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The Role of Economic Freedom in the Relationship between Foreign Direct Investment and Economic Growth: Evidence from Former Socialist Countries

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Abstract This study investigates the role of economic freedom in attracting foreign direct investment (FDI) and its impact on economic growth in 15 former socialist countries from 2000 to 2021 through the Generalized Method of Moments estimation method. Our findings suggest that higher economic freedom helps countries attract additional foreign investment. Furthermore, we found that a one-unit increase in the economic freedom index increases the real gross domestic product per capita by 0.019%. The findings also reveal that a 1% increase in FDI leads to a 0.585% surge in real income per capita, whereas trade openness surges income by 1.24%. These results reveal that FDI has a positive impact on economic growth, suggesting that FDI is an important factor driving economic development in former socialist countries. This study also provides policy recommendations based on the findings, highlighting the importance of promoting free and healthy competition, transparency, accountability, and investment in education and infrastructure.

Keywords: economic freedom, foreign direct investment, economic growth, former socialist countries, GMM, panel data, economic growth

JEL Classifications: E22, F15, F21, N15

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I. Introduction

The literature widely discussed the impact of foreign direct investment (FDI) on economic growth. However, studies on attracting FDI to developing countries remain limited. Since the early 1980s, many countries (including developing ones) have lifted restrictions on FDI inflows. According to the UN Conference on Trade and Development (UNCTAD), 59 countries adopted 87 policies affecting foreign investment in 2021. Moreover, the development of national investment policies aimed at stimulating and liberalizing investment has not been completed.

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Meanwhile, the overall share of regulatory or restrictive investment policies increased from 25% to 32% for 2019-2022 (UNCTAD 2021). FDI inflows increased by 77% from \$929 billion in 2020 to approximately \$1.65 trillion in 2021.¹)

However, direct investment flow is unevenly distributed across countries as countries with a liberalized investment environment can attract more FDI than others (Figure 1). Countries can benefit from the positive impact of FDI on economic growth by strengthening efforts to attract higher FDI inflows; familiarizing local firms with new processes, management skills, and expertise; training personnel to new technologies and investments; understanding processes related to the development of international production networks; and increasing access to markets (Zghidi et al. 2016). In addition, the theoretical literature suggested that FDI inflows can bring significant advantages to the host country. However, empirical studies examining the relationship between FDI and growth produced inconsistent findings (Azman-Saini et al. 2010). Recent literature found the absorptive capacity of the host country as a crucial factor in explaining the weak or inconsistent relationship between FDI and growth. This finding implies that in countries with low or poor absorptive capacity, the impact of FDI on growth may not be significant. Therefore, host countries must possess certain qualities that enable them to benefit from FDI inflows.





This study emphasizes the importance of institutions in recent growth processes to better understand the nature of the relationship between FDI and economic growth. In particular, the study highlights the importance of economic freedom (EF, hereafter) in mediating the spillover

Global foreign direct investment rebounded strongly in 2021, but the recovery is highly uneven. UNCNAD https://un ctad.org/news/global-foreign-direct-investment-rebounded-strongly-2021-recovery-highly-uneven

effects of FDI on economic growth in transition economies. Given this objective, the contributions of this study are threefold. First, this research focuses on former socialist countries, which have undergone significant economic transformations in recent decades. There is existing literature on the relationship among EF, FDI, and economic growth in many developing countries. However, this study contributes by examining these relationships in the context of former socialist countries. Second, this study employs the Generalized Method of Moments (GMM) estimation method, which allows for a more accurate estimation of the relationships among EF, FDI, and economic growth. This method is not commonly used in the existing literature on this topic. The use of GMM in this study provides a novel approach to examining such relationships in the context of transition economies. Finally, we provide new evidence on the impact of FDI on economic growth, considering the mediating effects of EF in former socialist countries.

This paper is further structured as follows. Section 2 is a literature review, and Section 3 describes the dataset and the methodology. Then, Section 4 provides the empirical results, and Section 5 concludes the study with policy implications.

II. Literature Review

Many studies showed that the index of EF has a substantial impact on cross-country differences in per capita income and economic growth (see, e.g., (W. N. w. Azman-Saini, A. Z. Baharumshah, & S. H. Law, 2010; J. De Haan, S. Lundström, & J.-E. Sturm, 2006; J. De Haan, S. Lundström, & J. E. Sturm, 2006). In this context, Barro (2000) showed that property rights protection stimulates investment and improves economic growth performance by increasing investment efficiency. However, Demetriades and Hook Law (2006) showed that increased financing could not ensure long-term economic growth in low-income countries without free institutions. Similarly, Rodrik, Subramanian, and Trebbi (2004) argued that liberal-democratic governance is an explanatory factor for cross-country differences in income, suggesting that institutions are more important than openness and geography in determining income levels.

According to economists, the EF index is one of the pillars of a country's institutional structure, along with political freedom and civil liberties. According to the Heritage Foundation (2022), the EF index is defined as government coercion or restriction of the production, distribution, or consumption of goods and services beyond what is necessary to protect and preserve civil liberties. Economists have long emphasized free choice and supply of resources, business competition, free trade with other countries, and protection of property rights as essential components of economic growth. However, several empirical studies showed the importance of the EF index in explaining the relationship among countries in economic growth. In an earlier study, Bengoa and Sanchez-Robles (2003) used panel data from 18 Latin American countries to examine the

relationship among the EF index, FDI, and economic growth. Their results showed that the EF index has a positive contribution to the flow of direct investment. They also found that economic growth is positively related to FDI. They suggested that human capital, economic stability, and liberalized markets may contribute to attracting long-term foreign capital flows.

On the impact of the EF index on FDI in North African countries, Zghidi, Mohamed Sghaier, and Abida (2016) identified the effect of the IE index on FDI. They suggested that EF has a positive impact on inward FDI. Azam, Nawaz, and Riaz (2019) found that improving the quality of institutions leads to faster economic growth. Over the past decade, many studies found evidence of the importance of institutions in influencing FDI flows in African countries. Later, Lu, Kasimov, Karimov, and Abdullaev (2020) examined the extent of natural resources, EF, and sea access in attracting FDI inflows to the Commonwealth of Independent States (CIS), using panel data from 1998 to 2017. The estimates confirm that such factors are robust and decisive, affecting the FDI location decisions of foreign investors in CIS. More precisely, the results suggest that increased revealed comparative advantage in petroleum, higher EF characterized by the increased government size and open markets, and territorial coastlines have a statistically significant and positive effect on FDI inflows to transition economies.

Studying the role of financial development, openness, and institutions, Baltagi and Liu (2020) used dynamic data methods and multiple datasets to examine the cross-country and temporal relationship between openness and economic institutions in financial development. Despite considering various aspects of financial development, their findings supported Rajan and Zingale's (2003) hypothesis that trade and capital account openness are necessary to promote financial development in the current environment. Habibi and Hidayat (2017) reported that FDI is essential for a country's economic development as it increases production, employment, and income levels. The authors also examined the relationship between free trade and the tax burden on FDI in Association of Southeast Asian Nations (ASEAN) countries using EF by testing the hypothesis that specific location factors can influence the state of foreign investment between 2004 and 2015. The study results show that freedom of trade and tax burden have statistically significant and positive effects on FDI in ASEAN countries. Therefore, they hypothesized that the government should reduce trade barriers and tax burdens to attract FDI inflows.

Recently, Kasimov and Saydaliev (2022) studied the determinants of FDI, and came to different conclusions about the relationship between FDI and economic growth. The authors explored the determinants of FDI and examined the impact of FDI on economic growth in Central Asian developing countries during 2000-2020. The estimates for economic growth suggested the positive and significant relationships among FDI, natural resources, human capital, and infrastructure. On the contrary, the effect of trade openness was surprisingly negative. The authors explained this outcome through the absence of a straightforward positive relationship between trade openness and growth, particularly in developing countries.

III. Data and Methodology

This study examines a sample of former socialist countries: Armenia, Azerbaijan, Belarus, Estonia, Georgia, Latvia, Lithuania, Moldova, Kyrgyzstan, Kazakhstan, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan. The countries for this study were selected primarily based on the availability of reliable data for the sample period. The panel covers the years 2000-2021. The dependent variable is economic growth, measured as the real gross domestic product (GDP) per capita growth rate in the 2005 prices in US dollars. In addition to the institutional variable (EF index), the primary variable of interest (FDI) and other control variables were also obtained from the World Development Indicators (WDI) database (World Bank 2022). The EF index was derived from information from the Heritage Foundation. Table 1 and Table 2 provides detailed information on variables and data sources.

Table 1. Definition of Variables and Data Sources

Variable	Content	Source
Initial GDP per capital	Initial GDP per capita (current USD, log)	World Bank (WDI)
Foreign direct investment	Foreign direct investment (current USD, log)	World Bank (WDI)
Economic freedom index	Index of economic freedom (rating indicator)	Heritage Foundation
Population growth	Population growth (annual, %)	World Bank (WDI)
Primary school enrollment	Primary School Enrollment (%)	World Bank (WDI)
Investment (%GDP)	Investments (% GDP)	World Bank (WDI)
Trade openness	Trade openness (% GDP)	World Bank (WDI)
The continent Europe Y: 1 No: 0	European continent and the location Yes: 1 No: 0	Dummy Yes: 1 No: 0
Country (dummy)	Country (dummy)	Cluster-ID

(Source) Authors' work.

Variable	Obs	Mean	Std. Dev.	Min	Max
Initial GDP per capita (Log)	328	8.199	1.169	4.93	10.214
Foreign direct investment (Log)	308	20.68	1.633	15.355	25.038
Economic freedom index	330	59.032	10.477	37.6	79.1
Population growth	330	0.451	1.062	-2.258	2.823
Primary school enrollment	220	92.184	4.295	81.052	99.583
Investment (%GDP)	314	25.115	7.565	6.295	57.710
Trade openness	323	96.248	31.483	29.192	175.351
The continent Europe Y: 1 No: 0	330	0.533	0.5	0	1
Country (dummy)	330	8	4.327	1	15

(Source) Authors' work.

The sign of the coefficients associated with direct investment is expected to be positive, as former socialist countries may experience spillover effects.

Our baseline model includes explanatory variables common to most growth regressions found in the literature:

- Initial GDP per capita (log): log real GDP per capita with a 1-year lag. We expect a positive coefficient, indicating an unconditional convergence among countries.
- Investment is the gross fixed capital formation ratio to GDP (% of GDP). A positive coefficient is expected because a higher share of investment is positively related to economic growth (Mankiw, Romer, & Weil, 1992).
- Primary School Enrollment. Higher school enrollment leads to higher human capital, which should be positively related to economic growth (Gemmell, 1996).
- Population growth. High population growth leads to lower per capita GDP growth. Thus, a negative coefficient is expected (Aisen & Veiga, 2013).
- Trade openness is measured as the share of imports and exports in GDP. Considering that trade benefits economic growth, a positive coefficient is expected (Chang & Mendy, 2012).

Table 3 presents the mean statistic of each variable by country. Latvia and Lithuania have the highest, whereas Tajikistan and Kyrgyzstan have the lowest per capita GDP. Russia and Kazakhstan dominate the other former socialist countries in total FDI inflows despite ranking below (52.9) and above (60.7) the EF average (58.3). Lithuania leads the list regarding EF,

Countries	Growth	FDI	Economic freedom	Population growth	Primary school	Investment	Trade openness
Armenia	7.829	19.339	68.777	-0.181	89.806	26.904	72.891
Azerbaijan	8.068	21.602	58.577	1.09	87.841	26.922	87.184
Belarus	8.385	20.547	48.736	-0.322	92.77	28.961	129.789
Estonia	9.54	21.124	76.355	-0.204	94.858	23.757	142.701
Georgia	7.888	20.447	68.168	-0.519	96.682	23.985	89.144
Latvia	9.294	20.392	68.182	-1.084	96.388	25.120	107.904
Lithuania	9.322	20.858	71.695	-1.053	96.491	25.109	127.895
Moldova	7.562	19.175	57.609	-0.589	88.658	20.974	108.759
Kyrgyzstan	6.674	18.957	59.709	1.474	88.256	23.572	110.545
Kazakhstan	8.724	22.454	60.727	1.097	88.709	28.476	77.123
Russia	8.941	23.65	52.914	-0.118	94.237	20.327	52.31
Tajikistan	6.334	18.741	52.205	2.117	97.153	22.447	101.319
Turkmenistan	8.171	20.875	44.609	1.43	87.265	33.294	71.436
Ukraine	9.23	21.766	50.082	-0.571	90.185	18.745	97.475
Uzbekistan	7.087	20.093	47.132	1.645	92.055	25.049	57.57

Table 3. Country-level Descriptive Statistics

whereas Belarus, Uzbekistan, and Turkmenistan rank the lowest, with an EF average of 48.7, 47.1, and 44.6, respectively. Table 3 shows the mean statistics for the control variables.

A. Econometric model

We examine whether EF plays a significant role in the impact of FDI on economic growth in former socialist countries. Hence, a specification similar to W. Azman-Saini, A. Z. Baharumshah, and S. H. Law (2010) and Aisen and Veiga (2013) is used, and the following model is considered:

$$y_{i,t} = \alpha y_{i,t-1} + \beta_1 F D I_{i,t} + \beta_2 E F_{i,t} + \gamma X_{i,t} + \mu_t + \eta_i + \epsilon_{i,t}.$$
 (1)

Equation (1) can also be written as a variable related to the growth rate, as follows:

$$Growth_{i,t} = y_{i,t} - y_{i,t-1} = (\alpha - 1)y_{i,t} + \beta_1 FDI_{i,t} + \beta_2 EF_{i,t} + \gamma X_{i,t} + \mu_t + \eta_i + \epsilon_{i,t}.$$
 (2)

Here, subscript *t* represents the time period, *i* stands for the country, and $y_{i,t}$ is the logarithm of real GDP per capita. $EF_{i,t}$ signifies the degree of EF, and $\gamma X_{i,t}$ is the vector of control variables as described in the previous section. μ_t is the time-specific effect, η_i indicates the unobserved country-specific fixed effect, and $e_{i,t}$ is the error term.

Equation (2) is the basis for our assumption. (α - 1) is the approximation coefficient. Although FDI can influence economic activity in many ways, we directly examine the relationship between FDI and economic growth through EF in the second set of regressions. The hypothesis we want to test is whether or not a country's level of EF affects the impact of FDI on economic growth. Hence, we add an interaction term constructed as the product of FDI and EF (i.e., FDI* EF) to Eq. (2). If the coefficient on the interaction term is positive and significant, then the marginal effect of FDI on economic growth depends on the level of EF.

The regression can be rewritten as follows:

$$Growth_{i,t} = y_{i,t} - y_{i,t-1} = (\alpha - 1)y_{i,t} + \beta_1 FDI_{i,t} + \beta_2 EF_{i,t} + \beta_3 FDI^* EF + \gamma X_{i,t} + \mu_t + \eta_i + \epsilon_{i,t}.$$
(3)

This study uses the panel GMM estimator developed by Arellano and Bond (1991), Arellano and Bover (1995), and Blundell and Bond (1998). This measure was chosen for two reasons. The first one is to control for country effects, which cannot be achieved with country-specific dummy variables because of the dynamic structure of the regression equation. The second reason

is to control for some explanatory variables simultaneously as they may be endogenous to growth or other dependent variables. The consistency of the system GMM model depends on the correctness of the assumption that there is no serial correlation of the error terms and the validity of the factors. Hence, the null hypothesis test for first-order serial correlation should be rejected under the assumption that the error has no serial correlation. Nevertheless, the null hypothesis test for second-order serial correlation should not be rejected.

We use two diagnostic tests proposed by Arellano and Bover (1995) and Blundell and Bond (1998): the Sargan test for over-identification restrictions and the second-order serial correlation of difference residuals. If the null hypothesis of both tests is not rejected, then the model is sufficiently defined, and the factors are valid. Table 4 shows the results of this estimation procedure.

IV. Results and Discussions

Column (1) of Table 4 reports on the preliminary analysis of the impact of FDI and the EF index on economic growth. Column (2) reports estimates of coefficients from the main specification using the interaction term constructed as the product of FDI and EF, whereas Column (3) provides the regression results without primary school enrollment to achieve higher degrees of freedom.

VARIABLES	(1)	(2)	(3)
	Model 1	Model 2	Model 3
Initial GDP per capita	0.884***	0.853***	0.875***
	(0.0152)	(0.0189)	(0.1395)
Foreign direct investment	0.0585***	0.0308***	0.0606***
	(0.00925)	(0.0033)	(0.0115)
Economic freedom	0.119**	0.116**	0.142***
	(0.0547)	(0.038)	(0.0611)
Population growth	-0.0499***	-0.0546***	-0.0674**
	(0.0167)	(0.0165)	(0.050)
Primary school enrollment	0.00786***	0.00850***	
	(0.00234)	(0.00257)	-
Investment (% GDP)	-0.00448**	-0.00643***	-0.0472***
	(0.0019)	(0.00201)	(0.081057)
Trade openness (% of GDP)	0.00124***	0.00112***	0.0126***
· · · /	(0.000378)	(0.000384)	(0.00193)
Foreign direct investment*Economic freedom		0.00127***	0.00504**
	-	(0.000458)	(.00176)

Table 4. GMM Estimations

Table 4. Continued

VARIABLES	(1) Model 1	(2) Model 2	(3) Model 3
The Continent Europe Y: 1 No: 0	-0.0187 (0.0393)	-0.0201 (0.0385)	-0.4834 (0.20359)
Constant	5.362** (2.247)	5.559** (2.248)	8.265*** (1.756)
Observations	210	210	300
Number of countries	15	15	15
Country effect	Yes	Yes	Yes
AR (2) test <i>p-value</i>	0.0379	0.0078	0.0776
Sargan test <i>p-value</i>	0.33	0.246	0.351

Note. Dependent variable is the growth rate of real GDP per capita: AR (2)-test for serial correlation of second-order residuals. J-test is a statistical test used to test Hansen's redundant restrictions. t-Statistics are given in parentheses,

and ***, **, and * indicate statistical significance at the 10%, 5%, and 1% levels, respectively. (Source) Authors' calculations.

The regression results in Column (1) show that the estimated coefficient on FDI is statistically significant at the 1% level, indicating that FDI leads to economic growth. This result is consistent with some studies on FDI, such as Gui-Diby (2014). Meanwhile, the coefficient of the EF index is positive and statistically significant. This result indicates that the higher the EF, the stronger the economic growth as it makes investment more efficient. This finding supports the conclusion that EF is vital for economic growth. Furthermore, control variables, primary school enrollment, and trade openness are positive and significant, whereas population growth and domestic investment adversely affect economic growth in former socialist economies. These estimates passed specification tests. The null hypothesis of second-order serial correlation cannot be rejected at the 5% level. Thus, the regression is not related to simultaneous homogeneity because the conditions cannot be rejected. Hansen's test shows that the equation is well defined, and the instruments used are valid.

The interaction term FDI*EF is used to determine the combined effect of FDI and the EF index in Column (2). The coefficient of the interaction term is positive and significant, indicating that a 1% increase in EF augments the effect of FDI on economic growth by 0.127%. Similarly, a 1% additional increase in FDI strengthens the impact of EF on economic growth by 0.127%. Notably, these results confirm that the higher the country's EF, the higher the benefit of foreign capital inflows. The main variables retain the same positive effect on economic growth with a slight decrease in the magnitude of the coefficients. Hence, the coefficients of the main variables considered in the equation have the correct sign and are significant at the 5% level or higher.

Column (3) shows the regression estimates without primary school enrollment, increasing the number of observations from 210 to 300. This case does not change the main results of the regression estimates. However, the coefficients slightly vary in magnitude but remain the

same sign and degrees of significance. These results highlight the importance of EF and FDI in promoting economic growth. The interaction term effects suggest that countries with higher levels of EF and attracting more FDI tend to experience higher economic growth rates. The reason could be that EF provides a conducive environment for businesses to operate, allowing them to take advantage of the opportunities that arise from FDI. For example, countries with low corruption levels, strong property rights protections, and minimal regulatory burdens tend to attract more foreign investment (Lu et al. 2020), leading to higher economic growth. Similarly, foreign investors prefer countries with a strict rule of law, developed financial systems, and stable political environments, all closely related to EF (Azman-Saini et al. 2010).

Table 5 presents regression results with heteroskedasticity-robust standard errors and clustered standard errors at the country level. The results in Column 1 show that the coefficient for

VARIABLES	Model 1	Model 2
Initial GDP per capita	0.853***	0.875***
Foreign direct investment	0.0308*** (0.0031)	0.0606*** (0.0108)
Economic freedom	0.116** (0.0364)	0.142*** (0.0598)
Trade openness (% of GDP)	0.00112*** (0.000341)	0.0126*** (0.00203)
Primary school enrollment	0.0085*** (0.00241)	
Population growth	-0.299*** (0.0178)	-0.0972** (0.0416)
Foreign direct investment*Economic freedom	0.00127*** (0.000412)	0.0054*** (0.00153)
Investment (% GDP)	-0.00643*** (0.00199)	-0.00872*** (0.0021)
The Continent Europe Y: 1 No: 0	-0.0201 (0.0367)	-0.4834 (0.211)
Constant	5.559** (2.151)	8.265*** (1.883)
Observations	210	300
Number of countries	15	15
Country effects	Yes	Yes
AR (2) test <i>p</i> -value	0.906	0.213
Sargan test p-value	0.341	0.35

Table 5. GMM Estimations with Robust Standard Errors

Note. Dependent variable is the growth rate of real GDP per capita. Heteroskedasticity-robust standard errors are in parentheses: AR (2)—test for serial correlation of second-order residuals. J-test is a statistical test used to test Hansen's redundant restrictions. t-Statistics are given in parentheses, and ***, **, and * indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

(Source) Authors' calculations.

FDI is 0.0308, implying that a 1% increase in FDI tends to surge economic growth by 0.03%, holding all other variables constant. The coefficient for EF is 0.116, indicating that a one-unit increase in EF is associated with a 0.116% increase in economic growth. Similarly, the control variables retain the same coefficients and degrees of significance.

V. Conclusion and Policy Recommendations

This study examined the impact of FDI and EF on economic growth in former socialist countries from 2000 to 2021 using the GMM estimation method. The study findings suggest that FDI and EF significantly affect economic growth. This result shows that foreign investors seek a free and healthy competitive market as an excellent democratic institution can guarantee property rights protection, lower operating costs, and higher productivity. Specifically, our results indicate that a one-unit increase in EF surges growth by 0.19%, whereas a 1% increase in FDI leads to a 0.03% increase in economic growth. As per the control variables, population growth and domestic investment tend to decrease real per capita GDP, whereas primary school enrollment and trade openness tend to increase economic growth in 15 former socialist countries.

Based on these findings, policymakers in former socialist countries could consider the following policy recommendations. First, these countries should prioritize efforts to increase EF in their respective countries by reducing government intervention in the market, streamlining regulations, improving transparency, and enforcing property rights protection. This case can help to create a healthy and competitive business environment that attracts foreign investors. Second, incentives, such as tax breaks and streamlined business regulations, should be prioritized to promote FDI. This case can help to create new job opportunities and promote economic growth. Third, policymakers should focus on improving the education system to create a skilled workforce that can support economic growth and attract more foreign investment. Fourth, as trade openness positively correlates with economic growth, working toward greater integration into global trade by reducing barriers and tariffs and negotiating trade agreements with other countries is crucial.

References

- Aisen, A., & Veiga, F. J. (2013). How does political instability affect economic growth? *European Journal of Political Economy*, 29, 151-167. https://doi.org/10.1016/j.ejpoleco.2012.11.001
- Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *The Review of Economic Studies*, 58(2), 277-297.

- Arellano, M., & Bover, O. (1995). Another look at the instrumental variable estimation of error-components models. *Journal of econometrics*, 68(1), 29-51. https://doi.org/10.1016/0304-4076(94)01642-D
- Azam, M., Nawaz, M. A., & Riaz, M. (2019). Does corruption and terrorism affect foreign direct investment inflows into Pakistan. *Journal of Managerial Sciences*, 13(2), 85-97.
- Azman-Saini, W., Baharumshah, A. Z., & Law, S. H. (2010). Foreign direct investment, economic freedom and economic growth: International evidence. *Economic Modelling*, 27(5), 1079-1089. https://doi.org/1 0.1016/j.econmod.2010.04.001
- Azman-Saini, W. N. W., Baharumshah, A. Z., & Law, S. H. (2010). Foreign direct investment, economic freedom and economic growth: International evidence. *Economic Modelling*, 27(5), 1079-1089.
- Baltagi, B. H., & Liu, L. (2020). Forecasting with unbalanced panel data. *Journal of Forecasting*, 39(5), 709-724.
- Barro, R. J. (2000). Inequality and Growth in a Panel of Countries. *Journal of Economic Growth*, 5(1), 5-32.
- Bengoa, M., & Sanchez-Robles, B. (2003). Foreign direct investment, economic freedom and growth: new evidence from Latin America. *European Journal of Political Economy*, 19(3), 529-545.
- Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87(1), 115-143. https://doi.org/10.1016/S0304-4076(98)00009-8
- Chang, C.-C., & Mendy, M. (2012). Economic growth and openness in Africa: What is the empirical relationship? *Applied Economics Letters*, 19(18), 1903-1907.
- De Haan, J., Lundström, S., & Sturm, J.-E. (2006). Market-oriented institutions and policies and economic growth: A critical survey. *Journal of Economic Surveys*, 20(2), 157-191. https://doi.org/10.1111/j.0950-0804.2006.00278.x
- De Haan, J., Lundström, S., & Sturm, J. E. (2006). Market-oriented institutions and policies and economic growth: A critical survey. *Journal of Economic Surveys*, 20(2), 157-191.
- Demetriades, P., & Hook Law, S. (2006). Finance, institutions and economic development. *International Journal of Finance & Economics*, 11(3), 245-260.
- Gemmell, N. (1996). Evaluating the impacts of human capital stocks and accumulation on economic growth: some new evidence. *Oxford Bulletin of Economics and Statistics*, 58(1), 9-28.
- Gui-Diby, S. L. (2014). Impact of foreign direct investments on economic growth in Africa: Evidence from three decades of panel data analyses. *Research in Economics*, 68(3), 248-256.
- Kasimov, I., & Saydaliev, H. B. (2022). Unveiling the Determinants of Foreign Direct Investment and Economic Growth in Central Asia. *European Journal of Business and Management Research*, 7(6), 108-114.
- Lu, W., Kasimov, I., Karimov, I., & Abdullaev, Y. (2020). Foreign direct investment, natural resources, economic freedom, and sea-access: Evidence from the commonwealth of independent states. *Sustainability*, 12(8), 3135.
- Mankiw, N. G., Romer, D., & Weil, D. N. (1992). A contribution to the empirics of economic growth. *The Quarterly Journal of Economics*, 107(2), 407-437.
- Rodrik, D., Subramanian, A., & Trebbi, F. (2004). Institutions rule: The primacy of institutions over geography and integration in economic development. *Journal of Economic Growth*, 9(2), 131-165.

Zghidi, N., Mohamed Sghaier, I., & Abida, Z. (2016). Does economic freedom enhance the impact of foreign direct investment on economic growth in North African countries? A panel data analysis. *African Development Review*, 28(1), 64-74.