ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25sep1092

Research on the Impact of Economic Policy Uncertainty on Russian Foreign Trade

Grigorovich Grigorii[1]

[1]School of Business, Zhengzhou University
Zhengzhou, China

Publication Date: 2025/10/04

Abstract: This study investigates the impact of Economic Policy Uncertainty (EPU) on Russia's foreign trade, focusing on both domestic and partner-country uncertainties. Using panel data from 2003 to 2021 for Russia and 18 partner countries, we employ fixed-effects regression models to analyze trade flows. The results indicate that Russia's domestic EPU has a statistically significant negative effect on bilateral trade, with a 1% increase in domestic uncertainty leading to a 7.04% decrease in trade volume. In contrast, partner-country economic policy uncertainty does not significantly affect Russia's trade. This suggests that external policy uncertainty has limited influence on Russia's trade, likely due to the relatively stable demand for its energy exports. Additionally, the analysis of heterogeneity reveals that domestic uncertainty negatively and significantly impacts imports, with a 1% increase in domestic uncertainty leading to 8.32% decrease in import trade volume. At the same time, partner-country's EPU has no significant influence on both import and export.

Keywords: *Economic Policy Uncertainty, Foreign Trade, Russian Foreign Trade.*

How to Cite: Grigorovich Grigorii (2025) Research on the Impact of Economic Policy Uncertainty on Russian Foreign Trade. *International Journal of Innovative Science and Research Technology*, 10(9), 2370-2379. https://doi.org/10.38124/ijisrt/25sep1092

I. INTRODUCTION

International trade is a highly complex system that cannot be fully explained by classical models of supply and demand or by theories of comparative and absolute advantages alone. In practice, trade flows are shaped by a wide spectrum of additional factors, including technological development of the country, its' infrastructure, market institutions, and the ability of firms to plan under conditions of uncertainty. Nowadays, Economic Policy Uncertainty (EPU) has become one of the most important dimensions, which captures the degree to which businesses and households face unpredictability about future economic policy. Elevated EPU can delay investment decisions, discourage firms from entering new markets, and increase the cost of financing trade-related operations. For economies that depend on long-term contracts and capital-intensive industries, such as energy and raw materials, uncertainty about future rules and policies may have an especially significant influence on the intensity and stability of international trade. Thus, incorporating EPU into empirical studies of trade helps to enrich our understanding of how nontraditional factors affect cross-border economic activity.

Russia represents a particularly relevant case for studying the link between EPU and trade. Since the early 1990s, the country has been actively integrated into global economic processes. It became a member of the International Monetary Fund and the World Bank, joined the Asia-Pacific Economic Cooperation forum, and in 2012 completed its accession to the World Trade Organization. In parallel, Russia has supported the development of infrastructure intended to facilitate international exchange, such as modernization of transport corridors, expansion of energy pipelines, and investment in port capacity. These steps underline the long-term orientation toward deeper involvement in global trade. At the same time, the growth of Russia's external trade has been periodically constrained by episodes of heightened uncertainty in the economic environment. The financial turbulence of 1998, the global financial crisis of 2008–2009, volatility in commodity markets in 2010, different types of crisis after 2014, and the COVID-19 pandemic all created conditions where firms and policymakers had to operate under elevated uncertainty. These experiences demonstrate that beyond structural determinants like GDP or exchange rates, EPU constitutes a meaningful factor influencing Russia's trade dynamics and deserves systematic empirical analysis.

II. LITERATURE REVIEW

A. The Concept of Economic Policy Uncertainty

In contemporary literature devoted to economic policy uncertainty, it usually refers to the difficulty faced by market participants in accurately predicting the probability, content, timing, and mode of implementation, or potential effects of economic policy changes [1]. Such unpredictability generates

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25sep1092

risks that are hard to be quantified and assessed in advance. In essence, EPU arises from the shifts in government-implemented economic policies, which expose firms and investors to face additional uncontrollable factors while formulating strategies and making economic decisions. These conditions increase market volatility and reduce the stability of the business environment. Not only domestic uncertainty influence shaping country's trade flows, but the foreign uncertainty is also believed to be a key factor for forming bilateral trade between two countries. That is why both Russia's and its major trading partners EPU are observed in this research. Against this backdrop, the study aims to examine how such uncertainty affects Russia's trade performance.

The Economic Policy Uncertainty Index (EPU Index) has become a widely used instrument in economic and financial research for analyzing the effects of economic policy uncertainty on investment, employment, trade, and other macroeconomic outcomes. Introduced by Scott Baker, Nick Bloom, and Steven Davis in 2016, the index provides a systematic approach to quantifying uncertainty of the country by measuring the frequency of specific keywords in newspaper articles. The construction of the index relies on text analysis techniques and typically involves several steps: collecting media data, identifying relevant keywords, calculating their frequency, applying standardization procedures, and deriving the final index values. Through this methodology, the EPU Index has emerged as a central tool for evaluating the implications of economic policy-related uncertainty.

B. Economic Policy Uncertainty and Different Markets

The literature studying how EPU affects specific markets has numerous researches. There are two main lines of studies: studies which are focused on agricultural and commodity sectors, and those devoted to financial and investment markets. Together, these strands provide valuable insights about the mechanisms through which uncertainty shapes market outcomes.

A substantial body of work is devoted to agricultural and food markets. Sun, Li, and Li [9], employing a structural vector autoregression (SVAR) model, investigated how global EPU influences China's soybean imports. Their empirical results indicated that rising global uncertainty exerts a statistically significant positive effect on import volumes, a finding explained by the mediating role of price fluctuations on both domestic and international markets. This evidence suggests that uncertainty, rather than always suppressing trade, can in certain cases stimulate precautionary imports of strategic goods. A related study by Yu and Gao [3] turned to China's leather industry, analyzing the impact of EPU on import and export flows. Their research showed that heightened uncertainty worsens the business environment for leather trade, increasing transaction costs and reducing the stability of cross-border exchanges. While the agricultural sector exhibited mixed responses, the leather industry appears particularly vulnerable to the dampening effects of uncertainty.

Further evidence on food markets was provided by Wei, Yu, and Zhu [11], who applied panel regression techniques to global trade data. Their results demonstrated that global EPU generally promotes growth in food trade, yet with striking asymmetries across countries. Developing economies experienced a significant positive effect of rising EPU, while in advanced economies the influence of uncertainty was weak or even slightly negative. These findings highlight that the essential nature of food as a strategic resource can make trade more resilient, though the magnitude of the effect depends heavily on a country's level of development. Extending this line of inquiry, Tadesse, Borojo, and Guan [4] examined agricultural exports using cross-country econometric analysis. They concluded that EPU has a negative effect on agricultural export performance overall, but that wealthier economies—measured by higher per capita GDP—are better insulated from its impact. Taken together, these studies reveal that EPU exerts complex, and at times contradictory, effects on agricultural markets, ranging from trade stimulation to pronounced contraction, depending on the product and national context.

Another cluster of studies investigates financial and investment markets. Gainetdinova [2], applying an autoregressive distributed lag (ARDL) model, analyzed the asymmetric impact of EPU and geopolitical risk on the Russian ruble. Authors' results demonstrated that economic policy uncertainty contributes to the depreciation of the ruble both in the short and the long term, illustrating how financial markets quickly incorporate expectations of instability. In China, Chen and Xie [12] used a fixed-effects panel regression combined with mediation analysis to explore how EPU affects producer price indices (PPI) for corn and wheat. They found a persistent negative correlation between rising uncertainty and agricultural producers' prices.

In Brazil, Teixeira, Batista, Souza, Fully, and Lamounier [3] employed a generalized method of moments (GMM) estimator to examine the impact of EPU on corporate investment. Their findings indicated that firms reduce investment volumes in response to higher uncertainty, with the effect persisting for at least four subsequent quarters. This underscores the long-lasting constraints that uncertainty imposes on capital allocation. Similarly, Liu and Longjiang [13] focused on China's manufacturing sector, showing that EPU discourages investment, particularly in firms with stronger competitive positions and higher levels of R&D expenditure. These results point to a paradox: the very firms that should drive innovation and competitiveness are most affected by policy instability. Collectively, research on financial and investment markets suggests that EPU tends to depress both currency stability and capital formation, thereby amplifying broader economic fragility.

C. Economic Policy Uncertainty and Foreign Trade

Another rich strand of literature directly addresses the consequences of EPU for foreign trade. Jia and Wu [14] analyzed China's trade flows using panel regressions with fixed effects, supplemented by mediation and heterogeneity models. Their study confirmed that EPU across different countries exerts a significant negative impact on China's imports and exports. They also identified tariffs and consumer

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25sep1092

price changes as important channels through which uncertainty transmits to trade, while their heterogeneity analysis revealed that the effects vary by partner country, depending on economic strength and trade strategy.

Le and Nguyen [5], adopting a modified gravity model following Anderson and van Wincoop, explored how EPU influences bilateral trade dynamics. They found that rising domestic EPU significantly reduces imports and overall trade volumes, whereas higher EPU in trading partners leads to a decline in exports but paradoxically increases imports from those partners. The authors also emphasized the role of volatility: fluctuations in EPU on either side of the trade relationship substantially reduce bilateral flows, suggesting that unpredictability itself, not just average levels of uncertainty, acts as a deterrent to trade.

Complementary insights were offered by Jia Dong [6], who concentrated on China's import trade. Using econometric analysis, he found that domestic EPU significantly suppresses imports, while global EPU shows no statistically significant effect. This contrast points to the stronger salience of domestic policy signals for importing firms. Constantinescu, Mattoo, and Ruta [7], analyzing global data, concluded that an increase in economic uncertainty reduces the growth of world trade in goods and services. They argued that the sharp rise in uncertainty in 2018 accounted for a one-percentage-point slowdown in global trade growth, highlighting the macroeconomic importance of uncertainty shocks.

Finally, Liu and Qi [15] and Hu and Liu [8] offered further evidence from China. Liu and Qi [15], drawing on the gravity framework, demonstrated that both domestic and external uncertainty restrict exports, though foreign EPU has a more pronounced effect, especially on processing trade. Hu and Liu [8], employing a time-varying parameter stochastic volatility VAR model (TVP-SV-VAR), showed that the influence of EPU on exports is time-dependent and became particularly strong during the COVID-19 pandemic. Their results underline that global crises can magnify the negative effects of uncertainty on trade, especially in relation to China's exports to OBOR and RCEP member countries.

Overall, these studies reveal that EPU systematically distorts international trade, though the direction and magnitude of the effects vary. Domestic EPU tends to weigh more heavily on imports, while foreign or global uncertainty more strongly suppresses exports. Moreover, episodes of global turbulence, such as the pandemic, appear to amplify these relationships, underscoring the need to consider both structural and temporal dimensions of uncertainty in trade analysis.

III. DATA AND VARIABLES

A. Choosing of the Variables

This study employs 9 core variables observed on a quarterly basis for the period of 2003–2021 for Russia and 18 partner-countries. Partner-countries which were examined in this study are as follows: Australia, Brazil, Canada, Chile, France, Germany, Greece, India, Ireland, Italy, Japan, Korea, Spain, UK, US, China, Sweden, Mexico. Although data are available for a longer time span, the sample was deliberately restricted in order to exclude the extraordinary fluctuations in the Russian economy during 2022–2024, which could otherwise bias the empirical results.

The main dependent variable is ln_R_Trade, which is representing the bilateral trade value between Russia and each partner country, measured in millions of U.S. dollars and expressed in natural logarithms. This variable captures the overall trade activity and serves as the central indicator of Russia's external trade performance.

For a more detailed analysis, two additional dependent variables are introduced in the analysis of heterogeneous impact of EPU on Russian trade. ln_X_R reflects Russia's export flows to partner-countries, while ln_M_R measures import flows from partners. Both of these two variable are included in research to examine whether EPU affects exports and imports differently.

The key explanatory variables of this study are ln_P_EPU and ln_R_EPU, which are denoting partner-country and Russian EPU indices respectively. Both are expressed in natural logarithms and allow the analysis to distinguish between external and domestic sources of economic policy uncertainty. In addition, ln_G_EPU, the global EPU index, is observed to analyze the stability of the model.

Several control variables are included to capture macroeconomic conditions of Russian Federation's economy. ln_M_GDP_G denotes the product of Russia's GDP and that of each partner country, thereby controlling for the size of the trading economies and its' influence on bilateral trade of the two partners. Such concept is in line with the terms of the gravity model framework. ln_M_UNEMP measures the average unemployment rate across Russia and its partners, serving as a proxy for cyclical fluctuations in labor markets. ln_OIL_P reflects the global Brent crude oil price, which is particularly relevant given the central role of energy in Russia's trade structure. Structural aspects of bilateral trade are measured through ln_TCI, the trade complementarity index between Russia and each partner country, which indicates the degree of compatibility in export and import structures. This variable is calculated using the following equation, $TCI_{ij} = 1 - \frac{1}{2}\sum_k \left|\frac{X_{ik}}{X_i} - \frac{M_{jk}}{Mj}\right|$, where X_{ik} – Russia's "k" product export value; X_i – Russia's overall export value; M_{jk} – partner-country "j" import value of the product "k"; M_j – partner's "j" overall import value. The ln_EX_RATE_R, defined as the real exchange rate of the Russian ruble relative to partner currencies, is added to control for competitiveness and exchange rate volatility. This variable is also calculated by author on the basis of the following equation: $EX\_RATE\_R = \frac{CPI_i}{CPI_j} * EX_{ij}$, where CPI_i – Russian Consumer Price Index; CPI_j – Partner-country's "j" consumer price index, and EX_{ij} – nominal exchange rate between Russia and partner "j". Finally, the variable TR_B is a dummy variable, and it equals one if trade with a given partner is subject to existing trade barriers, and zero otherwise. This indicator reflects the

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25sep1092

institutional and regulatory dimension of trade relations, capturing the role of sanctions, tariffs, or restrictions beyond standard macroeconomic drivers. The information about variables applied in this research is summarized in Table 1.

Table 1 The Summary of the Chosen Variables

Variable	Description	Measure/ Transformation	Source
ln_R_Trade	Bilateral trade value between Russia and partner country	Mln., U.S.$/ Natural logarithm	International Trade Center
ln_P_EPU	Partner country's EPU index value	Units/ Natural logarithm	Baker, Bloom & Davis Database
ln_R_EPU	Russian EPU index value	Units/ Natural logarithm	Baker, Bloom & Davis Database
ln_M_GDP_G	Product of Russian and partner's GDP value	Mln., U.S.$/ Natural logarithm	International Monetary Fond
ln_OIL_P	Global price of Brent Crude oil per barrel	U.S.$/ Natural logarithm	Federal Reserve Economic Data
ln_TCI	Trade complementarity index between Russia and partner country	Units/ Natural logarithm	Calculated by author according to trade value Data provided by International Trade Center
ln_M_UNEMP	Medium value of unemployment rate between Russia and partner country	Units/ Natural logarithm	International Monetary Fond
ln_EX_RATE_R	Real exchange rate of Russian ruble and partner's national currency	Russian rubles per patner's currency/ Natural logarithm	Calculated by author according to the ruble exchange rate Data provided by Russian Central Bank
TR_B	Binary: 1 = Russian trade with partner has any of existing trade barriers; 0 = otherwise.	Units/ No transformation applied	Reports, policy documents, and WTO/EU/US official announcements
Ln_G_EPU	Global EPU index value	Units/ Natural logarithm	Baker, Bloom & Davis Database
ln_X_R	Russian export value to partner country	Mln, U.S.$/ Natural logarithm	International Trade Center
ln_M_R	Russian import value from partner country	Mln, U.S.$/ Natural logarithm	International Trade Center

B. Descriptive Statistics

To provide a more rigorous overview of the dataset, it is essential not only to present the central tendencies of the variables but also to highlight the degree of variability, as this sheds light on the stability of the indicators over time and across countries. The dataset contains 1,243 quarterly observations spanning 2003–2021, and with the exception of the binary dummy TR_B, all variables were transformed into natural logarithms to normalize their distributions. Table 2 summarizes the descriptive statistics, reporting means, standard deviations, and ranges, which together offer a comprehensive view of the data's internal variation.

The dependent variable, ln_R_Trade, records a mean value of about 7.49 with a standard deviation of 1.54, indicating substantial heterogeneity in Russia's bilateral trade flows. When disaggregated, exports (ln_R_X) average 6.84 with a standard deviation of 1.86, while imports (ln_R_M) show a mean of 6.46 and a standard deviation of 1.57. These figures suggest that although Russian trade flows are relatively balanced, export volumes exhibit slightly higher variability than imports, reflecting their stronger sensitivity to external demand shocks.

Turning to the explanatory variables, the partner-country EPU index (ln_P_EPU) and Russia's domestic EPU index (ln_R_EPU) average 4.80 and 5.08, respectively, with modest standard deviations (0.53 and 0.54). This points to a persistent but relatively stable level of policy uncertainty both abroad and domestically. By contrast, the global EPU index (ln_G_EPU) averages 4.90 with a standard deviation of 0.44, suggesting that global uncertainty fluctuates less markedly than domestic Russian conditions.

Among the control variables, the international oil price (ln_OIL_P) shows a mean of 4.23 with a comparatively small standard deviation of 0.35. This limited dispersion highlights the long-run stability of global oil prices, despite occasional spikes, and underlines their relevance for modeling Russian trade performance. The real exchange rate (ln_EX_RATE_R) displays a mean of 2.35 with a relatively wide standard deviation of 2.34, indicating pronounced fluctuations in Russia's currency valuation against trading partners—a factor likely to exert asymmetric effects on imports versus exports.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25sep1092

Table 2 Descriptive Statistics of the Variables

Variable	Obs	Mean	Std. dev.	Min	Max
ln_R_Trade	1,243	7.48804	1.539653	3.492865	10.68977
ln_P_EPU	1,243	4.803701	.5264616	2.866246	6.491964
ln_R_EPU	1,243	5.075909	.5419099	4.072806	6.559603
ln_M_GDP_G	1,243	25.72301	1.235917	22.48414	28.87129
ln_OIL_P	1,243	4.234246	.3504912	3.262142	4.805812
ln_TCI	1,243	3.614118	.2022069	3.156303	4.183493
ln_M_UNEMP	1,243	1.914958	.3400195	1.217728	2.832772
ln_EX_RATE_R	1,243	2.347489	2.339923	-3.993804	5.160701
TR_B	1,243	.3322607	.4712135	0	1
ln_G_EPU	1,243	4.898868	.4391233	4.015455	5.87367
ln_R_X	1,243	6.838991	1.856381	1.266102	10.07454
ln_R_M	1,243	6.456009	1.57408	1.69286	9.912115

Table 3 Multicollinearity Test Results

Variable	VIF	1/VIF
ln_EX_RATE_R	2.54	0.394110
ln_TCI	2.20	0.454684
TR_B	1.98	0.504287
ln_M_UNEMP	1.98	0.505939
ln_M_GDP_G	1.72	0.581596
ln_R_EPU	1.71	0.585350
ln_P_EPU	1.35	0.741315
ln_OIL_P	1.21	0.823861
Mean VIF	1.84	

Following the descriptive statistics, it is also important to assess whether multicollinearity among the explanatory variables may bias the estimation results. Table 3 presents the results of the variance inflation factor (VIF) test. We can find out that all individual VIF values remain well below 3, and the mean VIF equals 1.84. These results indicate that the explanatory variables included in the model are not strongly correlated with each other, and therefore multicollinearity is unlikely to pose a problem for the subsequent regression analysis.

IV. RESEARCH METHODS

A. Model Setting

In order to analyze the impact of the EPU on the foreign trade of the Russian Federation, at the first stage our work builds a baseline regression model with the following specification:

$$\ln\_R\_Trade_{it} = \alpha + \beta_1 \ln\_P\_EPU_{it} + \beta_2 \ln\_R\_EPU_t + \\ + \gamma' Z_{it} + \mu_i + \delta_t + \varepsilon_{it} \quad (1)$$

Where: $\ln\_R\_Trade_{it}$ - Bilateral trade value between Russia and partner «i» at time «t»; $\ln\_P\_EPU_{it}$ - Partner's «i» EPU index value at time «t»; $\ln\_R\_EPU_t$ - Russian EPU index value at time «t»; Z_{it} - is a vector of control variables, including $\ln\_M\_GDP\_G_{it}$, $\ln\_OIL\_P_t$, $\ln\_TCI_{it}$, $\ln\_M\_UNEMP_{it}$, $\ln\_EX\_RATE\_R_{it}$, TR_B_{it}; μ_i – country's effects; δ_t - time fixed effects; ε_{it} – idiosyncratic error.

To assess model performance and ensure robustness, three standard panel-data specifications—Pooled OLS, Random Effects, and Fixed Effects—are introduced at the preliminary stage and described in the Table 4.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25sep1092

Table 4. Regression results for Pooled OLS, Random Effects and Fixed Effects models.

	Pooled OLS	Random Effects	Fixed Effects
ln_P_EPU	0.273*** (0.0656)	0.00224 (0.0239)	0.00421 (0.0238)
ln_R_EPU	-0.125 (0.115)	-0.0697** (0.0323)	-0.0704** (0.0321)
ln_M_GDP_G	0.814*** (0.0302)	0.217*** (0.0420)	0.185*** (0.0430)
ln_OIL_P	-0.471** (0.217)	0.262*** (0.0688)	0.289*** (0.0691)
ln_TCI	3.216*** (0.214)	0.603*** (0.109)	0.581*** (0.108)
ln_M_UNEMP	-0.370*** (0.125)	-0.304*** (0.0500)	-0.314*** (0.0498)
ln_EX_RATE_R	0.178*** (0.0198)	0.157*** (0.0507)	0.181*** (0.0585)
TR_B	0.0413 (0.0992)	-0.736*** (0.0449)	-0.759*** (0.0472)
Const	-23.49*** (1.280)	-1.003 (1.048)	-0.247 (1.037)
TIME FIXED	YES	YES	YES
R^2	0.619	0,346	0.647

Standard errors in parentheses: * p<0.10, ** p<0.05, *** p<0.01

As we can see from the table above, it presents the preliminary regression outcomes using Pooled OLS, Random Effects, and Fixed Effects estimators. For the partner country EPU index (ln_P_EPU), the pooled regression yields a positive and statistically significant coefficient of 0.273, implying that higher foreign uncertainty appears to stimulate Russian trade when heterogeneity is ignored. However, once country effects are introduced, the coefficient becomes small and statistically insignificant: 0.002 under RE model and 0.004 under FE model, indicating that the pooled result is likely biased by omitted heterogeneity. Turning to Russia's domestic EPU index (ln_R_EPU), the coefficient is insignificant under pooled OLS, but becomes negative and significant in both RE and FE models, with the value of -0.069 and –0.070 at the significance level of 5%. This suggests that domestic uncertainty exerts a stable and adverse effect on bilateral trade, while external uncertainty does not survive more rigorous specifications. Among the strange findings in the control variables, oil prices (ln_Oil_P) can be mentioned, as it switch sign from negative in OLS (–0.471, p<0.05) to positive in RE (0.262, p<0.01) and FE (0.289, p<0.01) models, and opposite happens to the variable of trade barriers, which switch sign from positive and insignificant in OLS to negative and significant in RE (-0.736, p<0.01) and FE (-0.759, p<0.01). These results motivate a more careful specification test to determine which estimator provides the most reliable inference.

B. Specification Testing

To ensure the robustness of the results and enhance the predictive power of the model, several specification tests are conducted. These tests are essential to determine the most appropriate estimator for the given data and to address potential issues such as unobserved heterogeneity, autocorrelation, and heteroskedasticity. By rigorously testing for these econometric concerns, the aim is to ensure that the estimated coefficients reflect the true relationships between the variables and are not biased by omitted factors or statistical inconsistencies. The results of these tests, presented in Table 5, provide important insights into the suitability of different models and guide the selection of the most reliable estimation approach for the analysis.

Table 5 Specification Tests' Results

Tests	Null Hypothesis	Test Statistic	p-value	Decision
Breusch–Pagan LM (Pooled OLS vs. RE)	Var(u) = 0 (no panel effects, Pooled OLS is sufficient)	χ^2 (1) = 30025.86	0.0000	Reject H_0
Hausman test (RE vs. FE)	Difference in coefficients is not systematic (RE consistent)	$\chi^2(10)$ = 24.29	0.0069	Reject H_0
Wooldridge test (autocorrelation**)**	No first-order autocorrelation	F(1,17) = 25.34	0.0001	Reject H_0
Modified Wald test (heteroskedasticity**)**	Homoskedasticity across panels	$\chi^2(18)$ = 2628.59	0.0000	Reject H_0

From the results of formal specification tests above, we can conduct the following conclusions. The Breusch–Pagan LM test strongly rejects the null hypothesis of no panel effects, with a test statistic of $\chi^2(1)$ = 30,025.86 and p value less than 0.0001, indicating that pooled OLS model is inappropriate. The Hausman test further rejects the null hypothesis of RE

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25sep1092

consistency, with $\chi^2(10) = 24.29$ and p value of 0.0069, implying that the Random Effects estimator is inconsistent and that Fixed Effects is preferable. Finally, the Wooldridge test rejects the null hypothesis of no first-order autocorrelation with $F(1,17) = 25.34$, $p<0.0001$, and the Modified Wald test rejects the null hypothesis of homoskedasticity across panels with $\chi^2(18) = 2628.59$, $p<0.0001$. Together, these results demonstrate the need for a Fixed Effects estimator that accounts for both heteroskedasticity and serial correlation through robust clustered standard errors.

C. Regression Results

As mentioned earlier, baseline regression model, represented by the Equation 1, due to the presence of autocorrelation and heteroscedasticity in the variables, requires capturing model errors using robust errors clustered by country. The estimation results for this regression are presented in Table 6 (Model 1). To be more precise, it presents the results from the Fixed Effects model with robust errors clustered by country.

Speaking about the results of the regression, the coefficient for the partner-country EPU index is positive (0.00421), but it is statistically insignificant, with a p-value of 0.693. This result suggests that, contrary to expectations, foreign economic policy uncertainty does not significantly affect Russia's trade flows. This finding aligns with previous researches, which showed that external uncertainty might have less of an impact on trade flows than domestic uncertainty, particularly in a context like Russia's, where trade is heavily influenced by energy exports. The insignificance of ln_P_EPU might also reflect the fact that Russia's trade partners may have diversified their risks in the face of international uncertainty, thereby buffering the potential negative impact on trade. On the other hand, there is the coefficient for Russia's own economic policy uncertainty index, which is negative with the value of -0.0704 and statistically significant at the 1% level. This indicates that an increase in domestic uncertainty leads to a reduction in Russia's bilateral trade. For each 1% increase in Russia's domestic economic policy uncertainty, the volume of trade decreases by approximately 7%. This result is in line with economic theory, which posits that greater domestic uncertainty can dampen both domestic and foreign investment, reduce trade flows, and increase the perceived risks for foreign firms considering trade with Russia. The negative relationship between ln_R_EPU and trade flows underscores the adverse effects that economic policy changes have on trade.

Among the control variables, there are several posing significant. For example, the coefficient ln_Oil_P is positive (0.289), and statistically significant at the 1% level ($p<0.01$). This result supports the notion that oil prices play a crucial role in Russia's trade dynamics, reflecting the country's heavy reliance on energy exports. As oil prices increase, the volume of Russian exports (primarily energy products) rises, which positively influences bilateral trade. Coefficient for unemployment (ln_M_UNEMP) is negative (-0.314), and also statistically significant but at the 10% level. This suggests that higher unemployment rates in Russia and its trading partners are associated with a decrease in trade. Rising unemployment is often indicative of weaker economic conditions, which could reduce the demand for imports and increase protectionist policies, thus constraining trade. Moreover, higher unemployment may lead to decreased domestic consumption, further reducing the demand for foreign goods. The TR_B variable shows a large and statistically significant negative coefficient (-0.759) at the significance level of 1%, indicating that the presence of trade barriers significantly reduces Russia's bilateral trade. Of course, trade barriers such as tariffs and non-tariff barriers impede trade by increasing the cost of trading goods. The strong negative coefficient on trade barriers highlights the importance of reducing barriers to trade to foster greater trade integration and economic growth. More specifically, when trade barriers exist between Russia and its trading partner, the volume of bilateral trade decreases by approximately 75.9%. Coefficients with ln_M_GDP_G, ln_TCI, and ln_EX_RATE_R are insignificant, but still playing important controlling function in the regression.

V. ROBUSTNESS AND ENDOGENEITY TESTING

To further examine the robustness of the results, the partner and Russian EPU indices were replaced with the global EPU index (ln_G_EPU) (Model 2 in Table 6). The sign and magnitude of the main control variables remain unchanged, with oil prices, unemployment, and trade barriers showing effects consistent with Model 1. The coefficient on the global EPU index is negative (–0.0577) but statistically insignificant, suggesting that global uncertainty does not exert a systematic influence on Russia's bilateral trade. Importantly, no key coefficients changed their signs, and the explanatory power of the model ($R^2 = 0.646$) remains very close to that of the baseline specification. This outcome reinforces the stability of the empirical model, confirming that the main conclusions are not sensitive to alternative measures of policy uncertainty.

Finally, the analysis addresses the potential endogeneity of the EPU variables by estimating instrumental variable models, where the second-order lags of ln_P_EPU and ln_R_EPU serve as instruments (Models 3 and Model 4 in Table 6). The results indicate that the coefficient on Russia's domestic EPU remains negative and significant in Model 3 (–0.076, $p<0.01$), while it turns to be negative but insignificant in Model 4 (–0.124, $p>0.1$), while using the second-order lag of itself. Partner EPU remains statistically insignificant across both specifications. Importantly, the formal endogeneity tests conducted, a version of the Durbin–Wu–Hausman test applied to endogenous regressors. Tests reject the presence of endogeneity, as for ln_P_EPU $\chi^2(1) = 0.277$, $p = 0.5987$, and for ln_R_EPU $\chi^2(1) = 0.283$, $p = 0.5947$. These results confirm that both regressors can be treated as exogenous. Given this evidence, it is appropriate to rely on the simpler Fixed Effects estimator with clustered robust errors (Model 1), which provides more efficient and stable estimates without the unnecessary complexity of instrumental variables.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25sep1092

Table 6 Final Model, Stability and Endogeneity Testing

	Model 1	Model 2	Model 3	Model 4
ln_P_EPU	0.00421 (0.0696)		0.0468 (0.140)	0.0144 (0.0690)
ln_G_EPU		-0.0577 (0.0469)		
ln_R_EPU	-0.0704*** (0.0218)		-0.0761*** (0.0277)	-0.124 (0.109)
ln_M_GDP_G	0.185 (0.132)	0.194 (0.131)	0.159 (0.135)	0.167 (0.135)
ln_OIL_P	0.289*** (0.0853)	0.289*** (0.0753)	0.325*** (0.109)	0.297*** (0.0889)
ln_TCI	0.581 (0.394)	0.582 (0.388)	0.579 (0.391)	0.594 (0.391)
ln_M_UNEMP	-0.314* (0.151)	-0.311* (0.150)	-0.318** (0.151)	-0.310** (0.148)
ln_EX_RATE_R	0.181 (0.173)	0.181 (0.171)	0.202 (0.173)	0.199 (0.171)
TR_B	-0.759*** (0.192)	-0.756*** (0.190)	-0.768*** (0.187)	-0.764*** (0.186)
Constant	-0.247 (2.565)	-0.499 (2.418)		
TIME FIXED	YES	YES	YES	YES
R^2	0.647	0.646	0.390	0.390

Standard errors in parentheses: * p<0.10, ** p<0.05, *** p<0.01

VI. HETEROGENEITY ANALYSIS

This chapter is based on the assumption that economic policy uncertainty has different impacts on Russia's foreign trade in terms of imports and exports. In economic literature it is believed that domestic EPU is morre willing to affect Import trade, while export trade of the country is usually being affected by foreign EPU. Table 7 include two regression models, which are based on the baseline regression model described above.

Table 7 Impact of EPU on Russia's Import and Export

	Import Trade	Export Trade
ln_P_EPU	-0.0691	0.0392
	(0.128)	(0.0879)
ln_R_EPU	-0.0832**	-0.0209
	(0.0340)	(0.0250)
Constant	1.796	-7.473*
	(4.027)	(4.032)
Controls	Yes	Yes
Time Fixed	Yes	Yes
R^2	0.531	0.495

Standard errors in parentheses: * p<0.10, ** p<0.05, *** p<0.01

Speaking about partner-country economic policy uncertainty, the coefficients are statistically insignificant in both models. In the import specification (Import Trade), the coefficient is –0.069 (p>0.1), while in the export specification it is 0.039 (p>0.1). This suggests that fluctuations in foreign policy uncertainty do not exert a systematic influence on Russia's bilateral trade flows, neither on imports nor on exports. These findings are consistent with the earlier results of the authors, where partner-country EPU did not demonstrate a robust effect once country heterogeneity was controlled for.

By contrast, Russia's own policy uncertainty shows a more asymmetric role. In the import regression, the coefficient is –0.083 (p<0.05), indicating a statistically significant negative relationship: rising domestic uncertainty reduces Russia's imports. Such an outcome is in line with theoretical expectations, as internal instability constrains demand conditions and discourages foreign suppliers from engaging in trade with Russia. However, in the export regression the coefficient is –0.021 (p>0.1), which is statistically insignificant. This implies that Russian exports, dominated by resource-based commodities, are less sensitive to fluctuations in domestic political or economic uncertainty.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25sep1092

VII. CONCLUSION

This study delves into the impact of economic policy uncertainty on Russia's foreign trade by analyzing both domestic and partner-country uncertainty. The results of the empirical analysis helps us to understand the nature of trade dynamics in the context of economic policy uncertainty in Russian Federation and outside of it. The main regression analysis, presented in Model 1 of Table 6, reveals a statistically significant negative relationship between Russia's own EPU (ln_R_EPU) and the volume of bilateral trade. Specifically, a 1% increase in Russia's domestic economic policy uncertainty leads to a 7.04% decrease in trade volume. In contrast to this, partner-country EPU (ln_P_EPU) does not show a significant effect on Russia's trade flows. It suggests that, contrary to what might be expected in a typical trade theory framework, uncertainty in partner countries does not significantly affect Russia's ability to trade with the partner. This result might be explained by the relative stability of Russia's energy sector, which is less sensitive to short-term changes in the economic policies of trading partners. Given Russia's dominant role as an energy exporter, the demand for its natural resources tends to remain strong regardless of fluctuations in its partners' economic policies. Therefore, it is primarily domestic uncertainty, rather than external, that shapes Russia's trade performance.

Further analyses of heterogeneity, as presented in Table 7, showed that the effects of EPU are not uniform across different types of trade. For import trade, the effect of domestic policy uncertainty is significantly negative. The magnitude of the negative effect is more pronounced for imports, as higher domestic uncertainty tends to reduce Russia's import activities more than it affects exports. On the other hand, partner-country uncertainty remains statistically insignificant in the context of both imports and exports, confirming the earlier result that external uncertainty does not significantly influence Russia's trade flows.

Given the findings of this study, it is evident that domestic policy uncertainty is a critical factor influencing Russia's bilateral trade flows with the observed partner-countries, having a greater impact on imports. The negative relationship between ln_R_EPU and trade performance underscores the importance of stabilizing domestic policies to enhance trade relations. Therefore, policy makers in Russia probably should focus on reducing internal economic and political uncertainty, implementing clear and predictable policies that foster a stable business environment. This would likely improve investor confidence, facilitate smoother trade transactions, and encourage greater economic integration with international markets. Furthermore, the energy sector, which remains relatively insulated from external uncertainty, should be considered a key asset in diversifying Russia's trade relationships. By enhancing its energy sector's global presence and addressing long-term structural issues, Russia can mitigate the risks associated with international market fluctuations. However, overreliance on energy exports should be avoided. A diversified export portfolio, particularly in high-value-added goods and services, would make Russia less vulnerable to volatility in global energy prices.

REFERENCES

[1]. Baker, S. R., N. Bloom, and S. J. Davis, "Measuring Economic Policy Uncertainty," Quarterly Journal of Economics, 131, no. 4 (November) 2016, pp. 1593-1636.

[2]. Gainetdinova, Anna. (2023). Asymmetric Impact of Geopolitical Risk and Economic Policy Uncertainty on Russian Ruble Exchange Rate. Journal of Applied Economic Research. 22. 270-293.

[3]. Batista, Alexandre & Souza, Gustavo & Fully, Valéria & Lamounier, Wagner. (2024). The Effect of Economic Policy Uncertainty in Brazil on Corporate Investment. Advances in Scientific and Applied Accounting. 17. 17-28.

[4]. Gignarta, Tadesse Soka, Dinkneh Gebre Borojo, and Zhenzhong Guan. 2024. "The Impacts of Economic Policy Uncertainties on Agriculture Export." Cogent Economics & Finance 12 (1).

[5]. Le, Thai-Ha and Nguyen, Canh. (2023) Dynamics of Bilateral Trade Under Economic Policy Uncertainty. Journal SSRN. 27.

[6]. Dong, J. (2023) "Research on Economic Policy Uncertainty and Import Trade", *Frontiers in Business, Economics and Management*, 7(1), pp. 235–238.

[7]. Constantinescu, Ileana Cristina; Mattoo, Aaditya; Ruta, Michele. Policy Uncertainty, Trade, and Global Value Chains : Some Facts, Many Questions (English). Policy Research working paper|no. WPS 9048 Washington, D.C. : World Bank Group.

[8]. Hu Guoheng, Liu Shan. (2021) Economic Policy Uncertainty (EPU) and China's Export Fluctuation in the Post-pandemic Era: An Empirical Analysis based on the TVP-SV-VAR Model. Frontiers in Public Health. Research. Pp. 2296-2565

[9]. Sun Zhongye, Li Yuying, Li Zhi. Research on the impact of global economic uncertainty on China's soybean import trade - analysis based on the perspective of ensuring China's soybean supply security [J]. Price Theory and Practice, 2021, (07): 106-109+165.

[10]. Yu Nana, Gao Yue. Analysis of the impact of economic uncertainty on leather import and export trade [J]. China Leather, 2023, 52 (06): 38-41.

[11]. Wei Yanjiao, Yu Huaidi, Zhu Jing. Economic policy uncertainty, regional economic cooperation and global food trade growth [J]. World Agriculture, 2024, (10): 43-55.

[12]. Chen Wen, Xie Yun. The impact of economic policy uncertainty on China's agricultural product prices [J]. Agricultural Outlook, 2024, 20 (10): 62-68.

[13]. Liu Ning, Long Jiang. The impact of economic policy uncertainty on investment in manufacturing enterprises [J]. Chinese and Foreign Enterprise Culture, 2024, (07): 80-82.

[14]. Jia Rongyan, Wu Houbing. Research on the impact of economic policy uncertainty in various countries on China's foreign trade [J]. Journal of Hebei University of Science and Technology (Social Science Edition), 2025, 25 (01): 15-24.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25sep1092

[15]. Liu Hui, Qi Jianhong. Macroeconomic uncertainty and exports: Is trade intermediary a buffer or a driver? [J]. World Economic Research, 2018, (04): 60-74+136.