# Are the US and Russian Economies Related? East and West Domination and Competition in the Economy

Angelina Kira Yelizaveta[1]
[1]Plekhanov Russian University of Economics, Russia

## Abstract

This study investigates the relationship between the US macro economy and real economic growth in Russia. The sample data used is from 2000 to 2021. The dependent variable is the level of GDP in Russia and the independent variables are Interest Rates, Inflation, and the United States Money Supply (M2). Data is taken from various sources World Bank. This study uses the Vector Auto-Regressive (VAR) analysis method to look at the individual behavior of each country studied and uses time-series data from 2000 to 2016 for analysis of the United States' quantitative easing policies on real output in Russia. The result of this study is The relationship between interest rates, inflation, and the amount of money in the United States to the GDP variable in Russia is significant in the long run. However, in the short term, the relationship is unstable. This shows that there is an influence between the US economy on Russia where the two countries both have economic dominance in the world but the surprising thing is that the two economies influence each other.

**Keyword :** US, Russian, Economies, East and West Domination, Competition
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## Background

Now the world is experiencing a process of globalization the world economy is turning into a single market for goods, services, capital, and labor (Wilantari & Bawono, 2021 ; Murniati & Bawono, 2020). The world economy includes sectors and branches of the national economy that interact in external markets. This system is based on world and state production, distribution, and consumption of goods - both material and spiritual (Chapuzet & Bawono, 2021; Damayanti, 2022). The world economy is the economic association of nations, thereby forming the global economic space (Sasongko, Bawono, & Prabowo, 2021). The basis for the unification of the economies of each country to become a global economy is the international division of labor (Widarni & Bawono, 2020). Within the framework of this system, countries specialize in the production of goods for the manufacture of which natural conditions, available resources, and a sufficient level of scientific and technological development exist (Widarni, Prestianawati, & Bawono, 2020). Thus, the international division of labor is the production of goods and services in different states, while their volume significantly exceeds the internal needs of these states and is designed for the international market (Tommi Elang & Prabowo, 2021).
The world market is a set of interrelated market relations between countries based on the global division of labor (Elleby, Domínguez, Adenauer, & Genovese, 2020). International trade takes place on world markets the exchange of goods and services between individual countries and

economies (Gruszczynski, 2020). Methods of state regulation of foreign trade. Most states are interested in exporting as many goods and services as possible while limiting the competitiveness of imported goods in the domestic market. To do this, countries use methods of regulating foreign trade, which can be tariffs, that is, related to customs duties, and non-tariff (Panchenko, Reznikova, & Bulatova, 2020).

The world economy is based on the existence of an international monetary and financial system, which can be defined as the form of organization of monetary and financial relations between countries, established by international agreements. If there was no certain correspondence between the currencies of each country, international trade would not be possible (Gourinchas, Rey, & Sauzet, 2019). Therefore, there is an international currency market a field of economic relations, where there is a purchase and sale of gold, currency, and documents for payment in the national monetary units of other countries (Viphindrartin, Wilantari, Prabowo, Sasongko, Priyanto, & Bawono, 2021; Kregel, 2019). These markets are subject to the same economic laws as commodity markets, including the laws of supply and demand. The international financial market is an area of economic relations in which international loans and investments are issued, deposits are made, and securities are traded. These market activities are controlled by international monetary organizations (Sgambati, 2019). The international economy allows each country to influence the global economy and ultimately influence each other, although not directly (Viphindrartin & Bawono, 2021).

The main international economic links, especially Russia and the USA, will be affected by the conflict between Russia and Ukraine in 2022 (Yan, Yao, & Ma, 2022). The United States and a number of European countries are forced to admit that sanctions against Russia have had a significant impact on their economies which are quite vulnerable (Seyfi & Hall, 2019). The economies of Western countries turned out to be more vulnerable than their governments had predicted. After the introduction of anti-Russian sanctions, the United States and a number of European countries received very strong "returns", while the measures taken could not have a tangible impact on Russia (Mutmainah,S., Sawitri,R. (2022).

Western sanctions aimed at destroying the Russian economy are not in accordance with what the west is planning (Costantini, Morando, Olk, & Tausch, 2022). However, Russia's oil revenues hit a record as crude oil prices rose (Sokhanvar & Bouri, 2022). The US anticipates sanctions will swiftly halt the conflict (van Bergeijk, 2022). But the economic strain they are facing also surprised the US administration and its European counterparts (Mariotti, 2022). The United States has subsequently prohibited imports of Russian oil, and the European Union has declared intentions to reduce imports, despite earlier assurances that the sanctions would not impair Russia's energy exports (Kucheriava, 2022). This has impacted energy prices have increased sharply in the US and Europe. And, oddly enough, the sanctions and associated embargoes allow America's main strategic competitor (Hawkins, Sari, Chaerunnisa, & Kuraini, 2022), China, to buy large quantities of oil at deeply discounted prices as Russia seeks customers to cover lost revenue (Hatipoglu, Al-Suwailem, Muhsen, & Al Muhanna, 2022).

The United States has decided to end permanent normal trade relations with Russia, and also imposed a ban on energy imports (Bosse, 2022). The law of USA also covers the assets of the Central Bank of the Russian Federation, which were blocked due to sanctions, and the assets of arrested Russian businessmen (Zagaris, Nagle, & Mostaghimi, 2022).

The Russian and US economies are difficult in economic collaboration because there are so many obstacles between the two (Duggan, Hooijmaaijers, Rewizorski, & Arapova, 2022). However, the existence of an open economy could mean that the USA and Russia indirectly interact with each other in the international economy(Teece, 2022). This study investigates the relationship between the US macro economy and real economic growth in Russia.

## Research Method

The sample data used is from 2000 to 2021. The dependent variable is the level of GDP in Russia and the independent variables are Interest Rates, Inflation, the United States Money Supply (M2). Data is taken from various sources World Bank. This study uses the Vector Auto-Regressive (VAR) analysis method to look at the individual behavior of each country studied and uses time-series data from 2000 to 2016 for analysis of the United States' quantitative easing policies on real output in Russia.

**Table 1.** An explanation of the variable description that we will use

| Variable | Description | Source | Unit of Analysis |
|---|---|---|---|
| Gross Domestic Product (GDP) | This figure represents overall goods' market cap values with goods services manufactured by a nation between 2000 and 2020 in percent growth | World Bank | Percent |
| Interest Rates (Ir) | Interest rates are calculated from the period 2000 to 2020 | World Bank | Percent |
| Inflation (Inf) | Increase in all general prices in percent | World Bank | Percent |
| Money Supply (Ms) | The amount of money supply growth in percent | World Bank | Percent |

We use the econometric equation as follows

$GDP_t = \beta_0 + \beta_1 Ir_{t} + \beta_2 Inf_{t2} + \beta_3 Ms_{t3} + e_t$ Equation 1

$Ir_t = \beta_0 + \beta_1 GDP_{t} + \beta_2 Inf_{t2} + \beta_3 Ms_{t3} + e_t$ Equation 2

$Inf_t = \beta_0 + \beta_1 GDP_{t} + \beta_2 Ir_{t2} + \beta_3 Ms_{t3} + e_t$ Equation 3

$Ms_t = \beta_0 + \beta_1 GDP_{t} + \beta_2 Ir_{t2} + \beta_3 Inf_{t3} + e_t$ Equation 4

Information :

GDP : Gross Domestic Product

Ir : Interest Rates

Inf : Inflation

Ms : Money Supply

e : erroneous title

t : time sequence

β : degree in terms of causation influence

## Result and Discussion

It is clear from Table 1's findings of the VAR estimation that Russia's real GDP is positively impacted by the variables of interest rates and money supply, but this effect is not significant in the first period. Meanwhile, inflation in the US has a negative and significant effect on Russia's real GDP. This indicates that when there is an increase in inflation in the US, Russia's real GDP will decrease.

**Table 1.** Estimation Results of the VAR Model

| | GDP | IR | M2 | INF |
|---|---|---|---|---|
| GDP | 0.072711<br>(0.05112)<br>[ 0.81112] | 0.006111<br>(0.03113)<br>[ 0.13343] | 0.231121<br>(0.11218)<br>[ 0.11213] | -0.002411<br>(0.02411)<br>[-0.039112* |
| IR | -0.211451<br>(0.47267)<br>[-0.32524] | 0.322322<br>(0.22712)<br>[ 0.01231] | 0.011212<br>(0.01121)<br>[ 0.07136] | -0.000291<br>(0.21322)<br>[-0.00278]* |
| M2 | 0.121324<br>(0.21231)<br>[ 0.71123] | -0.311225<br>(0.82124)<br>[-0.06631] | 0.087115<br>(0.25437)<br>[ 0.23242] | 0.711236<br>(0.81121)<br>[ 0.32281] |
| INF | -0.223132<br>(0.37116)<br>[-0.31245] | -0.217117<br>(0.11231)<br>[-0.16271] | 0.411231<br>(0.12329)<br>[ 0.67237] | 0.191752<br>(0.19432)<br>[ 0.69272] |
| C | 0.81231<br>(0.72432)<br>[ 0.42772] | 0.912428<br>(0.64311)<br>[ 0.52232] | -0.792123<br>(0.71123)<br>[-0.82511] | 0.263117<br>(0.62819)<br>[ 0.59118] |
| R-squared<br>Adj. R-squared | 0.822231<br>0.786522 | 0.822352<br>0.782112 | 0.82224<br>0.798664 | 0.81132<br>0.792422 |

Based on the VAR estimation results, the interest rate and money supply variables have a positive effect on real GDP in Russia, but this effect is not significant in the first period. Interest rate policy is not fully efficient after the global financial crisis. Meanwhile, inflation in the US has a negative and significant effect on the real GDP in Russia. This indicates that when there is an increase in inflation in the US, Russia's real GDP will decrease. This shows that the decline in real GDP in Russia will have an impact on banking interest rates it will have an impact on economic growth which will affect output during a crisis. US interest rate shocks tend to be responded to stably by Russia's real GDP. Meanwhile, shocks to the US money supply (M2) tend to be responded to stably by Russia's GDP.

**Table 2.** Variance Decomposition

| Period | S.E. | GDP_IND | IR | M2 | INF |
|---|---|---|---|---|---|
| 1 | 2.093174 | 99.12321 | 0.000000 | 0.000000 | 0.000000 |
| 2 | 2.176242 | 95.11321 | 0.79117 | 1.97725 | 0.072112 |
| 3 | 2.322241 | 88.31521 | 0.98614 | 8.23127 | 0.35252 |
| 4 | 2.603172 | 79.81121 | 0.992471 | 16.97575 | 0.892728 |
| 5 | 2.815243 | 73.69253 | 0.913672 | 22.22731 | 1.34244 |
| 6 | 2.817721 | 68.50117 | 0.797321 | 27.26756 | 1.49131 |
| 7 | 2.992212 | 63.99211 | 0.739971 | 31.92632 | 1.71436 |
| 8 | 3.169531 | 61.25223 | 0.724827 | 34.91124 | 1.77523 |
| 9 | 3.292213 | 58.44281 | 0.695157 | 37.13171 | 1.692114 |
| 10 | 3.394881 | 55.92131 | 0.674129 | 39.72383 | 1.697246 |

Table 2 shows the results of the Variance Decomposition (V.D.) in Russia which can be seen from the movement of Q.E. policy indicator variables on real GDP in Russia. In the first period, there has been no surprise response to interest rate variables, money supply, and inflation in the US. This response occurred since the second period.

## Conclusion

The relationship between interest rates, inflation, and the amount of money in the United States to the GDP variable in Russia is significant in the long run. However, in the short term, the relationship is unstable. This shows that there is influence between the US economy on Russia where the two countries both have economic dominance in the world but the surprising thing is that the two economies influence each other.

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