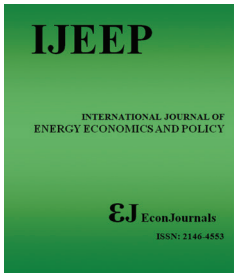


**International Journal of Energy Economics and Policy**

ISSN: 2146-4553

available at http: www.econjournals.com

**International Journal of Energy Economics and Policy, 2025, 15(2), 292-297.**

# The Relationship between Current Account Deficit, Economic Growth and Oil Prices in Developing Countries

**Zeinegul Yessymkhanova[1], Dariga Khamitova[2]*, Utegulova Bakytgul[3], Gulmira Azretbergenova[4]**

[1]Esil University, Astana, Kazakhstan, [2]Kazakh National Academy of Choreography, Astana, Kazakhstan, [3]Academy of Civil Aviation, Almaty, Kazakhstan, [4]Khoja Akhmet Yassawi International Kazakh-Turkish University, Turkestan, Kazakhstan
*Email: dariga1979@mail.ru

**Received:** 05 October 2024 **Accepted:** 21 January 2025 **DOI:** https://doi.org/10.32479/ijeep.18156

**ABSTRACT**

In this study, the relationship between current account deficit, economic growth and oil prices for 5 countries (Argentina, Indonesia, India, Mexico and Turkey) between 1980–2023 was examined using panel data analysis method. First, unit root tests were performed on the variables and stationarity was determined. Since the current account deficit, economic growth and oil price variables were stationary in their first degree differences, Pedroni and Kao Panel Cointegration Tests were performed and it was determined that the variables were cointegrated. After the cointegration test, Dumitrescu and Hurlin Panel Causality Test was performed and one-way causality was determined from economic growth to current account deficit and oil prices, and from oil prices to current account deficit.

**Keywords:** Oil Prices, Current Account Deficit, Economic Growth, Developing Countries
**JEL Classifications:** C22, F32, Q42

## 1. INTRODUCTION

One of the most fundamental economic problems that countries face is the current account deficit, which occurs when the income from current transactions is smaller than the expenses (Altayligil & Çetrez, 2020). Liberalization in capital movements, abandonment of fixed exchange rates, the revolution in information technologies, the huge expansion of transaction volume and the rapid increase in financial development as a result; facilitated borrowing from international markets, caused transformations in the current account balance, the number of countries with current account deficits in the world increased rapidly and current account deficits became permanent. In addition, since it is one of the most important indicators of macroeconomic performance, has a decisive role in the formation of economic decisions and expectations, and increases the vulnerability of countries to economic crises, the current account deficit maintains its importance for national economies and is among the most discussed topics in the economic literature.

The basis of the current account deficit problem is that countries resort to external borrowing because it is difficult to meet the import of technology, energy, intermediate goods and investment goods required for economic development through exports; in addition, due to the inadequacy of national resources and technology, the production targeted for growth depends on external resources, making current account deficits chronic (Calderon et al. 2000). Energy, which is one of the basic inputs for production, is still the leading factor increasing external dependency for many countries. The impact of energy dependency on national economies has been discussed in the literature for years; increasing energy consumption in parallel with the increase in world population, urban development, income growth and industrialization is gradually increasing interest in the subject (Asif & Muneer, 2007; Narayan & Smyth, 2008; Sorrell, 2010). While external dependency on energy causes a current account deficit in countries that import energy (Özlale & Pekkurnaz, 2010; Huntington, 2015; Yalta & Yalta, 2017), the increasing energy demand for production required

to eliminate the current account deficit problem further deepens the problem. The failure to develop domestic production opportunities in energy use further aggravates the situation (Cherp et al. 2012).

In this study, the relationship between current account deficit, economic growth and oil prices in developing countries (Argentina, Indonesia, India, Mexico and Turkey) with current account deficit problems was examined using panel data analysis. In the section following the introduction, the relevant literature was discussed. In the third section, the model and method were explained. Then, the empirical analysis results were evaluated. The study ended with the conclusion section.

## 2. LITERATURE REVIEW

There are many studies in the literature examining the effects of the increase in oil prices on inflation, unemployment, economic growth, current account deficit and other macroeconomic variables (Burbidge and Harrison, 1984; Gisser and Goodwin, 1986; Lee et al., 1995; Jones et al., 2004; Hamilton, 2011; Dias, 2013; Azretbergenova and Syzdykova, 2020; Syzdykova et al., 2020; Azretbergenova et al., 2021; Abubakirova et al.,2021; Syzdykova et al., 2022; Syzdykova & Azretbergenova, 2024; Yessymkhanova et al., 2024a; Yessymkhanova et al.,2024b), and among these variables, the relationship between the current account deficit and oil imports is also the subject of many studies. In these studies conducted on most countries dependent on foreign energy, it is mentioned that there is a positive relationship between these two variables.

The relationship between oil prices, current account deficit, and economic growth is complex and varies across economies. Studies show that fluctuations in oil prices significantly affect both current account deficit and economic growth, with effects that vary depending on the country context. In G7 countries, rising oil prices negatively affect economic growth but show a positive correlation with current account deficit, suggesting a unidirectional causality from oil prices to growth and current account deficit (Ma & Wang, 2024). Conversely, in Fragile Five countries, there is a positive correlation between oil prices and GDP, but a negative relationship with current account deficit, indicating a more nuanced interaction (Bayraktar et al., 2016).

Kaminsky et al. (1998) and Kaminsky and Reinhart (1999) stated in their study on the determinants of the current account deficit after the financial crises experienced in Mexico and Asian countries that the increase in oil prices increased the current account deficit and at the same time, the negative effect it created could be reflected on the entire economy through the current account channel. Schubert (2013) concluded in his study that an increase in oil prices initially worsened the current account deficit, and then, with gradually decreasing expenditures, the trade balance improved until the current account became surplus. Van Wijnbergen (1984) found that if investments were not taken into account, the effect of changes in oil prices on the current account deficit was negative. The surprising result was that a recession caused by changes in oil prices could lead to a current account surplus if investments could be cut sufficiently. The government's efforts to increase investments would bring the current account deficit problem back to the agenda.

Huntington (2015) examined the relationship between oil trade and current account deficit for a sample of 91 countries between 1984 and 2009 and concluded that the decrease in oil imports caused a decrease in the trade deficit. He evaluated oil importing and exporting countries separately in his study and concluded that being an oil exporter is an important variable that increases the current account surplus, but being an oil importer has no effect on the current account deficit. Zaouali (2007) concluded in his study on the Chinese economy that the increase in oil prices may have an insignificant effect on the current account deficit through foreign capital and investments. Sadorsky (1999) stated that the effect of changes in oil prices on the economic activities of countries is insignificant. Hooker (1996) also found no relationship between oil prices and macroeconomic variables in his study on the United States.

Bildirici et al. (2010) show that oil prices negatively affect budget deficits and GDP growth during depressions, while current account deficits positively affect GDP under both economic regimes, indicating complex interrelationships between these variables.

Chuku et al. (2011) analyzed the causality between oil prices and current account deficit for the Nigerian economy, based on the period 1970-2008. As a result of the test they conducted with the VAR method, they found that there was a significant causality relationship between oil price shocks and the current account balance.

Longe et al. (2018) oil price fluctuations significantly affect Nigeria's current account balances, highlighting the need for stability in oil prices to improve economic performance with long-term adverse effects on economic growth.

Musau & Veka (2020) show that net oil exports positively affect the trade balance, but net oil imports do not explain current account deficits, indicating limited direct impact on economic growth. According to Taghizadeh-Hesary et al. (2016), fluctuations in oil prices significantly affect economic growth, especially in developing economies, and potentially exacerbate current account deficits due to increased import costs and inflationary pressures.

Sruthi & Jitender (2023) show that a persistent current account deficit can exacerbate inflation and hinder economic growth, especially in emerging economies like India, which is affected by external factors such as oil prices.

When the studies conducted in the literature are evaluated in general, it is seen that the findings between the current account balance and oil prices vary from country to country and whether the country is an oil exporter or an oil importer is important. Inconclusive literature findings reveal the need for this study.

## 3. METHODOLOGY

In the empirical part of the study, the relationship between current account deficit, economic growth and oil prices of 5 countries (Argentina, Indonesia, India, Mexico and Turkey) facing the

**Table 1: Unit root test results**

| Variable | Method | Level | | | | 1st difference | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Intercept | | Intercept and Trend | | Intercept | | Intercept and Trend | |
| | | t statistic | P-value | t statistic | P-value | t statistic | P-value | t statistic | P-value |
| *lnca* | LLC | −1.52009 | 0.0648 | −1.52744 | 0.0701 | −7.73385 | 0.0000 | −9.74042 | 0.0000 |
| | IPS | −1.75018 | 0.0601 | −2.71123 | 0.0047 | −14.2880 | 0.0000 | −14.1677 | 0.0000 |
| *lngdp* | LLC | 2.82187 | 0.8802 | −0.95757 | 0.1873 | −5.48187 | 0.0000 | −5.41449 | 0.0000 |
| | IPS | 2.95812 | 1.0000 | −0.37579 | 0.7146 | −7.05515 | 0.0000 | −5.00775 | 0.0000 |
| *lnoil* | LLC | 0.45704 | 0.7630 | −0.37310 | 0.8712 | −8.54038 | 0.0000 | −7.42924 | 0.0000 |
| | IPS | 1.22292 | 0.8734 | −0.53303 | 0.3518 | −8.48448 | 0.0000 | −7.12542 | 0.0000 |

**Table 2: Pedroni panel cointegration test result**

| Tests | t-statistic | Probability | Weighted t-statistic | Probability | Decision |
|---|---|---|---|---|---|
| Panel v | 0.657946 | 0.2147 | −0.601897 | 0.6057 | $H_0$: Rejected |
| Panel rho | −10.42769 | 0.0000 | −10.30179 | 0.0000 | |
| Panel pp | −20.51367 | 0.0000 | −18.10479 | 0.0000 | |
| Panel adf | −12.32746 | 0.0000 | −10.73497 | 0.0000 | |
| Group rho | −10.07364 | 0.0000 | | | |
| Group pp | −23.46924 | 0.0000 | | | |
| Group adf | −13.64851 | 0.0000 | | | |

**Tablo 3: Kao panel cointegration test result**

| Tests | t-statistic | Probability | Decision |
|---|---|---|---|
| ADF | −9.693078 | 0.0000 | $H_0$: Rejected |
| Residual variance | 3.0420361 | | |

problem of current account deficit was investigated using panel data analysis method. Data between 1980-2023 were used in the analysis. GDP was used as an indicator of economic growth, current account balance as an indicator of current account deficit and Brent Oil price data were used for oil prices. GDP and current account balance data were accessed via Word Bank database, while Brent Oil prices were obtained from International Energy Agency. Logarithms of all three variables were taken and included in the analysis. The model determined in the study can be expressed as follows:

$$lnca_{i,t} = \beta_{0i,t} + \sum_{k=1}^{K} + \beta_1 lngdp_{1i,t} + \beta_2 oil_{2i,t} + u_{i,t}$$

In order to determine the stationarity in the study, unit root tests produced by Levin (2002), and Im, Pesaran and Shin (1997) were applied. Kao and Pedroni cointegration tests were applied to determine the long-term relationship between the variables. Then, Dumitrescu and Hurlin Panel Causality Analysis was used to examine the direction of the relationship between the variables. Kao, who developed a panel cointegration test based on error terms and to determine the long-term relationship, based the tests on which he based his tests, are Dickey Fuller (DF) and Augmented Dickey Fuller (ADF) tests (Kao, 1999). Kao cointegration, ADF long-term regression model is as follows:

$$\hat{e}_{it} = p\hat{e}_{it-1} + \sum_{j=1}^{p} \varphi_j \Delta\hat{e}_{it-j} + u_{itp}$$

The hypotheses of the test are as follows:
$H_0$: There is no cointegration between variables.
$H_1$: There is cointegration between variables.

Pedroni (1995; 1999) cointegration test includes 7 panel cointegration tests, 4 of which are panel (intragroup tests) and 3 of which are group tests (between groups). In the Pedroni (1995; 1999) test, the main factor in organizing the model to be examined is whether the average exists or not. The cointegration test including average and trend is as follows:

$$y_{i,t} = \alpha_i + \delta_i t + \beta_1 x_{1i,t} + \beta_2 x_{2i,t} + \cdots + \beta_{Mi} x_{Mi,t} + \varepsilon_{i,t}$$

$t = 1,\ldots,T$; $i = 1,\ldots,N$; $m = 1,\ldots,M$

Pedroni (1995; 1999) tested the panel cointegration hypotheses as follows:
$H_0$: There is no cointegration ($H_0 = \rho_i = 1$)
$H_1$: There is cointegration ($H_0 = \rho_i < 1$)

Dumitrescu-Hurlin Panel Causality Test (2012) was developed to test the causality between variables. This test can be used in cases where T, which represents the time dimension, is larger or smaller than N, which is the cross-sectional dimension. Model for Dumitrescu-Hurlin Panel Causality Test (2012) (Dumitrescu and Hurlin, 2012):

$$Y_{i,t} = \alpha_i + \sum_{k=1}^{K} + \gamma_i^{(k)} Y_{i,t-k} + \sum_{k=1}^{K} + \beta_i^{(k)} X_{i,t-k} + \varepsilon_{i,t}$$

$k$: lag length, γ autoregressive parameter and $\beta$ slope coefficient.

The hypotheses regarding the test are;
$H_0$: There is no causality in all units of the panel data set.
$H_1$: There is a causal relationship in at least one of the units of the panel data set.

## 4. ANALYSIS OF FINDINGS

### 4.1. Unit Root Test Results

The following hypotheses were created to determine stationarity for the variables:

**Table 4: Dumitrescu and Hurlin panel causality test results**

| Hypotheses | k=1 | k=2 | k=3 | Decision |
|---|---|---|---|---|
| *lngdp→lnca* | 7.20136 | 6.71063 | 5.04313 | $H_0$: Rejected |
| | (0.0000)*** | (0.0000)*** | (0.0195)** | |
| *lnca→lngdp* | 0.11472 | 0.80176 | 1.07465 | $H_0$: Accepted |
| | (0.1364) | (0.1527) | (0.1228) | |
| *lnoil→lnca* | 5.20147 | 4.58731 | 5.40769 | $H_0$: Rejected |
| | (0.0000)*** | (0.0085)*** | (0.0622)* | |
| *lnca→lnoil* | 0.70364 | 1.20756 | 2.43147 | $H_0$: Accepted |
| | (0.5958) | (0.3341) | (0.5232) | |
| *lnoil→lngdp* | 1.30756 | 1.50789 | 2.68731 | $H_0$: Accepted |
| | (0.6569) | (0.05073) | (0.6535) | |
| *lngdp→lnoil* | 2.56759 | 5.31456 | 5.59782 | $H_0$: Rejected |
| | (0.0187)** | (0.0006)*** | (0.0435)** | |

k: lag length, values in parentheses show probability values. ***,**, * show significance at 1%, 5% and 10% levels, respectively

**Table 5: Panel regression analysis results**

| Variable | Coefficient | Std. Error | t-statistic | Probability |
|---|---|---|---|---|
| *lngdp* | 0.098792 | 0.076960 | 0.104756 | 0.7365 |
| *lnoil* | 1.087633 | 0.107634 | 9.008914 | 0.0000 |

$H_0$: There is a general root in the series ($H_0 = \rho_i = \rho = 1$).
$H_1$: There is no general unit root in the series ($H_0 = \rho_i = \rho < 1$).

Table 1 examines the stationarity in variables. In determining statistical significance, variables should not contain a unit root. If there is a trend in the time series of variables, there is a possibility that the relationship is fictitious. Therefore, stationarity is an expression of the reality of the relationship.

The most commonly used panel unit root tests, Levin (2002) and Im, Pesaran and Shin (IPS) (1997) unit root tests, indicate that the variables are stationary, as shown in Table 1. All three variables were made stationary by taking their first-degree differences, and the null hypothesis ($H_0$) that the series have a unit root was rejected.

Since all variables are stationary in first-degree difference, the long-term cointegration relationship between the variables was tested with Pedroni and Kao cointegration tests. The Pedroni Cointegration Test consists of seven test statistics, four of which are intra-sectional and three of which are inter-sectional. According to the Pedroni Cointegration Test results in Table 2, since the probability value of six out of seven test statistics is <0.05, the $H_0$ hypothesis, which states that there is no cointegration relationship, is rejected and it is determined that there is a cointegrated relationship between the variables. This situation is an indication that the variables in question have a cointegrated relationship in the long term.

At the same time, according to the Kao Cointegration Test result (Table 3), it was determined that the probability value was less than 0.05 and the $H_0$ hypothesis, which stated that there was no cointegration relationship, was rejected and it was found that there was a cointegrated relationship between the variables. This situation indicates that there is a long-term relationship between the variables in question.

After determining the cointegration relationship, panel causality test was conducted and the results are shown in Table 4. Within the framework of the findings in Table 4, a one-way causality relationship was determined from the economic growth expressed as *lngdp* to the current deficit expressed as *lnca* and from the oil prices expressed as *lnoil* to the current deficit expressed as *lnca*. The one-way causality relationships found indicate that an increase in economic growth leads to a significant change in the current deficit and oil prices, while an increase in oil prices leads to a significant change in the current deficit.

### 4.2. Panel Regression Analysis Results

The panel regression analysis required to measure the intensity of the effects of the independent variables oil prices and GDP representing growth on the dependent variable current account deficit is given. The regression equation created based on the results in Table 5 is as follows:

*lnca* = 12.689 + 0.098**lngdp* + 1.087**lnoil*

(18.607) (0.104) (9.008)

[0.698] [0.076] [0.107]

Table 5 shows the panel regression analysis results showing the relationship between *lnca* and *lngdp* and *lnoil*. Within the framework of the information obtained as a result of the panel regression analysis, a statistically significant relationship (P<0.05) was found between the *lnca* variable and the *lnoil* variable, while no statistically significant relationship (P>0.05) was found between the *lnca* variable and the *lngdp* variable. In other words, as oil prices increase, the current account deficit variable increases.

## 5. CONCLUSION

In the global production process, changes in oil prices, referred to as black gold, affect world economies. While increases in oil prices increase the national income of oil exporting countries, oil importing countries experience contractions in the growth process. This situation will both reduce the production process in countries and lead to decreases in resources to be transferred to other sectors. In this respect, oil prices affect the economy in general. In this study, the relationship between current account deficit, economic growth and oil prices for 5 countries (Argentina, Indonesia, India, Mexico and Turkey) between 1980-2023 was

examined using panel data analysis method. First, unit root tests were applied to the variables and stationarity was determined. Since the current account deficit, economic growth and oil price variables were stationary in their first degree differences, Pedroni and Kao Panel Cointegration Tests were performed and it was determined that the variables were cointegrated. After the cointegration test, Dumitrescu and Hurlin Panel Causality Test was performed and one-way causality from economic growth to current account deficit and oil prices and from oil prices to current account deficit was determined.

In order for countries not to be affected by fluctuating oil prices in response to their increasing energy needs, turning to natural energy sources such as solar and wind, which can replace the oil industry, and accelerating technological studies to detect, process and use existing underground resources have an important effect. In this context, in order to both increase economic growth and reduce the current deficit, governments should provide incentive grants and tax exemptions to companies that can produce alternative energy in countries.

## REFERENCES


Abubakirova, A., Syzdykova, A., Dosmakhanbet, A., Kudabayeva, L., Abdulina, G. (2021), Relationship between oil prices and stock prices in BRICS-T countries: Symmetric and asymmetric causality analysis. International Journal of Energy Economics and Policy, 11(3), 140-148.

Altayligil, Y.B., Çetrez, M. (2020), Macroeconomic, institutional and financial determinants of current account balances: A panel data assessment. Journal of Economic Structures, 9(1), 49.

Asif, M., Muneer, T. (2007), Energy supply, its demand and security issues for developed and emerging economies. Renewable and Sustainable Energy Reviews, 11(7), 1388-1413.

Azretbergenova, G.Ž., Syzdykov, B., Niyazov, T., Gulzhan, T., Yskak, N. (2021), The relationship between renewable energy production and employment in European union countries: Panel data analysis. International Journal of Energy Economics and Policy, 11(3), 20-26.

Azretbergenova, G.Ž., Syzdykova, A. (2020), The dependence of the Kazakhstan economy on the oil sector and the importance of export diversification. International Journal of Energy Economics and Policy, 10(6), 157-163.

Bayraktar, Y., Taha, E.G.R.I., Yildiz, F. (2016), A causal relationship between oil prices current account deficit, and economic growth: An empirical analysis from fragile five countries. Ecoforum Journal, 5(3), 29-44.

Bildirici, M., Alp, E., Bakirtas, T. (2010), Oil prices and current account deficits: Analysis of causality in the USA. Applied Econometrics and International Development, 10(1), 137-150.

Burbidge, J., Harrison, A. (1984), Testing for the effect of oil price rise using vector autoregressive. International Economic Review, 24, 459-484.

Calderon, C., Chong, A., Loayza, N. (2000), Determinants of Current Account Deficits in Developing Countries. Policy Research Working Paper No. 2398. Vol. 51. Washington, DC: World Bank.

Cherp, A., Adenikinju, A., Goldthau, A., Hernandez, F., Hughes, L., Jansen, J., Jewell, J., Olshanskaya, M., de Oliveira, R.S., Sovacool, B., Vakulenko, S. (2012), Energy and security. In: Global Energy Assessment: Toward A Sustainable Future. United Kingdom: Cambridge University Press. p325-383.

Chuku, C. A., Akpan, U. F., Sam, N. R., & Effiong, E. L. (2011), Oil price shocks and the dynamics of current account balances in Nigeria. OPEC Energy Review, 35(2), 119-139.

Dias, F.C. (2013), Oil Price Shocks and Their Effect on Economic Activity and Price: An Application for Portugal. Economic Bulletin and Financial Stability Report. Portugal: Banco de Portugal.

Dumitrescu, E.I., Hurlin, C. (2012), Testing for Granger non-causality in heterogeneous panels. Economic Modelling, 29(4), 1450-1460.

Gisser, M., Goodwin, T.H. (1986), Oil and the macroeconomy: Tests of some popular notations. Journal of Money, Credit, and Banking, 18(1), 96-103.

Hamilton, J.D. (2011), Nonlinearities and the macroeconomic effects of oil prices. Macroeconomic dynamics, 15(S3), 364-378.

Hooker, M.A. (1996), What happened to the oil price-macroeconomy relationship? Journal of monetary Economics, 38(2), 195-213.

Huntington, H.G. (2015), Crude oil trade and current account deficits. Energy Economics, 50, 70-79.

Jones, D.W., Leiby, P.N., Paik, I.K. (2004), Oil price shocks and the macroeconomy: What has been learned since 1996. The Energy Journal, 25(2), 1-32.

Kaminsky, G.L., Linzondo, S., Reinhart, C.M. (1998), Leading Indicators of Currency Crises. International Monetary Fund Staff Papers No. 45. International Monetary Fund. p1-48.

Kaminsky, G.L., Reinhart, C.M. (1999), The twin crises: The causes of banking and balance-of-payments problems. American Economic Review, 89(3), 473-500.

Kao, C. (1999), Spurious regression and residual-based tests for cointegration in panel data. Journal of Econometrics, 90(1), 1-44.

Lee, K., Ni, S., Ratti, R.A. (1995), Oil shocks and the macroeconomy: The role of price variability. Energy Journal, 16(4), 39-56.

Levin, A., Lin, C.F., Chu, C.S.J. (2002), Unit root tests in panel data: Asymptotic and finite-sample properties. Journal of Econometrics, 108(1), 1-24.

Longe, A.E., Adelokun, O.O., Omitogun, O. (2018), The current account and oil price fluctuations nexus in Nigeria. Journal of Competitiveness, 10(2), 118-131.

Ma, B., Wang, X. (2024), Unveiling asymmetric dynamics: Exploring the impact of oil price on economic growth and current account deficit: Evidence from G-7 countries. Resources Policy, 89, 104481.

Musau, A., Veka, S. (2020), Crude oil trade and current account deficits: Replication and extension. Empirical Economics, 58(2), 875-897.

Narayan, P.K., Smyth, R. (2008), Energy consumption and real GDP in G7 countries: New evidence from panel cointegration with structural breaks. Energy Economics, 30(5), 2331-2341.

Özlale, Ü., Pekkurnaz, D. (2010), Oil prices and current account: A structural analysis for the Turkish economy. Energy Policy, 38(8), 4489-4496.

Pedroni, P. (1995), Panel Cointegration: Asymptotic and Finite Sample Properties of Pooled Time Series Tests with an Application to the PPP Hypothesis, Indiana University. p1-29. Available from: https://web.williams.edu/economics/pedroni/pc-revc.pdf

Pedroni, P. (1999), Critical values for cointegration tests in heterogeneous panels with multiple regressors. Oxford Bulletin of Economics and Statistics, 61(S1), 653-670.

Pesaran, M.H., Shin, Y. (1995), Testing for Unit Roots in Heterogeneous Panels. United Kingdom: University of Cambridge.

Sadorsky, P. (1999), Oil price shocks and stock market activity. Energy Economics, 21(5), 449-469.

Schubert, S.F. (2014), Dynamic effects of oil price shocks and their impact on the current account. Macroeconomic Dynamics, 18(2), 316-337.

Sorrell, S. (2010), Energy, economic growth and environmental sustainability: Five propositions. Sustainability, 2(6), 1784-1809.

Sruthi, V.A., Jitender, B. (2023), Nexus between current account balance, price stability, and economic growth in India: An empirical analysis.

International Journal for Multidisciplinary Research, 5(2), 1-11.
Syzdykova, A., Abubakirova, A., Kudabayeva, L., Zhantayeva, A., Omarova, A. (2022), Asymmetric causality relationship between oil prices and inflation in BRIC countries. International Journal of Energy Economics and Policy, 12(3), 184-191.
Syzdykova, A., Azretbergenova, G.Ž (2024), Asymmetric effect of oil prices on Kazakhstan's stock market index and exchange rate. International Journal of Energy Economics and Policy, 14(6), 15-23.
Syzdykova, A., Azretbergenova, G.Ž., Massadikov, K., Kalymbetova, A., Sultanov, D. (2020), Analysis of the relationship between energy consumption and economic growth in the commonwealth of independent states. International Journal of Energy Economics and Policy, 10(4), 318-324.
Taghizadeh-Hesary, F., Yoshino, N., Assari-Arani, A. (2016), Economic impacts of oil price fluctuations in developed and developing economies. In: Monetary Policy and the Oil Market. Berlin, Germany: Springer. p75-91.
Van Wijnbergen, S. (1984), Oil price shocks and the current account: An analysis of short run adjustment measures. Review of World Economics, 120(3), 460-480.
Yalta, A.Y., Yalta, A.T. (2017), Dependency on imported oil and its effects on current account. Energy Sources, Part B: Economics, Planning, and Policy, 12(10), 859-867.
Yessymkhanova, Z., Azretbergenova, G.Ž., Mukhiddinova, S. (2024a), Determinants of energy consumption in MIST countries. International Journal of Energy Economics and Policy, 14(4), 317-323.
Yessymkhanova, Z., Azretbergenova, G.Ž., Saparova, A. (2024b), Testing the environmental Kuznets curve hypothesis in BRIC countries. International Journal of Energy Economics and Policy, 14(1), 371-376.
Zaouali, S. (2007), Impact of higher oil prices on the Chinese economy. OPEC Review, 31(3), 191-214.