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CONTRIBUTIONS OF FOREIGN DIRECT INVESTMENT AND INTERNATIONAL TRADE ON ECONOMIC GROWTH IN EMERGING MARKETS AND DEVELOPING ECONOMIES

ABSTRACT

In the context of deepening globalisation, Emerging Markets and Developing Economies (EMDEs) are increasingly asserting their pivotal role in global economic growth. According to the International Monetary Fund classification, EMDEs are a diverse group of countries in terms of size and development levels, yet they share common characteristics such as high growth rates, large market potential, and increasing international integration. Acknowledging this role, this research was undertaken to quantitatively evaluate the effects of Foreign Direct Investment (FDI) and global trade on economic growth in EMDEs during the 1994–2023 period. Based on panel data from the World Bank's World Development Indicators, the study applies modern econometric methods such as OLS, FEM, REM, and GMM to ensure accuracy and reliability in estimation. Empirical results show that international trade has a clear positive impact on long-term economic growth by expanding markets, increasing resource allocation efficiency, and promoting technological innovation. Meanwhile, FDI not only supplements investment capital but also acts as a channel for transferring technology, management skills, and global production linkages – particularly effective in countries with transparent investment environments and stable institutional systems. These findings not only enrich the theoretical basis of the role of FDI and trade in economic growth but also hold significant practical value for policymaking in EMDEs. Effectively leveraging these two factors can become a strategic lever to help these countries achieve sustainable growth, narrow the development gap, and enhance global competitiveness.

Keywords: developing economies, economic growth, emerging market, FDI, international trade, GMM, WDI

JEL Classification: B22, F15, F43

INTRODUCTION

Foreign direct investment (FDI) and international trade play an important role in promoting economic development in many countries around the world. Numerous economic theories and empirical studies have provided quantitative evidence to clarify these impacts. The World Bank (2020) report indicates that FDI inflows have enhanced labour productivity in countries with open policies and transparent legal environments, particularly in developing economies in Southeast Asia and Latin America. Data from UNCTAD (2021) emphasises that in Africa, FDI has strengthened production capacity in the resource extraction and agricultural sectors, contributing significantly to poverty reduction and GDP growth. Specifically, countries such as Nigeria and Ethiopia have used FDI to improve infrastructure and develop domestic value chains, creating jobs and increasing income.

Emerging markets and developing economies (EMDEs) play a vital role in the global economic landscape. According to the International Monetary Fund (IMF), these economies include countries with middle-income levels, high economic growth rates, and increasing integration into global trade and investment flows (IMF, 2023). Ten countries are selected for analysis in this context: Brazil, China, India, Indonesia, Mexico, South

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Africa, Turkey, Vietnam, and the Philippines. These economies stand out not only for their rapid growth but also for their importance in international trade and their ability to attract FDI (World Bank, 2022).

China and India are the two largest economies among the emerging markets, serving as key engines of global growth. China, the world's second-largest economy, has become a global manufacturing hub thanks to its open-door policies and strong FDI inflows since the 1980s (OECD, 2021). Meanwhile, India is notable for its fast-growing services sector, particularly in information technology, which significantly contributes to the national GDP (UNCTAD, 2020). Brazil, Russia, and South Africa – three BRICS countries – demonstrate strong potential due to their abundant natural resources. Brazil is known as a leading global agricultural exporter (FAO, 2021), while Russia focuses on energy and mineral exports (BP, 2022). South Africa, despite facing political and social challenges, holds a strategic position in African trade thanks to its developed infrastructure and rich mineral reserves (Collier & Venables, 2007).

Indonesia, the Philippines, and Vietnam are three prominent representatives of Southeast Asia. Indonesia and the Philippines are known for their large populations and young labour forces, while Vietnam stands out for its rapid export growth and success in attracting FDI into the manufacturing sector (ASEAN Secretariat, 2022). These countries have leveraged their geographical advantages near global supply chains to promote sustainable economic growth (Athukorala & Yamashita, 2006).

Mexico and Turkey represent two other key regions: North America and the Middle East. Mexico has greatly benefited from the North American Free Trade Agreement (NAFTA) – now the USMCA (Lederman & Maloney, 2003), while Turkey acts as a strategic bridge between Europe and Asia (OECD, 2022). Both countries have leveraged trade and FDI to enhance industrialisation capacity and promote economic growth (Sachs & Warner, 1995).

In summary, emerging and developing economies not only demonstrate diversity in economic structure but also exhibit tremendous growth potential. Their deepening participation in global value chains through FDI and international trade has transformed them into new engines of global economic momentum. This underscores the importance of studying the role of these factors in promoting long-term economic growth. Research on economic growth in EMDEs is therefore critically necessary. However, to date, there have been very few studies specifically examining economic growth in these countries – particularly studies evaluating the impact of FDI and international trade – aside from notable examples such as Cheng and Kwan (2000), Loungani and Razin (2001), and Kose et al. (2009). A key limitation of these studies is that they are outdated – conducted more than a few decades ago – and focus on only one or a few economies.

LITERATURE REVIEW

Foreign direct investment (FDI) is considered a crucial factor in economic growth, especially in developing and emerging economies. According to neoclassical growth theory, FDI contributes to economic growth by supplementing investment capital, facilitating technology transfer, and enhancing labour productivity. Liberalisation theory emphasises the role of an open business environment in attracting FDI, while endogenous growth theory focuses on the contribution of FDI to technological innovation.

Academic literature provides substantial evidence for the positive impact of FDI on economic growth. For instance, De Mello (1997) argued that FDI encourages technology and knowledge transfer, enhancing economic efficiency and long-term growth. More recently, Li et al. (2021) supplemented this view by stating that the positive impact of FDI depends on regulatory policies and the level of infrastructure development. Blomström et al. (1994) highlighted the role of FDI in improving international competitiveness.

International trade is considered a core driver of economic growth, according to classical economic theories such as those of Adam Smith and David Ricardo. Ricardo's comparative advantage theory suggests that trade enables countries to optimise resource allocation, thereby increasing economic efficiency. The Heckscher-Ohlin model focuses on trade's contribution to improving factor distribution, while endogenous growth theory underscores the role of trade in technology transfer.

The role of foreign direct investment and cross-border trade in driving economic growth is essential for enhancing economic development across global nations. Numerous empirical studies have provided quantitative evidence to clarify these effects. In developed countries, FDI serves as a key driver of economic growth by facilitating technology transfer, enhancing innovation capacity, and investing in strategic industries and services. Borensztein et al. (1998) demonstrated that FDI positively contributes to labour productivity and GDP growth in countries with strong technical and educational foundations. Similarly, Blomström and Kokko (1998) examined FDI's positive impact on competitiveness and technology transfer. In the United States, FDI has promoted innovation in the information and communication technology sector, contributing to long-term economic growth (Caves, 1996). A study by Alfaro et al. (2004) emphasised that the impact of FDI is highly dependent

on the development level of financial markets. For example, in Germany, industries receiving FDI often exhibit higher productivity due to efficient capital mobilisation. Furthermore, Helpman (2006) found that in developed countries, FDI generates greater benefits when invested in high-tech sectors, thereby stimulating innovation and growth.

In developing countries, FDI is regarded as one of the most significant factors in attracting capital, facilitating technology transfer, and enhancing international competitiveness. Alfaro (2003) highlighted that FDI in the manufacturing and service sectors has a more positive impact than in agriculture. In Southeast Asia, FDI not only boosts labour productivity but also plays a vital role in regional integration. For example, in Vietnam, FDI has significantly contributed to the manufacturing sector, particularly in technology and exports (Nguyen et al., 2020). In Africa, Asiedu (2002) asserted that a stable policy environment and robust infrastructure have enabled some countries, such as Ghana and Kenya, to maximise the benefits of FDI. However, Asiedu also pointed out that corruption and political instability hinder FDI attraction in some nations. In Latin America, Lederman et al. (2003) analysed the impact of FDI in Brazil and Mexico, revealing that FDI inflows into manufacturing have contributed to GDP growth and enhanced global competitiveness. Additionally, Loungani and Razin (2001) argued that a transparent policy environment and well-developed infrastructure play a crucial role in maximizing the benefits of FDI. They emphasized that the positive impact of FDI in developing countries is more pronounced when combined with institutional reforms and sound macroeconomic policies.

International trade (ITR) has significantly contributed to economic growth in developed countries by facilitating technology transfer and improving resource allocation efficiency. Frankel and Romer (1999) demonstrated a positive correlation between trade and economic growth, particularly in technologically innovative nations. Grossman and Helpman (1991) highlighted that trade not only enhances competitiveness but also fosters technological innovation. In the European Union, Wacziarg and Welch (2008) confirmed that trade liberalization has contributed to long-term GDP growth. Moreover, in North America, Bernard and Jensen (1999) found that exporting firms tend to have higher productivity, thereby driving overall economic growth. In high-tech industries, Melitz (2003) showed that international trade enables more efficient firms to enter global markets, consequently improving sector-wide productivity.

In developing countries, international trade enhances production capacity, expands export markets, and improves labour productivity. Dollar and Kraay (2003) found that countries with open trade policies tend to achieve higher economic growth rates. In Southeast Asia, Athukorala and Yamashita (2006) asserted that the region has significantly benefited from global trade due to participation in cross-border production networks. Indonesia and Vietnam serve as prime examples, where trade liberalization has facilitated export growth and increased national income. In Africa, Collier and Venables (2007) demonstrated that international trade enhances resource utilization efficiency and reduces poverty. More recently, Adegbite et al. (2021) found that trade expansion, particularly in technology and agriculture, has improved global market access and fostered sustainable economic growth in countries such as Nigeria and Ethiopia. Additionally, Bigsten et al. (2004) examined Sub-Saharan Africa and found that trade-promoting policies have enhanced labour productivity in key manufacturing sectors. In Latin America, Lederman and Maloney (2003) analyzed the role of trade in improving industrial quality and productivity in Chile and Brazil, emphasizing the need for infrastructure investment and trade policy reforms to maximize economic integration benefits. Sachs and Warner (1995) concluded that developing countries with trade openness experienced faster economic growth and greater resilience to external economic shocks. Similarly, Rodrik (1998) argued that international trade must be accompanied by stable macroeconomic policies to ensure sustainable growth.

In emerging and developing economies, empirical research has shown that FDI and international trade play a crucial role in driving economic growth. Loungani and Razin (2001) found that countries with strong infrastructure and transparent policies are more effective at leveraging FDI. Kose et al. (2009) analyzed the relationship between trade integration, capital flows, and economic growth in emerging markets, emphasizing that both FDI and international trade serve as powerful growth drivers, particularly through technological and knowledge transfers. Cheng and Kwan (2000) studied China and demonstrated that FDI not only generates employment but also improves labour productivity through spillover effects.

The literature review has clarified theoretical foundations and empirical evidence supporting the positive relationship between FDI, international trade, and economic growth across multiple countries. However, studies focusing on emerging and developing economies remain limited, despite these nations' active engagement in attracting FDI and international trade, particularly within global supply chains. This study addresses this gap by empirically investigating the impact of FDI and international trade on economic growth in emerging and developing economies using the latest World Development Indicators (WDI) dataset, updated through 2023.

This research is performed with the main objective of quantitatively measuring the influence of FDI and international trade on economic growth in developing and emerging economies (EMDEs) over the period from 1994 to 2023. By applying advanced econometric techniques – particularly the Generalized Method of Moments (GMM) – the research aims to provide

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highly reliable empirical evidence on the relationships among the key variables within a dynamic analytical framework. Specifically, the paper focuses on the following objectives:

1. To synthesize and systematically analyze the theoretical foundations and empirical evidence regarding the effects of FDI and international trade on economic growth, with particular emphasis on the context of EMDEs.
2. To construct an econometric model and conduct empirical estimations to evaluate the influence of FDI, international trade (ITR), and a set of control variables – including gross capital formation (GCF), government consumption expenditure (GCE), and inflation (INF) – on economic growth (EGR), using long-term panel data from 10 representative EMDEs.
3. To compare and assess the suitability of different estimation techniques – such as Ordinary Least Squares (OLS), Fixed Effects Model (FEM), Random Effects Model (REM), and GMM – in order to verify the robustness and consistency of the results.
4. To identify economic factors that exert either positive or negative effects on growth in developing and emerging economies, thereby clarifying the specific role of each variable within the model.
5. To propose appropriate policy recommendations based on the empirical findings, with the goal of optimizing the contribution of FDI and international trade to sustainable economic growth strategies in EMDEs.

With this comprehensive and systematic approach, the paper aims to contribute meaningfully to both theoretical and practical discussions in the field of international economic growth. Moreover, it is expected to serve as a valuable reference for policymakers in designing and implementing effective economic development programs in developing and emerging countries.

AIMS AND OBJECTIVES

This research examines the impact of foreign direct investment and world trade on economic expansion in emerging markets and developing economies. The unique aspect of our study is its analysis of a comprehensive sample of ten EMDEs over the period from 1994 to 2023. It aims to confirm the hypothesis that FDI and international trade play a significant role in fostering economic growth in these economies.

METHODS

The econometric tools adopted in this study include Ordinary Least Squares (OLS), Random Effects Model (REM), Fixed Effects Model (FEM), and the Generalized Method of Moments (GMM) approach by Arellano and Bover (1995) and Blundell and Bond (1998). We use these tools concurrently to analyze and compare the results of model estimations across different techniques. The econometric model is as follows:

$$EGR_{it} = \beta_0 + \beta_1 FDI_{it} + \beta_2 ITR_{it} + \beta_3 GCF_{it} + \beta_4 GCE_{it} + \beta_5 INF_{it} + \varepsilon_{it}$$

where i refers to each country in the panel dataset and t designates the time period; EGR denotes the economic growth of the countries; FDI represents foreign direct investment; ITR refers to international trade.

The control variables include *GCF* (gross capital formation), *GCE* (government consumption expenditure), and *INF* (annual inflation rate). The variables are described in detail in Table 1.

The assessment of the impact of *FDI* and *ITR* on economic growth in emerging markets and developing economies (EMDEs) is conducted through the coefficients β_1 and β_2 in the model. Specifically, if these regression coefficients are positive and statistically significant, the respective factor has a positive impact on economic growth. Conversely, if these coefficients are negative and statistically significant, the factor has a negative impact on economic growth. If the regression coefficients are not statistically significant, then the factor has no impact on economic growth.

Table 1. Details of variables in econometric methodologies.

Variable	Symbol	Measurement	Data source
Economic growth	EGR	GDP per capita growth (annual %)	WDI
Foreign direct investment	FDI	Foreign direct investment, net inflows (% of GDP)	WDI
International Trade	ITR	Exports and Imports of goods and services (% of GDP)	WDI
Domestic investment capital	GCF	Gross capital formation (% of GDP)	WDI
Public consumption expenditure	GCE	General government final consumption expenditure (% of GDP)	WDI
Inflation	INF	Inflation, consumer prices (annual %)	WDI

The research sample includes 10 emerging markets and developing economies (Table 2). Data used in this study were obtained from the World Bank's World Development Indicators (WDI) database over the period from 1994 to 2023.

Table 2. Emerging markets and developing economies in the sample.

No	Country Name	Country Code	No	Country Name	Country Code
1	Brazil	BR	6	Philippines	PH
2	China	CN	7	South Africa	ZA
3	India	IN	8	Turkey	TR
4	Indonesia	ID	9	Ukraine	UA
5	Mexico	MX	10	Viet Nam	VN

Table 3 outlines the correlation coefficients among the variables employed in the econometric model. The outcomes demonstrate that all independent variables exhibit low interdependence, implying that multicollinearity does not pose a concern, and the estimation methods used remain robust despite relationships among variables.

Table 3. Correlation Coefficients.

Variables	EGR	FDI	ITR	GCF	GCE	INF
EGR	1.000					
FDI	0.249	1.000				
ITR	0.108	0.404	1.000			
GCF	0.521	0.232	0.177	1.000		
GCE	-0.206	-0.105	-0.486	-0.345	1.000	
INF	-0.046	-0.099	-0.083	-0.047	0.076	1.000

Table 4 outlines descriptive statistics for the econometric model's variables, indicating significant disparities across EMDEs throughout the study timeframe.

Table 4. Statistical overview of variable data.

Variable	Obs	Mean	Std. Dev.	Min	Max
EGR	300	3.270	3.969	-14.489	13.636
FDI	300	2.311	1.732	-2.757	9.713
ITR	300	57.760	30.228	15.636	186.676
GCF	300	26.264	7.944	12.346	46.660
GCE	300	13.278	4.142	5.465	21.067
INF	300	18.371	121.850	-1.710	2,075.888

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Economic Growth (EGR): The average annual economic growth rate is 3.27%, but it varies greatly across countries. The highest growth rate recorded is 13.636%, while the lowest is -14.489%. This disparity highlights notable differences in economic growth performance among developing and emerging economies.

Foreign Direct Investment (FDI): The average FDI value is 2.311%, with a wide variation across countries. The maximum is 9.713%, while the minimum is -2.757%. This indicates that reliance on FDI is not uniform within EMDEs, with some countries attracting substantial foreign capital while others face challenges in doing so.

International Trade (ITR): The average level of international trade is 57.76%, with the highest rate reaching 186.676% and the lowest at 15.636%. This reflects the uneven development of international trade across countries, with some deeply integrated into global markets while others are less engaged.

Gross Capital Formation (GCF): Domestic investment averages 26.264%, but the variation is considerable. The highest rate is 46.66%, and the lowest is 12.346%. This demonstrates differences in the mobilization and use of domestic investment resources across the sample economies.

Government Consumption Expenditure (GCE): Public spending averages 13.278%, with a high of 21.067% and a low of 5.465%. This disparity reflects differences in fiscal priorities and the efficiency of public expenditure management among EMDEs.

Inflation (INF): The average inflation rate is 18.371% per year, but the variation is extremely large. Some countries recorded hyperinflation, with rates as high as 2,075.888%, while others maintained very low inflation, with the lowest being -1.71%. This demonstrates price instability and considerable variation in monetary policies across the countries studied.

These statistics highlight the diversity in economic conditions and policy frameworks among EMDEs and provide an important foundation for analyzing the impact of these factors on economic growth.

RESULTS

Based on the dataset described above, we first estimate the model using three econometric methods: OLS, REM, and FEM. During this process, we also conduct diagnostic tests to detect potential issues of heteroskedasticity and autocorrelation in the error terms, ensuring the reliability of the estimations.

To further assess the validity of the model, we conduct endogeneity tests for the explanatory variables using the Durbin-Wu-Hausman test. This step is essential to determine whether the variables in the model are endogenous or exogenous, which directly affects the choice of estimation method and the interpretation of results. The outcomes of the Durbin-Wu-Hausman test are presented in Table 4. The test results indicate that among the independent variables, three variables – FDI, GCF, and GCE – are endogenous, while ITR and INF are identified as exogenous variables.

With endogenous variables present in the model, we estimate it using GMM. This method is highly effective for panel data with potential endogeneity, as it controls unobserved heterogeneity, simultaneous bias, and measurement errors. By employing System GMM estimation, we address endogeneity and ensure consistent and efficient parameter estimates.

In summary, the use of multiple estimation methods and robust diagnostic testing enhances the credibility of the empirical analysis. The adoption of System GMM allows us to overcome the limitations of traditional panel data techniques and obtain reliable insights into the impact of FDI and international trade on economic growth in developing and emerging economies.

Table 5. Results of the Durbin-Wu-Hausman test.

Variables	Endogenous/exogenous	P.value
FDI	endogenous	0.050
ITR	exogenous	0.951
GCF	endogenous	0.000
GCE	endogenous	0.000
INF	exogenous	0.340

The bottom section of Table 6 presents diagnostic statistics to verify the GMM model's appropriateness and validity. The results show that p-values for AR(1) and AR(2) tests are above the 5% significance threshold, indicating no first- or second-order autocorrelation in the residuals, thus satisfying a fundamental GMM estimation assumption. The Sargan and Hansen tests yield p-values greater than 5%, confirming that the instrumental variables are valid and not overidentified, supporting the GMM model's reliability. Furthermore, all models' F-tests have p-values below 5%, validating their overall significance and suitability. Notably, the number of instruments in GMM estimation is kept below the number of country groups in the panel data, ensuring model stability and avoiding issues with excessive instruments. Table 6 also provides estimation results from OLS, FEM, REM, and GMM approaches to analyze the effects of FDI and world trade on economic progress in developing and emerging economies. These results offer robust evidence of the FDI-trade-growth relationship, emphasising the importance of using diverse estimation techniques to ensure reliable and consistent findings.

Table 6. Results estimated with System GMM. Note: ***p < 0.01, **p < 0.05, *p < 0.1.

Variables	OLS	FEM	REM	GMM
l.EGR				-0.505**
FDI	0.367***	0.442***	0.411***	0.676***
ITR	0.009	0.003	0.014	0.842***
GCF	0.238***	0.216***	0.214***	0.704*
GCE	-0.056	-0.799***	-0.173**	-0.924**
INF	-0.001	-0.001	-0.001	-0.219*
Constant	-2.541	7.380	-0.161	10.908
F–test p-value	0.000	0.000	0.000	0.000
Number of obs	300	300	300	280
Number of groups				10
Number of instruments				8
AR(1) p-value				0.144
AR(2) p-value				0.234
Sargan test p-value				0.142
Hansen test p-value				1.000

The findings in Table 6 provide strong empirical evidence of the connection between macroeconomic factors and economic growth (EGR) in developing and emerging economies (EMDEs). Through four estimation models – OLS, FEM, REM, and GMM – the study evaluates the role and degree of influence of each independent variable on economic growth.

FDI demonstrates a consistently positive and statistically significant effect on EGR across all four models. The FDI variable is significant at the 1% level in all estimations, with coefficients of 0.367 (OLS), 0.442 (FEM), 0.411 (REM), and the highest at 0.676 in the GMM model. The larger coefficient in the GMM model reflects the stronger long-term impact of FDI when analyzed within a dynamic framework. This suggests that FDI is not only an important source of capital but also a strategic tool for promoting growth through technology transfer, productivity enhancement, and market expansion.

International Trade (ITR) is only statistically significant in the GMM model, at the 1% level, with a positive coefficient. In contrast, it lacks significance in the three static models (OLS, FEM, and REM). This implies that the positive impact of international trade on economic growth becomes evident primarily in the long run. The complexity of this relationship may be influenced by various factors such as infrastructure quality, the degree of trade liberalization, and the capacity of countries to capitalize on global integration opportunities.

The lagged economic growth variable (l.EGR) has a negative coefficient of -0.505 in the GMM model and is statistically significant at the 5% level. This indicates the presence of economic convergence among EMDEs – countries with higher initial growth rates tend to slow down over time, while those with lower starting points tend to catch up.

Gross Capital Formation (GCF) displays a positive and statistically significant effect in all four models, reinforcing its fundamental role in supporting growth through expanded production capacity, upgraded infrastructure, and promotion of domestic innovation.

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In contrast, Government Consumption Expenditure (GCE) has a negative coefficient and is significant across all models. This suggests that in many EMDEs, public spending may be inefficient, potentially leading to resource misallocation or even impeding economic growth due to poor budget management and governance.

Lastly, Inflation (INF) is statistically insignificant in the three static models but becomes significant at the 1% level in the GMM model, with a negative coefficient. This highlights that high inflation acts as a constraint on long-term growth, even if its short-term impact is not immediately evident.

In summary, the statistical findings from Table 6 indicate that in the context of developing and emerging economies, FDI and domestic investment play a positive role in promoting economic growth. In contrast, inefficient public expenditure and high inflation are detrimental. Moreover, the benefits of international trade are only evident in the long run, underlining the importance of using dynamic models like GMM in econometric analyses to fully capture the long-term effects of macroeconomic variables on growth.

DISCUSSION

The findings from this research provide key insights, corroborating and elaborating on prior studies about the factors influencing economic growth in EMDEs. Applying GMM as a dynamic estimation method allows for a more precise capture of the variables' long-term dynamics, generating results with both theoretical and practical value.

The confirmation that FDI has a consistently positive and significant effect on economic growth across all four models is a particularly robust finding, especially considering that the coefficient is substantially higher in the GMM model (0.676), underscoring its dominant long-term impact. This aligns with earlier research – for instance, Borensztein et al. (1998) emphasized that FDI can enhance productivity in host countries, particularly when those countries have adequate absorptive capacities, such as high education levels and a conducive investment climate. Similarly, Alfaro et al. (2004) highlighted FDI's role in improving resource allocation efficiency across sectors, thereby accelerating economic growth. More recent studies, such as Wang & Choi (2016), Pandey & Bishnoi (2023), and Samsuddin & Amar (2020), reaffirm FDI as a key driver of technological transfer, innovation, and domestic value creation. However, a unique contribution of this study lies in its assertion that FDI should not be seen merely as supplementary capital, but as a transformative force capable of restructuring the economic foundations of EMDEs – especially within the context of globalization and competitive global supply chains. This highlights the need for these countries to not only attract FDI, but also to prioritize its quality and ensure domestic capacity to absorb and diffuse the imported technology.

Another noteworthy finding is that international trade (ITR) only shows statistical significance in the GMM model, reflecting a long-term relationship with economic growth. This finding adds an important dimension to prior studies such as Barro (2003), Niebel (2018), and Myovella et al. (2020), which emphasized the role of trade as a vehicle for market expansion, investment attraction, and technological spillovers. The present study reveals that trade only exerts a positive effect on growth when supported by stable policies, developed infrastructure, and strong national competitiveness. These enabling conditions are often lacking in EMDEs, which may explain the insignificant results in the three static models (OLS, FEM, REM). Compared to earlier research, this study introduces a new analytical dimension: the importance of estimation methodology. Specifically, the fact that trade does not show significance in static models but does in the dynamic GMM framework suggests that only dynamic tools can fully capture the economic effects of trade.

The negative coefficient of the lagged economic growth variable (l.EGR) in the GMM model serves as evidence for economic convergence, where lower-income countries gradually catch up to their higher-income counterparts. This finding aligns with Solow's (1956) neoclassical growth theory and is supported by empirical work from Barro & Sala-i-Martin (1992). Moreover, more recent contributions by Niebel (2018) and Hadush et al. (2023) argue that convergence tends to be stronger when countries engage in structural reforms, promote education, and invest in technological innovation. This suggests that the growth potential of EMDEs remains significant – provided they leverage their comparative advantages and implement appropriate supporting policies.

Gross capital formation (GCF) shows a clearly positive and statistically significant impact in all models, confirming its vital role in growth promotion. This finding is consistent with studies such as Oyebowale & Algarhi (2020) and Batrancea et al. (2021), which highlight that well-directed domestic investment can generate greater spillover effects than FDI under the right conditions. A novel contribution here is the study's demonstration that GCF holds relevance not only in the short term (static models) but also in the long term (GMM), emphasizing the critical importance of strengthening internal capital mobilization alongside foreign investment strategies.

The government consumption expenditure variable (GCE) carries a negative coefficient and is statistically significant across all models, reflecting the inefficiency of public spending in many EMDEs. This supports warnings from Barro (2003) and Pandey & Bishnoi (2023) that public expenditure can be counterproductive if poorly managed or misallocated. Such inefficiency often arises when spending is directed toward low-impact or non-viable projects, or when it is influenced by corruption and rent-seeking behaviour. This study emphasizes that public spending contributes to growth only when it is well-targeted – particularly toward infrastructure, education, and health.

The inflation variable (INF) is insignificant in the static models but becomes significantly negative in the GMM model. This indicates that inflation acts as a long-term constraint on growth. The result is consistent with previous studies by Samsuddin & Amar (2020) and Hadush et al. (2023), which assert that high inflation undermines purchasing power, creates economic instability, and erodes investor confidence. What distinguishes this study is its finding that the adverse impact of inflation becomes evident only in the long run, once again highlighting the superiority of dynamic modelling approaches like GMM in analyzing macroeconomic policy effects.

Overall, this study both validates classical hypotheses in growth theory and contributes new insights through the use of dynamic GMM estimation. While it reaffirms the positive roles of FDI and GCF, it also clarifies that the effects of international trade, government spending, and inflation should be interpreted within the appropriate temporal frameworks to accurately assess their impact on growth. The study's key strength lies in its comprehensive approach, integrating both static and dynamic models to provide a multidimensional and more accurate understanding of economic growth in the EMDE context. These findings are of high practical relevance and offer valuable guidance for long-term economic policy formulation in emerging and developing countries.

CONCLUSIONS

This study was conducted to evaluate the impact of FDI, international trade, and other macroeconomic factors on economic growth (EGR) in emerging and developing economies (EMDEs). With the aim of clarifying the role of each factor in promoting growth, the study utilized four econometric models: OLS, FEM, REM, and GMM. From these, a logical and coherent system of conclusions was drawn, corresponding to each stated research objective.

The research results show that FDI has a positive and statistically significant impact on economic growth across all models, being particularly prominent in the GMM model with the highest coefficient (0.676). This indicates that FDI is not only a necessary supplementary capital source but also a strategic factor that brings technology, management expertise, and global market connections, thereby boosting production efficiency and restructuring the economy. Therefore, FDI plays a pivotal role in the long-term development strategies of EMDEs.

ITR only shows a positive and statistically significant impact in the GMM model, emphasizing that the influence of international trade on growth only becomes evident in the long run. This reflects the complex nature of this relationship, which is affected by various intermediate factors such as infrastructure quality, production capacity, and integration policies. The results reinforce the argument that a proper assessment of the role of trade should be placed within a dynamic analytical framework, highlighting the necessity of the GMM method in growth studies.

The lagged economic growth variable (l.EGR) has a negative and statistically significant coefficient in the GMM model, indicating the presence of economic convergence within the EMDEs group. Specifically, countries with initially high growth rates tend to experience a gradual decrease in growth, while countries with lower growth rates tend to catch up. This result is consistent with neoclassical growth theory, confirming that poorer countries have higher growth potential due to the marginal efficiency of capital investment and technology.

The results indicate that GCF has a positive and statistically significant impact across all four models, demonstrating its crucial role in supporting growth through investment in infrastructure, production capacity, and improving the domestic business environment. Conversely, general government consumption expenditures (GCE) have a negative impact, suggesting inefficiency in public spending in many EMDEs, possibly due to waste, corruption, or poor budget management. Inflation (INF) is not significant in static models but shows a negative impact in the GMM model, indicating the risk of high inflation in the long run and its negative effect on the investment environment and macroeconomic stability.

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Drawing on the study's results, multiple policy suggestions are put forward to foster sustainable economic growth in EMDEs:

1. Governments need to establish a stable, transparent, and competitive investment environment. Improving infrastructure, simplifying administrative procedures, and strengthening the legal framework are essential conditions. More importantly, FDI policies should aim to encourage technology transfer and connect domestic enterprises with multinational corporations, thereby enhancing domestic production capacity.
2. Countries should develop long-term trade strategies focusing on diversifying markets and exporting products, improving the quality of goods, and enhancing logistics infrastructure. Proactive participation in free trade agreements, coupled with institutional reforms and improved domestic competitiveness, will help optimize benefits from global economic integration.
3. Encouraging domestic investment, especially from the private sector and small and medium-sized enterprises (SMEs), is a key factor. Governments should provide financial support, improve access to credit, and invest in key areas such as education, healthcare, and high technology to promote comprehensive and sustainable growth.
4. Stricter control and monitoring measures for public spending are needed, increasing transparency and accountability in the use of state budgets. Prioritizing public spending on areas with significant spillover effects, such as transport infrastructure, education, and healthcare, will create favourable conditions for long-term growth.
5. Monetary policies need to be flexible and cautious to control inflation within target levels, while ensuring exchange rate stability and building investor confidence. Effective coordination between fiscal and monetary policies is a prerequisite for maintaining sustainable growth.

Although the study has provided valuable evidence, some limitations should be noted: the quality and completeness of data in some EMDEs are limited, which may affect the accuracy and generalizability of the models; the study primarily focused on economic variables, and did not include non-economic factors such as institutional quality, democracy levels, corruption, or political stability.

Future research could focus on the following directions:

1. Expanding the scope geographically, with in-depth analysis by region, such as Africa, Asia, or Latin America, to identify specific characteristics in the relationship between FDI, ITR, and growth.
2. Integrating non-economic factors, including institutional variables such as public administration effectiveness, corruption control, and economic freedom, to provide a more comprehensive analysis of factors affecting growth.

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The Authors declare that there is no conflict of interest.

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Трінь Л. Д.

ВПЛИВ ПРЯМИХ ІНОЗЕМНИХ ІНВЕСТИЦІЙ І МІЖНАРОДНОЇ ТОРГІВЛІ НА ЕКОНОМІЧНЕ ЗРОСТАННЯ В КРАЇНАХ ІЗ РИНКОМ, ЩО ФОРМУЄТЬСЯ, ТА КРАЇНАХ, ЩО РОЗВИВАЮТЬСЯ

В умовах поглиблення глобалізації країни з ринками, що формуються, і країни, що розвиваються (EMDE), усе більше утверджують свою ключову роль у глобальному економічному зростанні. Згідно з класифікацією Міжнародного валютного фонду (МВФ), країни EMDE є групою країн, різноманітною за розміром і рівнем розвитку, проте вони мають спільні характеристики, такі як високі темпи зростання, великий ринковий потенціал і зростання міжнародної інтеграції. Визнаючи цю роль, автор провів дослідження для кількісної оцінки впливу прямих іноземних інвестицій (ПІІ) і міжнародної торгівлі на економічне зростання країн EMDE протягом 1994–2023 років. Ґрунтуючись на панельних даних Індикаторів світового розвитку (WDI) Світового банку, автор використав сучасні економетричні методи, такі як OLS, FEM, REM та GMM, щоб забезпечити точність і надійність оцінки. Емпіричні результати показують, що міжнародна торгівля має чіткий позитивний вплив на довгострокове економічне зростання за рахунок розширення ринків збуту, підвищення ефективності розподілу ресурсів і сприяння технологічним інноваціям. Проте ПІІ не лише доповнюють інвестиційний капітал, а й виступають каналом для передачі технологій, управлінських навичок і глобальних виробничих зв'язків – особливо ефективно в країнах із прозорим інвестиційним середовищем і стабільними інституційними системами. Ці результати не лише збагачують теоретичну базу ролі ПІІ і торгівлі в економічному зростанні, а й мають значну практичну цінність для формування політики в країнах EMDE. Ефективне використання цих двох факторів може стати стратегічним важелем, який допоможе цим країнам досягти сталого зростання, скоротити розрив у розвитку та підвищити глобальну конкурентоспроможність.

Ключові слова: економіки, що розвиваються; економічне зростання; ринки, що формуються; прямі іноземні інвестиції, міжнародна торгівля, узагальнений метод моментів (GMM), Індикатори світового розвитку (WDI)

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