

To obtain estimation results for the panel data model, three approaches were used: the Common Effects Model (CEM)/Pooled Least Squares (PLS), the Fixed Effects Model (FEM), and the Random Effects Model (REM), as shown in Table 3.

The Chow test stipulates that if the F-statistic probability is < α , then H₀ is rejected, making the FEM a better model than the CEM. Meanwhile, the Hauman test stipulates that if the χ^2 probability is < α , then H₀ is rejected, making the FEM a better model than the REM.

Table 3 shows the probability of F-statistic (0.000) < α (0.01), then H₀ is rejected, so the FEM model is better than the CEM model. Furthermore, the probability of χ^2 (0.000) < α (0.01) then H₀ is rejected, so the FEM model is better than the REM model. So the FEM model is the best estimation model to use in this study.

Table 3. Panel Data Regression Results

Variable	Regression Coefficient		
	PLS	FEM	REM
<i>C</i>	2,284	3,078	2,779
<i>GPR</i>	-2,815	-1,959	-2,043
<i>WUI</i>	2,950	2,604	2,835
<i>OP</i>	0,046	0,028	0,041
<i>GP</i>	-0,001	-0,001	-0,001
<i>R</i> ²	0,548	0,871	0,449
<i>Adjusted. R</i> ²	0,538	0,802	0,437
Statistic <i>F</i>	53,226	12,541	35,794
Prob. Statistic <i>F</i>	0.0000	0.0000	0.0000
Model Selection Test			
(1) Chow			
Period <i>F</i> (59,116) = 4,962; Prob. <i>F</i> (59,116) = 0.000			
(2) Hausman			
Period random χ^2 (4) = 43,658; Prob. χ^2 (4) = 0.000			

Source: Data processed from the World Bank, ESDM, EPU.

Note: *Significant at α (0.01), **Significant at α (0.05), ***Significant at α (0.1).

Based on table 4, it is known that the probability of F-statistics in the FEM model is $0.000 < \alpha$ (0.01) which means H_0 is rejected, so together, the variables geopolitical risk index (GPR), world uncertainty index (WUI), oil price (OP), and gold price (GP) have an influence on economic growth which is described by the GDP Growth variable in 3 OIC member countries (Saudi Arabia, Indonesia and Malaysia) 2020-2024 (2020 M01-2024 M12).

Table 4. Best FEM Model Estimation Results

$GDPGrowth_{it} = 3,078 - 1,959GPR_{it} + 2,604WUI_{it} + 0,028OP_{it} - 0,001GP_{it} + \varepsilon_{it}$	(2)
(0,149) (0,087)*** (0,000)* (0,000)*	
$R^2=0,871$; <i>F-stat</i> = 12,541; Prob. <i>F-stat</i> = 0,000	

Source: Data processed from the World Bank, ESDM, EPU.

Note: *Significant at α (0.01), **Significant at α (0.05), ***Significant at α (0.1).

Table 4 shows that the coefficient of determination (R^2) in the FEM model is 0.871, meaning that 87.1% of the variation in economic growth (GDP Growth) can be attributed to the geopolitical risk index (GPR), the global uncertainty index (WUI), oil prices (OP), and gold prices (GP). The remaining 12.9% is influenced by variables outside the study.

Table 5. t-Test Results

Variable	Coefficient	Prob. <i>t</i>	Conclusion
<i>GPR</i>	-1,959	0,149	Not Significant
<i>WUI</i>	2,604	0,087	Significant at 0,1
<i>OP</i>	0,028	0,000	Significant at 0,01
<i>GP</i>	-0,001	0,000	Significant at 0,01

Source: Data processed from the World Bank, ESDM, EPU.

Table 5 shows that the World Uncertainty Index (WUI) variable has an empirical probability t-statistic of 0.087 $< \alpha$ (0.1), indicating a positive and significant effect on economic growth (GDP). Furthermore, the oil price (OP) and gold price (GP) variables have an empirical probability t-statistic of $0.000 < \alpha$ (0.01), indicating a positive and significant effect on economic growth (GDP), while the gold price variable has a negative and significant effect on economic growth (GDP). Meanwhile, the Geopolitical Risk Index (GPR) variable does not significantly influence economic growth (GDP) because its probability is $0.149 > \alpha$ (0.1), This is in accordance with Wali (2020) research where the geopolitical uncertainty index (GPR) variable does not have a significant effect on economic growth as described by GDP.

In Table 5, the coefficient of the World Uncertainty Index (WUI) is 2.604, with a linear relationship between the dependent and independent variables. Therefore, a 1% increase in the World Uncertainty Index will result in a 2.604% increase in economic growth (GDP).

The coefficient of the oil price variable in Table 5 is 0.0280. With a relationship pattern of the dependent and independent variables, namely lin-lin, a 1 liter increase in oil prices per US dollar will increase economic growth by 0.0280%.

Furthermore, the coefficient of the gold price variable in Table 5 is -0.001. With a relationship pattern of the dependent and independent variables, namely lin-lin, a 1 gram increase in gold prices per US dollar will decrease economic growth (GDP growth) by -0.001%.

Discussion

Effect of World Uncertainty Index (WUI) on GDP Growth

The increase in the World Uncertainty Index (WUI), which shows a positive impact on economic growth or GDP growth, can explain the unique conditions in the three OIC member countries because these countries have a high ability to adapt to global economic uncertainty, such as strengthening fiscal and monetary policies in response to global economic uncertainty. Thus, global uncertainty actually creates strategic opportunities for the domestic economies of these countries to develop through export diversification and increasing domestic investment. This is in contrast to research by Bannigidmath, et al. (2024), which found that global uncertainty actually had a negative impact on GDP growth in Western European countries. This is due to the COVID-19 pandemic, which caused global uncertainty in Western European countries to be four times greater than in the non-pandemic period. This is because Western European countries did not implement adaptive policies to optimally capture this response.

Effect of Oil Price (OP) on GDP Growth

The increase in oil prices that have a positive effect on economic growth (GDP Growth) shows that these countries are the highest oil producing countries that have a very high level of oil exports and have the largest income from the energy sector, so that when oil prices increase there is an increase in state revenue, income in the energy sector and foreign exchange exports which directly or indirectly can encourage household consumption, investment, and government spending through improving infrastructure and social programs which can ultimately support economic growth. This is in line with research by Putra, et al. (2023) which shows that oil prices have a positive and significant effect on economic growth in Indonesia, Indonesia have a positive impact from the increase in gold prices because Indonesia receive largest income from oil sales.

Effect of Gold Price (GP) on GDP Growth

Furthermore, the increasing price of gold which has a negative impact on economic growth (GDP Growth) shows that gold is a hedging instrument (safe haven) when the market is in high uncertainty, so that when investors and the public shift productive assets to gold, this causes a decrease in investment flows in real sectors such as infrastructure and manufacturing, as well as reducing business sentiment and consumption which ultimately reduces overall economic growth, making the increase in gold prices a reflection of stagnation or slowing economic activity that arises due to high preferences for safe but unproductive assets. Therefore, when investors and the public shift productive assets to gold, this causes a decrease in investment flows in real sectors such as infrastructure and manufacturing, which ultimately reduces overall economic growth. This is in line with research by Sari (2024) which shows that the price of gold has a negative impact on economic growth in Indonesia, this is because the movement of gold prices in Indonesia is caused by fluctuations in the rupiah exchange rate against the United States dollar. If the price of gold increases, economic growth in Indonesia will decrease due to the depreciation of the rupiah.

Results of this study can provide government efforts to maintain stable economic growth amidst global uncertainty, with implications for fiscal policy. The government needs to strengthen targeted expansionary fiscal policy, for example by increasing productive infrastructure spending and labor-intensive programs to maintain public consumption during economic uncertainty and external shocks. The government can expand the reach of temporary and targeted energy subsidies, so that the effects of rising oil prices do not overly burden the real sector and low-income households. Thus, targeted, adaptive, and responsive real fiscal policy can be used as a primary instrument in addressing the negative impacts of global uncertainty, while simultaneously capitalizing on the opportunities posed by rising oil prices to support better economic growth in OIC member countries, particularly Saudi Arabia, Indonesia, and Malaysia.

Conclusion

Based on the analysis conducted in this study, it can be concluded that the world uncertainty index (WUI) has a positive and significant effect on GDP Growth (economic growth). This indicates that the 3 OIC member countries (Saudi Arabia, Indonesia, and Malaysia) can implement adaptive policies in response to global uncertainty, so that it can be a strategic opportunity for the economic growth of these countries. Furthermore, crude oil prices have a positive and significant effect on GDP Growth (economic growth), this shows that the 3 countries are one of the largest oil producers, so that with increasing oil prices, the income obtained will increase and support economic growth. Conversely, gold prices have a negative and significant effect, indicating that high gold prices can encourage investors to shift investments in the real sector to hedge assets, thereby suppressing economic activity which ultimately reduces economic growth. Meanwhile, the

geopolitical risk index does not have a significant effect on GDP Growth (economic growth). Based on the results of this study, it is important to implement adaptive strategies such as economic diversification and strengthening fiscal and monetary instruments in response to global uncertainty to maintain the stability of economic growth. The main limitation of this study is only focused on three member OIC countries, so the results of this study may not be generalized to all other OIC member countries, which have different economic structures and levels of commodity dependence.

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