

Bieleń, M., Ikani, K. S., & Włodarczyk, J. (2024). Diversity within commonality: A comparative study of the impact of foreign direct investment and trade openness on economic growth. *Journal of International Studies*, 17(1), 174-187. doi:10.14254/2071-8330.2024/17-1/10

Journal  
of International  
Studies

Scientific Papers

Centre of  
Sociological  
Research

## Diversity within commonality: A comparative study of the impact of foreign direct investment and trade openness on economic growth

**Martyna Bieleń**

*Faculty of Economics, University of Economics in Katowice,  
Poland*

*[martyna.bielen@edu.uekat.pl](mailto:martyna.bielen@edu.uekat.pl)*

*ORCID 0000-0002-9228-6784*

**Kingsley Success Ikani**

*Faculty of Economics, University of Economics in Katowice,  
Poland*

*[kingsley.ikani@edu.uekat.pl](mailto:kingsley.ikani@edu.uekat.pl)*

*ORCID 0000-0001-7499-6136*

**Julia Włodarczyk\***

*Faculty of Economics, University of Economics in Katowice,  
Poland*

*[julia.wlodarczyk@ue.katowice.pl](mailto:julia.wlodarczyk@ue.katowice.pl)*

*ORCID 0000-0001-5689-454X*

*\*Corresponding author*

**Abstract.** The relationships between foreign direct investment (FDI), trade openness, and economic growth are complex and analyzed by many researchers. Still, there are some gaps in our knowledge as literature documents positive, negative, and ambiguous impact of FDI and trade openness on economic growth. This paper addresses one of these gaps and focuses on the similarities and differences among countries from Central and Eastern Europe and West Africa. The econometric analysis covers the 1995-2022 period and employs panel data methods to reveal the long-term positive impact of FDI and trade openness on economic growth in West African countries and long-term positive impact of FDI on economic growth in Central and Eastern European countries. We also demonstrate that apart from cross-border linkages captured by FDI and trade flows, economic growth in Central and Eastern European countries positively correlates with global economic development, however, in case of West Africa this effect is statistically insignificant.

**Received:**  
December, 2023  
**1st Revision:**  
January, 2024  
**Accepted:**  
March, 2024

DOI:  
10.14254/2071-  
8330.2024/17-1/10

**Keywords:** foreign direct investment, trade openness, economic growth, Central and Eastern Europe, West Africa.

**JEL Classification:** F14, F21, F43, O57

## 1. INTRODUCTION

The interactions between foreign direct investment (FDI), trade openness, and economic growth are complex and not fully understood despite the significant interest in these issues among researchers and policy makers. Prevailing literature documents positive impact of FDI and trade openness on economic growth, but sometimes research indicates negative or ambiguous relationships.

FDI drives employment, technological progress, productivity gains, and sustainable long-term economic growth (Anyanwu & Yameogo, 2015). It helps to close developmental gaps and provides foreign exchange, investment, tax revenue, and capital inflow; the latter is particularly important for capital-scarce nations like transition economies or African countries (Quazi, 2007). However, FDI alone is not sufficient for economic growth (Benetrix et al., 2023). Moreover, the gains from FDI are not evenly distributed across nations: as countries shift from low to middle-income levels, the effect of FDI increases, but it diminishes as they reach high-income status (Baiashvili & Gattini, 2019).

Similarly, trade openness is also perceived as a crucial driver of economic growth. It allows countries to specialize in production of goods and services in which they have a comparative advantage or in which they can benefit from economies of scale. Openness fosters competition, greater efficiency, and innovation, because businesses exposed to foreign competition must modernize their products and processes (Tjitrajaya et al., 2021). Importantly, trade openness can attract foreign investment, which can provide capital, technology, and expertise indispensable for expansion and modernization of local companies (Kandiero & Chitiga, 2006; Lee et al., 2021). On the other hand, excessive openness can have adverse effects on both developed and developing economies. Such negative effects include increased inequality (Dorn et al., 2021) and environmental degradation (Copeland & Taylor, 2004), which can undermine economic growth in the long run.

The relationships between FDI, trade openness and economic growth seem particularly intriguing in case of countries that for decades were at the peripheries of the global economy, such as transition economies or postcolonial countries. The aim of the paper is to fill in one of the gaps in the literature associated with the lack of comparative analyses concerning Central and Eastern European countries and West African countries and to examine the impact of foreign direct investment and trade openness on economic growth in both regions using the same approach. We hypothesize that previously underprivileged position of transition and postcolonial countries leads to the phenomenon mentioned in the title of this paper, namely diversity within commonality (Todaro & Smith, 2014). In other words, we expect that despite different past experiences, current institutional order and other factors shaping the socio-economic reality of these countries, the character of at least some relationships will be similar. For instance, many of these countries are characterized by a relative capital scarcity, greater FDI inflows than outflows and greater volumes of imports than exports which implies financing current account deficits with financial account surpluses.

Apart from the choice of two specific groups of countries that have not been previously compared, the novelty of our paper consists in joint analysis of FDI flows, trade openness and the impact of global economic fluctuations (captured by the average rate of growth of developed countries). Finally, in order to obtain reliable results, we resort to two econometric methods and estimate fixed effects and pooled mean

group models. The latter approach allows us to differentiate between long-run and short-run relationships pertaining to analysed processes.

The remainder of the paper is structured as follows. Section 2 discusses the literature linking relations between foreign direct investment, trade openness and economic growth. Section 3 introduces data and methods applied in empirical research. Section 4 presents the results of our analysis. Final section concludes.

## 2. LITERATURE REVIEW

In accordance with the research scope, we have delineated three strands of literature linking: (i) FDI and economic growth, (ii) trade openness and economic growth, (iii) FDI, trade openness, and economic growth.

### 2.1. Foreign direct investment and economic growth

The literature on the economic impact of foreign direct investment (defined as the cross-border acquisition of assets associated with a certain degree of control) is extensive. In one of the first seminal publications, MacDougall (1960) developed a theoretical framework for analysing the impact of FDI on host countries and argued that FDI can have a positive impact on economic growth through its effects on capital formation and technology transfer. Since then, numerous studies have been conducted on the relationship between FDI and economic growth in developed, developing and transition countries alike.

The surge in FDI, prompted by globalization, has significantly increased both its flow and stock globally in recent decades (Chirilă – Donciu, 2013; Hill & McKaig, 2015; Pekarskienea & Susniene, 2015; Incekara & Savrul, 2021). FDI brings numerous benefits to host economies. These include technological advancement, capital accumulation, job creation, infrastructure development, skilled labor provision, enhanced productivity, and increased competition (Nunthirapakorn, 2020; Masron & Nor, 2013; Edrak et al., 2014). In particular, FDI plays a vital role in the economic growth of developing nations (Bazán-Navarro & Álvarez-Quiroz, 2022; Edrak et al., 2014; Iqbal et al., 2012).

Some authors argue against a positive relationship between FDI and economic growth. De Mello's (1999) analysis of developing countries from 1970-1990 and a study by Khaliq and Noy (2007) suggest that FDI has a limited or negative impact on economic growth. Furthermore, FDI can lead to crowding out of domestic businesses (Aitken and Harrison, 1999), increased reliance on foreign investment (Meyer, 2009), reduced labour and environmental standards in host countries (Blonigen and Wang, 2005), or even capital flight (Alfaro et al., 2004).

Nevertheless, recent studies tend to apply different research methods and focus on various groups of countries, but typically demonstrate a positive impact of FDI on economic growth (see Table 1).

Table 1

Recent empirical studies on the relationship between FDI and economic growth

Author(s)	Countries	Years	Methods	Impact
Asafo-Agyei and Kodongo (2022)	25 Sub-Saharan African countries	1993-2015	Fixed effects	positive
Bilas (2020)	13 EU countries	2002-2018	ARDL	positive (but very weak)
Baiashvili and Gattini (2019)	111 countries	1980-2014	GMM	positive and negative
Liang et al. (2019)	113 developing and transition countries	2000-2019	Fixed effects, 2SLS	positive
Vojtovic et al. (2019)	CEE countries	1997-2014	VAR	positive
Mamingi and Martin (2018)	OECS countries	1988-2013	GMM	positive

Source: Authors' elaboration.

FDI flows exerted a significant impact on the economic growth and development of Central and Eastern Europe during and after the period of systemic transition that started in the late 1980s. Bačić et al. (2004) conclude that the positive impact of FDI was visible mainly in small economies, such as Slovakia, Slovenia, and Lithuania. Darrat et al. (2011) find a positive impact of FDI on economic growth only in countries that are members of the European Union. Later research shows that FDI has an overall positive impact on economic growth, but this result depends on the measure of financial market development (Vojtovic et al., 2019).

With regard to African countries, Adewumi (2007) finds a generally positive impact of FDI on the continent as a whole, but for individual economies the effect varies from positive to negative. On the other hand, Awolusi et al. (2017) show a minimal impact of FDI on African economic growth. Finally, Asafo-Agyei and Kodongo (2022) identify a strong non-linear relationship and claim that FDI must surpass \$44.67 per person per year and the host economy must possess adequate absorption capacity to experience faster economic growth due to FDI.

## 2.2. Trade openness and economic growth

Trade openness (defined as the volume of exports and imports expressed as percentage of GDP) is not as frequently analyzed as the impact of FDI, however, the role of trade in promoting economic growth has sparked a growing amount of economic research following the works of Grossman and Helpman (1990) and Romer (1990). Economists continue to dispute the benefits of openness in the global economy. Openness supporters claim that it can lead to higher economic growth and progress, while opponents argue that it can exacerbate inequality and result in job losses in specific industries.

Positive impact of trade openness on economic growth is reported by many researchers (cf. Chang & Ying, 2008; Das & Paul, 2011; Marelli & Singorelli, 2011; Asfaw, 2014; Keho, 2017). However, the relationship between GDP and openness is not always straightforward (cf. Table 2). Some studies have shown that the benefits of openness may not be evenly distributed across the population and may result in rising inequality and social unrest. Some works show that trade openness has a detrimental impact on economic growth (cf. Foster, 2008). Assessing the relationship between trade openness and economic growth for 130 countries, Ulaşan (2015) concludes that the trade openness is not significantly associated with economic growth. Cooke (2010) shows that increasing openness may lead to inflation or depreciation of currency.

Table 2

Recent empirical studies on the relationship between trade openness and economic growth

Author(s)	Countries	Years	Methods	Impact
Oppong-Baah et al. (2022)	Ghana, Nigeria	1998-2017	OLS, FE, RE	positive
Oloyede et al. (2021)	ECOWAS and SADC countries	2006-2017	OLS, FE, RE	positive, but not significant
Sheng et al. (2019)	19 developing countries	1980-2013	OLS, FE, GMM	ambiguous
Towhid and Kiyoto (2019)	BIMSTEC countries	1991-2016	FE	ambiguous
Silajdzic and Mehic (2018)	CEE countries	1995-2013	PCSE and LSDVC	ambiguous

*Source:* Authors' elaboration.

In the context of Central and Eastern Europe (CEE), there is a limited number of studies addressing the relationship between trade openness and economic growth. The existing ones demonstrate a positive

impact of trade openness on economic growth (e.g. Iyke, 2017; Grella et al., 2017), even though Silajdzic and Mehic (2018) report more ambiguous results.

In African countries trade openness is found to have a positive impact on economic growth (e.g. via investment ratio channel, cf. Kinfaek & Bonga-Bonga, 2022; Sunde et al., 2023). However, in low-income African countries there is a negative relationship, while in upper-income countries this relationship is positive. On the other hand, Bunje et al. (2022) show that in case of 52 African countries the impact of trade openness on economic growth can be positive or negative depending on the choice of research method.

### 2.3. FDI, trade openness and economic growth

The relationship between FDI, trade openness, and economic growth is ambiguous. According to Whiteaker (2020), FDI and international trade are different but complementary types of transactions that play a fundamental role in the global economy. Vásquez et al. (2019) identify a correlation among economic growth, FDI, and the level of trade openness, which is noticeable in economies experiencing high growth rather than those with low or moderate growth levels. A study conducted on the ASEAN countries using panel regression estimation revealed that both trade openness and economic growth have a highly positive impact on economic growth (Astot & Sentosa, 2021). Conversely, individual country-specific studies yield varying results (see Table 3).

Table 3

Recent empirical studies on the relationship between FDI, trade openness and economic growth

Author(s)	Countries	Years	Methods	Impact
Hao (2023)	China	1990-2021	ARDL	positive (both)
Azu (2023)	Nigeria	1980-2020	Classical Multiple Regression	negative (both)
Asada (2022)	Thailand	2000-2017	ARDL	negative (FDI) positive (trade openness)
Fatiha and Masih (2021)	Malaysia	1970-2020	VECM, VDC	positive (both)
Su et al. (2019)	Vietnam	2005-2015	FE, LSDV, GMM	positive (FDI and trade openness separately) negative (joint effect)

Source: Authors' elaboration.

The literature referring to FDI, trade openness and economic growth in Central and Eastern European countries as well as in West African countries is relatively scant. For instance, Szkorupová (2014) documents a positive impact of foreign direct investment and exports on economic growth in Slovakia but does not take into account imports. Similarly, Cinar and Nulambek (2018) analyze a group of Sub-Saharan African countries and find a positive influence of both FDI and trade openness in the long term. As already mentioned in the introduction, our research was motivated by the research gap pertaining to comparative studies involving CEE and WA countries.

### 3. DATA AND METHODOLOGY

In our investigations we analyze two samples: 19 countries from Central and Eastern Europe (CEE countries: Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Moldova, Montenegro, North Macedonia, Poland, Romania, Serbia, Slovakia, Slovenia, and Ukraine) and 16 countries from West Africa (WA countries: Benin, Burkina Faso, Cabo Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, and Togo). Our analysis employs annual data from the period 1995-2022 (we exclude one

observation for Ukraine for 2022 as its significant decline in GDP was caused by factors lying outside our framework). A few missing values were linearly interpolated. Table 4 presents descriptive statistics of our variables.

Table 4

Descriptive statistics

Region	CEE countries					WA countries				
	Obs.	Mean	Std. dev.	Min	Max	Obs.	Mean	Std. dev.	Min	Max
real_GDP_growth	503	3.28	5.25	-15.31	54.2	448	5.14	7.53	-30.15	106.28
FDI_inflow	502	4.33	3.96	-11.61	36.72	448	4.20	8.11	-53.53	70.35
FDI_outflow	485	0.54	1.37	-12.87	9.15	411	1.76	14.81	-142.74	120.92
Exports	487	0.49	0.19	0.11	0.96	432	0.25	0.11	0.07	0.82
Imports	487	0.57	0.14	0.21	0.94	432	0.37	0.19	0.11	2.23
Trade_openness	487	1.06	0.31	0.44	1.90	432	0.62	0.28	0.21	2.90
GOV	487	0.18	0.03	0.09	0.26	432	0.13	0.05	0.01	0.29
GCF	487	0.25	0.05	0.01	0.42	432	0.23	0.11	0.04	0.57
Population_growth	503	-0.41	0.78	-2.62	6.68	448	2.66	0.81	0.21	10.2
Unemployment_rate	531	12.32	7.56	2.01	38.8	448	4.76	3.12	0.32	14.88
DEV_growth	531	2.03	1.87	-4.13	5.23	448	2.03	1.87	-4.13	5.23

*Note:* GOV stands for the general government final consumption expenditure (% GDP), GCF for gross capital formation (% GDP), DEV\_growth is the average rate of GDP growth of developed countries. FDI and trade variables are expressed as % of GDP.

*Source:* Authors' calculations based on data from: UNCTAD (2023) and World Development Indicators (2023).

In our empirical analysis we resort to two methods: for both samples we estimate coefficients of fixed effects (FE) panel models and pooled mean group (PMG) models (using `xtreg` command with `fe` option and `xtpmg` with the `pmg` option in Stata, respectively). The choice of the first method follows the standard practice (especially for relatively small panels), while the second reflects our interest in short run and long run relationships between economic growth and our measures of economic openness. Importantly, we don't analyze large macro panels comprising diverse countries from the whole world, but we study two rather small sets of relatively similar countries. This justifies the use of the PMG models which allow for heterogeneous short-run dynamics and common long-run relationships in each sample (Blackburne III & Frank, 2007).

#### 4. EMPIRICAL RESULTS AND DISCUSSION

Our analysis confirms both the important role of capital and trade openness for economic growth and significant differences between CEE and WA countries. Our main results are presented in Table 5 (FE models) and Table 6 and 7 (PMG models). Due to non-stationarity observed in some time series and in order to make our analysis coherent, both in case of FE and PMG models we resort to first differences of our variables.

Table 5

## Determinants of real GDP growth (fixed effects models)

Region	CEE countries			WA countries			
Model	(1a)	(2a)	(1-2b)	(3a)	(4a)	(3b)	(4b)
D.FDI_inflow	0.002 (0.045)	-0.022 (0.040)		0.173*** (0.014)	0.116*** (0.018)	0.187*** (0.021)	0.116*** (0.022)
D.Trade_openness	2.577 (2.459)			-4.270 (2.638)			
D.FDI_outflow		0.088 (0.051)			0.076*** (0.007)		0.077*** (0.009)
D.Exports		17.01 (14.68)			7.829 (14.40)		
D.Imports		-10.26 (16.19)			-10.17*** (2.838)		-8.047*** (1.753)
D.DEV_growth	0.325*** (0.077)	0.326*** (0.069)	0.356*** (0.094)	0.131** (0.055)	0.071 (0.065)	0.106** (0.049)	
D.GOV	-75.89** (32.93)	-60.01 (34.87)	-81.86** (31.45)	-47.41*** (13.20)	-36.16 (22.29)	-47.40*** (12.90)	-43.14** (17.52)
D.GCF	33.35*** (10.75)	46.36** (22.06)	42.56*** (12.19)	-13.39*** (3.468)	-1.133 (5.083)	-14.47*** (3.467)	
D.Population_growth	1.375 (2.126)	3.409*** (0.937)	4.490*** (0.406)	4.873*** (1.260)	5.650*** (1.561)	4.787*** (1.108)	5.635*** (1.600)
D.Unemployment_rate	-0.886*** (0.127)	-0.890*** (0.139)	-0.768*** (0.202)	-2.250*** (0.695)	-2.308*** (0.732)	-2.271*** (0.684)	-2.384*** (0.767)
Constant	2.782*** (0.050)	2.664*** (0.061)	3.067*** (0.046)	5.266*** (0.021)	5.301*** (0.055)	5.257*** (0.017)	5.320*** (0.025)
Observations	463	446	466	416	380	416	380
R-squared	0.457	0.498	0.431	0.225	0.293	0.216	0.290
Number of countries	19	19	19	16	16	16	16

Note: Robust standard errors in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ . D represents first differences with regards to all explanatory variables.

Source: Authors' calculations.

As exhibited in Table 5, the baseline model (1a for CEE countries and 3a for WA countries) includes first differences of variables typically analyzed in the literature, namely inflows of foreign direct investment and trade openness, along with the average rate of real GDP growth in developed countries and control variables. In models 2a and 4a (which are our preferred specifications) apart from inflows of FDI we consider also FDI outflows and instead of trade openness we look at the impact of dynamics of exports and imports on economic growth separately. Implementing backward stepwise regression results in models 1-2b, 3b and 4b that are characterized by lower values of  $R^2$  than in case of baseline models and alternative specifications (this is visible especially in case of CEE countries which implies that changes in some trade or investment flows may actually influence the dynamics of real GDP growth).

Differences between both subsamples refer to two key explanatory variables, namely the impact of increase in inflows of FDI (which stimulates economic growth in WA countries, but is statistically insignificant in CEE countries) and changes in the trade openness (which is statistically insignificant in both samples, but bears a positive sign in CEE countries and a negative sign in WA countries). Similarly, the dynamics of gross capital formation stimulates economic growth in CEE countries, but has a negative impact on WA countries (albeit the coefficient is not statistically significant in the preferred specification).

Also the link between real GDP growth and the dynamics of the average rate of GDP growth of developed countries (capturing other forms of economic integration) is much stronger for CEE countries compared to WA countries (in case of latter group of countries the link is statistically insignificant in the preferred specification).

Nevertheless, there are many similarities pertaining to the regions under analysis. In fact, the impact of the dynamics of FDI outflows, exports and imports seems to be similar in both groups of countries, even though only in case of WA countries the impact of increases in FDI outflows (positive but rather weak) and of increase in imports (negative) are statistically significant. Besides, results presented in Table 4 document that economic growth depends positively on faster population growth, negatively on increases in the unemployment rate, and negatively on increases in government spending (albeit the last variable is not statistically significant in preferred specifications).

Taken together, our results confirm previous findings and offer evidence that more meticulous investigations of various dimensions of openness to capital and trade flows can enrich conducted analysis.

In order to capture both long-run and short-run relationships between economic growth and various measures of economic openness, we estimate coefficients of pooled mean group models (see Table 6 for full specification and Table 7 for results of backward stepwise regression).

Table 6

Determinants of real GDP growth (pooled mean group models) – full specification

Region	CEE countries			WA countries		
Model	(5a)	(6a)	(7a)	(8a)	(9a)	(10a)
<b>Long run relationships</b>						
L.FDI_inflow	0.104** (0.044)	0.214*** (0.047)	0.065 (0.040)	0.169*** (0.062)	0.257*** (9.69e-08)	0.053 (0.074)
L.Trade_openness	-1.928*** (0.634)			2.473* (1.364)		
L.FDI_outflow		0.063 (0.145)			0.630*** (1.49e-07)	
L.Exports			-17.37*** (2.285)			-4.542 (3.688)
L.Imports			17.62*** (2.884)			10.88** (4.276)
<b>Short run relationships</b>						
EC	-0.665*** (0.092)	-0.647*** (0.072)	-0.757*** (0.077)	-0.752*** (0.081)	-0.770*** (0.123)	-0.754*** (0.080)
D.FDI_inflow	0.060 (0.055)	0.159** (0.065)	0.084* (0.050)	-0.052 (0.105)	0.289 (0.443)	-0.051 (0.113)
D.Trade_openness	0.401 (5.731)			2.127 (4.546)		
D.DEV_growth	0.475*** (0.122)	0.569*** (0.090)	0.351*** (0.106)	0.001 (0.098)	-1.488 (1.405)	-0.050 (0.089)
D.GOV	-109.3*** (24.58)	-78.61*** (22.64)	-25.01 (31.19)	-51.28*** (14.29)	-37.62** (15.75)	-47.08*** (16.05)
D.GCF	41.86*** (8.197)	42.31*** (8.256)	70.39*** (15.57)	9.166 (9.504)	-15.09 (25.15)	18.34* (10.01)
D.Population_growth	0.375 (2.027)	0.292 (1.282)	0.628 (1.572)	1.521 (2.682)	-11.03 (12.31)	1.453 (1.989)
D.Unemployment_rate	-0.553*** (0.134)	-0.494*** (0.108)	-0.580*** (0.147)	-5.630*** (1.384)	-8.705* (5.056)	-5.741*** (1.394)
D.FDI_outflow		0.241 (0.392)			7.358 (7.257)	



D.Exports			42.28** (18.68)			9.916 (8.221)
D.Imports			-26.79 (16.41)			-4.689 (6.540)
Constant	3.011*** (0.328)	1.052*** (0.177)	0.364 (0.437)	2.228*** (0.458)	3.322*** (0.670)	1.633*** (0.455)
Observations	463	446	463	416	380	416

Note: Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. EC stands for the error-correction term depicting the speed of adjustment.

Source: Authors' calculations.

Table 7

## Determinants of real GDP growth (pooled mean group models) – backward stepwise regression

Region	CEE countries			WA countries		
Model	(5b)	(6b)	(7b)	(8b)	(9b)	(10b)
<b>Long run relationships</b>						
L.FDI_inflow	0.144*** (0.0476)	0.214*** (0.0460)		0.186*** (0.0504)	0.196*** (0.0503)	
L.Trade_openness	-2.225*** (0.668)					
L.FDI_outflow		0.211* (0.126)				
L.Exports			-20.86*** (2.632)			-7.459** (3.013)
L.Imports			18.94*** (3.433)			12.34*** (2.880)
<b>Short run relationships</b>						
EC	-0.693*** (0.0615)	-0.645*** (0.0636)	-0.647*** (0.0873)	-0.807*** (0.0717)	-0.804*** (0.0814)	-0.818*** (0.0722)
D.FDI_inflow	0.107** (0.0526)	0.136** (0.0548)				
D.DEV_growth	0.498*** (0.0867)	0.548*** (0.0866)	0.409*** (0.0981)			
D.GOV	-97.28*** (18.66)	-87.77*** (18.53)		-46.20*** (17.74)		-46.47*** (17.86)
D.GCF	42.89*** (7.417)	45.27*** (7.448)	86.32*** (14.32)			
D.Unemployment_rate	-0.658*** (0.116)	-0.567*** (0.107)	-0.468*** (0.171)	-4.885*** (1.492)	-4.909*** (1.454)	-4.902*** (1.536)
D.Exports			48.24*** (12.57)			
D.Imports			-34.08** (15.77)			
Constant	3.040*** (0.319)	0.980*** (0.198)	1.425*** (0.393)	3.588*** (0.384)	3.491*** (0.402)	2.135*** (0.395)
Observations	463	463	466	416	380	416

Note: Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. EC stands for the error-correction term depicting the speed of adjustment.

Source: Authors' calculations.

Results presented in Tables 6 and 7 consist of two equations: the normalized cointegrating vector presented in the upper part of the table and the short-run dynamic coefficients at the bottom. Due to the

fact that the PMG estimator combines both pooling and averaging, the intercept, short-run coefficients, and error variances are allowed to differ across the groups, but the long-run coefficients are assumed to be equal among countries from a given sample (cf. Blackburne III & Frank, 2007).

As exhibited in Table 6 and 7, in the long run both CEE and WA countries enjoy a positive impact of FDI inflows on real GDP growth, however, this impact ceases to be statistically significant when taking into account flows of exports and imports (cf. models 7a, 7b, 10a, 10b). Similarly, trade openness and FDI outflows have a statistically significant effect for real GDP dynamics only in some specifications (cf. models 5a, 5b, 6b, 8a, 9a) that do not include flows of exports and imports. Long-run relationships turn out to be relatively similar for CEE and WA countries.

In the short run, we observe both commonality and diversity with regard to analysed groups of countries. Similarities refer to consistently negative impact of the dynamics of the unemployment rate, insignificant impact of changes in trade openness and dynamics of the population growth rate, negative impact of government final consumption expenditure (associated with its countercyclicality), as well as a positive impact of gross capital formation (albeit not always statistically significant). The most important difference between CEE and WA countries comes down to the fact that the real GDP dynamics in CEE countries strongly depends of developments observed in developed economies (even after controlling for FDI and trade flows), while such an effect is not observable for WA countries. This might imply different character of linkages between the core of the world economy and both groups of countries. In case of CEE countries linkages seem to depend more on economic fluctuations and cyclical factors, while in case of WA they might be associated with structural factors. Another difference refers to the fact that we find more factors significantly explaining the dynamics of real GDP in CEE countries (including the dynamics of FDI inflow in the short run in some specifications) compared to WA countries.

We also observe that the short run effects of exports and imports (positive and negative, respectively) are reversed in the long run which can explain ambiguous results reported by the previous literature with respect to trade openness (cf. models 7a, 7b, 10a).

Finally, as expected, the error-correcting speed of adjustment term (*EC*) is statistically significant and negative which confirms that the variables show a return to a long-run equilibrium (cf. Blackburne III and Frank, 2007) and that our results are reliable.

Due to the existing research gap, especially with regard to the use of pooled mean group models which allow to differentiate between long run and short run developments, direct comparison of our results with those of other researchers is somehow straitened. We offer some evidence supporting findings by Bačić et al. (2004), Darrat et al. (2011), and Vojtovic et al. (2019) that FDI inflows exert positive impact on economic growth in CEE countries, as well as those by Adewumi (2007), Awolusi et al. (2017), and Agyei and Kodongo (2022) who find a similar relationship for African countries. However, we show that in West African countries the impact of FDI inflow can be observed in the long run only and that in both groups of countries exports and imports might have a more pronounced effect than FDI flows. With regard to trade openness, we have corroborated findings of Bunje et al. (2022) that depending on the choice of research methods, trade openness can have either a positive or negative effect on growth in African countries. In particular, we obtained positive effect for FE models and one PMG model specification (cf. model 8b) and lack of statistically significant results for remaining PMG model specifications in case of WA countries. Also, in case of CEE countries we could observe positive effects of trade openness (albeit not statistically significant) for FE models and short-run relationships in PMG models, but a statistically significant negative relationship between trade openness and dynamics of real GDP growth in the long run in PMG models. Therefore, we are closer to Silajdzic and Mehic (2018) who report ambiguous results regarding the impact of trade openness on economic growth than to Iyke (2017) and Grela et al. (2017) who claim that this impact is positive.

## 5. CONCLUSION

Referring to our hypothesis presented in the introduction, we conclude that the specificity of transition and postcolonial countries leads to diversity within commonality. We show that in the long run, FDI inflow (and trade openness in some specifications) significantly and positively impact economic growth in West African countries, but in the case of Central and Eastern European countries the impact of FDI inflows is positive, while that of trade openness is negative. Furthermore, the average growth rate of developed countries positively influences economic growth in CEE countries, but not in WA countries. This may imply greater vulnerability of the former group of countries in a situation of global turmoil.

Finally, we observe that the short run effects of exports and imports (positive and negative, respectively) are reversed in the long run which can explain ambiguous results reported by the previous literature with respect to trade openness. This observation has important practical implications, especially if results are supposed to guide policy makers. For instance, Sunde et al. (2023) employ an ARDL model and find that exports and trade openness have a significantly positive impact on Namibia's economic growth, while imports has a significantly negative impact on economic growth in Namibia. Based on these results, Sunde et al. (2023) recommend to restrict imports (imposing quotas and higher import tariffs) in line with principles of mercantilism. Our estimations suggest that this picture can be more nuanced and deserves further studies.

Future analysis could involve extended time series with regard to analysed countries as well as include other groups of countries sharing similar historical experience. On the basis of the literature review and conducted research we can ask: what is the most appropriate level of analysis of relationships between FDI, trade openness and economic growth? How to generalize the experience of individual economies and groups of countries to better understand local and global patterns? Finally, an interesting extension of conducted analysis would be to include income inequality in a single research framework to capture impact of FDI and trade openness both on economic growth and income inequality. This would offer more precise insights into social welfare.

## ACKNOWLEDGEMENT

The publication was financed by funds from the Kraków University of Economics, Poznań University of Economics and Business, and University of Economics in Katowice – cooperation agreement no. CRU-6414/2021.

## REFERENCES

- Adewumi, S. (2007). *The Impact of FDI on Growth in Developing Countries. An African Experience*. Jonkoping International Business School. Dissertation.
- Aitken, B., & Harrison, A. (1999). Do domestic firms benefit from direct foreign investment? Evidence from Venezuela. *American Economic Review*, 89(3), 605-618.
- Alfaro, L., Chanda, A., Kalemli-Ozcan, S., & Sayek, S. (2004). FDI and economic growth: The role of local financial markets. *Journal of International Economics*, 64(1), 89-112. [https://doi.org/10.1016/S0022-1996\(03\)00081-3](https://doi.org/10.1016/S0022-1996(03)00081-3)
- Anyanwu, J.C., Yameogo, N.D. (2015). Regional comparison of foreign direct investment to Africa: Empirical analysis. *African Development Review*, 27(4), 345-63. <https://doi.org/10.1111/1467-8268.12152>
- Asada, H. (2022). Effects of foreign direct investment, trade openness, and human capital development on the economic growth of Thailand. *International Journal of Asian Business and Information Management*, 13(1), 1-14. <https://doi.org/10.4018/IJABIM.309989>
- Asafo-Agyei, G., & Kodongo, O. (2022). Foreign direct investment and economic growth in Sub-Saharan Africa: A nonlinear analysis. *Economic Systems*, 56(4), Article no. 101003. <https://doi.org/10.1016/j.ecosys.2022.101003>
- Asfaw, H.A. (2014). Trade policy and economic growth in Sub-Saharan Africa: A panel data approach. *American Journal of Trade and Policy*, 1, 94-101.

- Astot, V., & Sentosa, S. (2021). The effect of trade openness, foreign direct investment, government expenditure, labor force, and inflation on economic growth in ASEAN countries. *Advances in Economics, Business and Management Research*, 222, 451-456. <https://doi.org/10.2991/aebmr.k.220702.068>
- Awolusi, O., Olufemi, A., & Pelsier, T. (2017). Foreign direct investment and economic growth in Africa: A comparative analysis. *International Journal of Sustainable Economy*, 9(3), 183-198. <https://doi.org/10.1504/IJSE.2017.085062>
- Azu, B. (2023). Foreign direct investment, trade openness and economic growth: Evidence from Nigeria. *GOUUni Journal of Faculty of Management and Social Sciences*, 11(1), 29-41.
- Bačić, K., Račić, D., & Ahec Šonje, A. (2004). The effects of FDI on recipient countries in Central and Eastern Europe. *MPRA Paper 83263*, University Library of Munich, Germany.
- Baiashvili, T., & Gattini, L. (2019). *Impact of FDI on economic growth: the role of country income levels and institutional strength*. Economics – Working Papers 2020/02, European Investment Bank.
- Bazán-Navarro, C.E., & Álvarez-Quiroz V.A. (2022). Foreign direct investment and exports stimulate economic growth? Evidence of equilibrium relationship in Peru. *Economies*, 10(10), Article No. 234. <https://doi.org/10.3390/economies10100234>
- Benetrix, A., Pallan, H., & Panizza, U. (2023). *The elusive link between FDI and economic growth*. Retrieved from: <https://blogs.worldbank.org/developmenttalk/elusive-link-between-fdi-and-economic-growth> (28.12.2023).
- Bilas, V. (2020). FDI and economic growth in EU13 countries: Cointegration and causality tests. *Journal of Competitiveness*, 12(3), 47-63. <https://doi.org/10.7441/joc.2020.03.03>
- Blackburne III, E., & Frank, M. (2007). Estimation of nonstationary heterogeneous panels. *Stata Journal*, 7, 197-208. <https://doi.org/10.1177/1536867X0700700204>
- Blonigen, B.A., & Wang, M. (2005). *Inappropriate pooling of wealthy and poor countries in empirical FDI studies*. University of Oregon. Mimeo.
- Bunje, M., Abendin, S., & Wang, Y. (2022). The effects of trade openness on economic growth in Africa. *Open Journal of Business and Management*, 10, 614-642. <https://doi.org/10.4236/ojbm.2022.102035>
- Chang, R., Kaltani, L., & Loayza, N.V. (2009). Openness can be good for growth: The role of policy complementarities. *Journal of Development Economics*, 90, 33-49. <https://doi.org/10.1016/j.jdeveco.2008.06.011>
- Chirilă – Donciu, E. (2013). Globalization and foreign direct investments. *CES Working Papers*, 5(2), 177-186.
- Cinar, M., & Nulambeh, N.A. (2018). Foreign direct investment, trade openness and economic growth: A panel data analysis for Sub-Saharan Africa. *Business and Economics Research Journal*, 9(4), 749-760.
- Cooke, D. (2010). Openness and inflation. *Journal of Money, Credit and Banking*, 42, 267-287. <https://doi.org/10.1111/j.1538-4616.2009.00287>
- Copeland, B.R., & Taylor, M.S. (2004). Trade, growth, and the environment. *Journal of Economic Literature*, 42(1), 7-71.
- Darrat, A., Kherfi, S., & Soliman, M. (2011). FDI and economic growth in CEE and MENA countries: A tale of two regions. *International Business & Economics Research Journal (IBER)*, 4. <https://doi.org/10.19030/iber.v4i12.3649>
- Das, A., & Paul, B.P. (2011). Openness and growth in emerging Asian economies: evidence from GMM estimation of a dynamic panel. *Economics Bulletin*, 31, 2219-2228.
- De Mello, L.R. (1999). Foreign direct investment-led growth: Evidence from time series and panel data. *Oxford Economic Papers*, 51, 133-151. <https://doi.org/10.1093/oep/51.1.133>
- Dorn, F., Fuest, C., & Potrafke, N. (2021). *Trade openness and income inequality: New empirical evidence*. CESifo Working Paper No. 9203.
- Edrak, B.B., Gharlegghi, B., Fah, B.C.Y., & Tan, M. (2014). Critical success factors affecting Malaysia's SMEs through inward FDI: Case of service sector. *Asian Social Science*, 10, 131-138. <https://doi.org/10.5539/ass.v10n16p131>
- Fatiha, I., & Mansur, M. (2017). *Causal relationship between FDI, trade, economic growth and exchange rate: Malaysian evidence*. MPRA Paper No. 108485.
- Foster, N. (2008) The impact of trade liberalization on economic growth: Evidence from a quantile regression analysis. *Kyklos*, 61, 543-567. <https://doi.org/10.1111/j.1467-6435.2008.00417.x>
- Grela, M., Majchrowska, A., Michalek, T., Mućk, J., Stażka-Gawrysiak, A., Tchorek, G., & Wagner, M. (2017). *Is Central and Eastern Europe converging towards the EU-15?* Working Paper, No. 264. Warszawa: Narodowy Bank Polski (NBP).
- Grossman, G.M., & Helpman, E. (1991). *Innovation and growth in the global economy*. Cambridge, MA: MIT Press.

- Hao, Y. (2023). The dynamic relationship between trade openness, foreign direct investment, capital formation, and industrial economic growth in China: New evidence from ARDL bounds testing approach. *Humanities and Social Sciences Communications*, 10, Article No. 160. <https://doi.org/10.1057/s41599-023-01660-8>
- Hill, C., & McKaig, T. (2015). *Global business today* (4th Canadian ed.). Toronto: McGraw-Hill Ryerson.
- Incekara, A., & Savrul, M. (2012). *The effect of globalization on foreign trade and investment in Eurasian countries*. International Conference on Eurasian Economies, Almaty, Kazakhstan. <https://doi.org/10.36880/C03.00485>
- Iqbal, B.A., Hassan, M., & Rawat, B. (2012). FDI in retail sector in South Asia: A case of India. *The Journal of World Investment & Trade*, 13, 951-971. <https://doi.org/10.1163/22119000-01306003>
- Iyke, B. (2017). Does trade openness matter for economic growth in the CEE countries? *Review of Economic Perspectives*, 17(1), 3-24. <https://doi.org/10.1515/revecp-2017-0001>
- Kandiero, T., & Chitiga, M. (2006). Trade openness and foreign direct investment in Africa. *South African Journal of Economic and Management Sciences*, 9(3), Article No. 1093. <https://doi.org/10.4102/sajems.v9i3.1093>
- Keho, Y. (2017). The impact of trade openness on economic growth: The case of Cote d'Ivoire. *Cogent Economics & Finance*, 5(1), Article No. 1332820. <https://doi.org/10.1080/23322039.2017.1332820>
- Khaliq, A., & Noy, I. (2007). *Foreign direct investment and economic growth: Empirical evidence from sectoral data in Indonesia*. Working Papers 200726, University of Hawaii at Manoa, Department of Economics.
- Kinfaek, E., & Bonga-Bonga L. (2022). The growth effect of trade openness on African countries: Evidence from using an instrumental variable panel smooth transition model. *Bulletin of Economic Research*, 75(2), 366-379. <https://doi.org/0.1111/boer.12360>
- Lee, J., Hsiao, Y-C., Bui, N., & Nguyen, T-T. (2021). Inward foreign direct investment and trade openness in Vietnam: A nonlinear autoregressive distributed lag approach. *Economies*, 9(3), Article No. 120. <https://doi.org/10.3390/economies9030120>
- Liang, C., Shah, S.A., & Bifei, T. (2021). The role of FDI inflow in economic growth: Evidence from developing countries. *Journal of Advanced Research in Economics and Administrative Sciences*, 2(1), 68-80. <https://doi.org/10.47631/jareas.v2i1.212>
- MacDougall, R. (1960). The benefits and costs of private investment from abroad: A theoretical approach. *Economic Record*, 36(74), 13-35. <https://doi.org/10.1111/j.1475-4932.1960.tb00434.x>
- Mamingi, N., & Martin, K. (2018). Foreign direct investment and growth in developing countries: evidence from the countries of the Organisation of Eastern Caribbean States. *CEPAL Review*, 124, 79-98.
- Marelli, E., & Signorelli, M. (2011). China and India: Openness, trade and effects on economic growth. *The European Journal of Comparative Economics*, 8, 129-154.
- Masron, T.A., & Nor E., (2013). FDI in ASEAN-8: Does institutional quality matter? *Applied Economics Letters*, 20(2), 186-189. <https://doi.org/10.1080/13504851.2012.687090>
- Meyer, K.E., & Sinani, E. (2009). When and where does foreign direct investment generate positive spillovers? A meta-analysis. *Journal of International Business Studies*, 40(7), 1075-1094.
- Nunthirapakorn, T. (2020). Effects of foreign direct investments on the host country. *NIDA Business Journal*, 26, 217-220.
- Oloyede, B., Osabuohien, E., & Ejemeyovwi, J. (2021). Trade openness and economic growth in Africa's regional economic communities: empirical evidence from ECOWAS and SADC. *Heliyon*, 7(5), Article No. 06996. <https://doi.org/10.1016/j.heliyon.2021.e06996>
- Oppong-Baah, T., Bo, Y., Twi-Brempong, C., Amoah, E., Prempeh, N., & Addai, M. (2022). The impact of trade openness on economic growth: The case of Ghana and Nigeria. *Journal of Human Resource and Sustainability Studies*, 10, 142-160. <https://doi.org/10.4236/jhrss.2022.101010>
- Pekarskienea, I., & Susniene, R. (2015). Features of foreign direct investment in the context of globalization. *Procedia - Social and Behavioral Sciences*, 213, 204-210. <https://doi.org/10.1016/j.sbspro.2015.11.427>
- Quazi, R.M. (2007). Foreign direct investment in Latin America: A panel regression study. *The International Journal of Business and Finance Research*, 1(1), 59-67.
- Romer, P.M. (1990). Endogenous Technological Change. *Journal of Political Economy*, 98(5), Part 2, S71-S102.
- Sheng, B., Fatima, S., Irshad, M., & Ramzan, M. (2019). Impact of openness on economic growth in developing economies: An empirical analysis. *European Online Journal of Natural and Social Sciences*, 8(3), 411-425.

- Silajdzic, S., & Mehic, E. (2018). Trade Openness and Economic Growth: Empirical Evidence from Transition Economies. In: Bobek, V. (Ed.). *Trade and Global Market* (chapter 2). InTech. <https://doi.org/10.5772/intechopen.75812>
- Su, D.T., Nguyen, P.C., & Christophe, S. (2019). Impact of foreign direct investment, trade openness and economic institutions on growth in emerging countries: The case of Vietnam. *Journal of International Studies*, 12(3), 243-264. <https://doi.org/10.14254/2071-8330.2019/12-3/20>
- Sunde, T., Tafirenyika, B., & Adeyanju, A. (2023). Testing the impact of exports, imports, and trade openness on economic growth in Namibia: Assessment using the ARDL cointegration method. *Economies*, 11(3), Article No. 86. <https://doi.org/10.3390/economies11030086>
- Szkorupová, Z. (2014). A causal relationship between foreign direct investment, economic growth and export for Slovakia. *Procedia Economics and Finance*, 15(4), 123-128. [https://doi.org/10.1016/S2212-5671\(14\)00458-4](https://doi.org/10.1016/S2212-5671(14)00458-4)
- Tjitrajaya, Y.A., Lim, C., Pasaribu, S.M.S., Sandjaja, F.R., & Mokoginta, I.S. (2021). The importance of economic openness on technical efficiency in global perspective. *International Journal of Economic Policy Studies*, 15, 387-403. <https://doi.org/10.1007/s42495-021-00064-3>
- Todaro, M.P., & Smith, S.C. (2014). *Economic development*. Boston: Pearson Education.
- Towhid, S., & Kiyoto, K. (2019). Impact of trade openness on economic growth: Evidence from BIMSTEC Countries. *Social Systems Research*, 39, 65-81.
- Ulaşan, B. (2015). Trade openness and economic growth: Panel evidence. *Applied Economics Letters*, 22(2), 163-167. <https://doi.org/10.1080/13504851.2014.931914>
- UNCTAD (2023). *UNCTADstat*. Retrieved from: <https://unctadstat.unctad.org/datacentre/> (27.12.2023).
- Vásquez, M.C., Velázquez, A.M., & González, B.P. (2019). Foreign direct investment, economic opening and economic growth in Latin American. *Contaduría y administración*, 64(1). <https://doi.org/10.22201/fca.24488410e.2018.1288>
- Vojtovic, S., Klimaviciene, A., & Pilinkiene, V. (2019). The Linkages between economic growth and FDI in CEE countries. *Ekonomický časopis*, 67(3), 264-279.
- Whiteaker, J. (2020). *The relationship between FDI and international trade*. Retrieved from: <https://www.investmentmonitor.ai/features/the-relationship-between-fdi-and-international-trade/> (22.12.2023).
- World Development Indicators (2023). *World Bank Database*. Retrieved from: <https://databank.worldbank.org/source/world-development-indicators> (27.12.2023).