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**The relationship between
 foreign direct investment,
 financial development
 and growth economic in
 Next-II Countries:
 a PMG/ARDL estimation**

1. Introduction

Investment works for any economy because it makes economic growth by activating sufficient demand determinants. Foreign direct investment is part of this investment. However, its flows change from one country to another; a few hypotheses have been created to display the personal investment choice and distinguish its most significant determinants. Keynes was the first cause to notice an autonomous speculation choice at the level of the real economy. This choice depends on the capital's peripheral proficiency that the investor expects contrasted and the loan fee as an elective expense of contributed reserves. There is no uncertainty that foreign direct investments venture assumes a significant part in improving nations' economies. Nobody disregards its significance for the state in progressing financial and social turn of events, expanding practical limit, raising the monetary development rate, and improving the economic circumstance.

Moreover, many studies dealt with the determinants of foreign direct investment

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(e.g., see louail, 2019, Asiedu, 2006; Billington, 1999; Boateng, Hua, Nisar, & Wu, 2015; Caves, 1971; Chakrabarti, 2001; Dunning, 1988; Vernon, 1979) to explain variations across countries in how much FDI inflows they receive. Among the determinants that have been focused on are growth and development of market size, economic openness, Monetary policy and inflation, Political and institutional factors, and education and infrastructure.

Many studies took economic growth and financial development as determinants of foreign direct investment; some of them have studied the impact in one country (Riache et al., 2021, Anetor, 2020, Nwosa et al. 2011a and Nwosa et al. 2011b), or in several countries (Omran & Bolbol. 2003, Nasir et al. 2019, Sghaier et al. 2013, Choong. 2012, Choong & Lam. 2011, Hermes & Lensink, 2003 and Pradhan et al. 2018). Some of them also studied the causal relationship for one country (e.g. Tang & Tan. 2014) or several countries (e.g. Adeniyi et al. 2012). The study of the impact of financial development and economic growth on the flow of foreign direct investment to the N-11¹. Countries between 1985-2019 are in addition to these studies.

According to the above discussion, a clear difference between scholars on foreign direct investment, economic growth and financial development. Moreover, this study provides empirical evidence on the association between foreign direct investment, financial development and economic growth in the N-11 countries. The topic is considered experimental, and its results are not convincing; and in light of these concerns, this study aims to contribute to the existing literature by studying the relationship between foreign direct investment, financial development and economic growth in the N-11 countries during the period 1985–2019. This study is distinguished from the previous ones in three main aspects. First, we focus on the group of countries poised to become the world's biggest economies in the 21st century, after the BRIC countries. No prior research investigates foreign direct investment, economic growth and financial development nexus in those countries together, despite single country studies. Second, since different economic structures might characterise the studied sample, institutions and political conditions heterogeneity, maybe, in this case, the use of standard econometric models provides spurious findings. To eliminate this problem, we emphasise modelling foreign direct investment, economic growth, and financial development relationships by accounting

1 Next 11 is a grouping acronym that refers to Bangladesh, Egypt, Indonesia, Iran, Mexico, Nigeria, Pakistan, Philippines, South Korea, Turkey and Vietnam.

for heterogeneity between the study's countries. By applying heterogeneous dynamic panel data modelling; They are known as the Pooled Mean Group (PMG)². Another advantage in the short run for the PMG estimator is that it can check the relationship country-by-country. Moreover, the panel data in the Autoregressive Distributed Lag technique is also applied. Moreover, there are many advantages of that technique outlines by literature, compared to other standard cointegration techniques. Third, like other previous studies, this research neglected some control variables that could have produced different results.

This study contributes to clarifying the accuracy and comprehensiveness of the relationship between foreign direct investment, financial development and economic growth by providing aid to decision-makers in understanding the nature of dynamic relationships between FDI, financial development and economic growth. Like other studies that preceded it, this study contains deficiencies that could serve as a horizon for future studies, such as studying causality between study variables for the N-11 group.

This study was divided into six sections—section 1 introduction. Section 2 provides a theoretical and empirical underpinning on the foreign direct investment, economic growth and financial development nexus—section 3 research methodology. Section 4 findings of empirical study, while the last section exposures some discussion and conclusions.

2. Theoretical and empirical underpinnings and hypothesis development

Theoretically, and as indicated by dunning's hypothesis dunning, 1981, FDI determinants of the host nation are recognised into three kinds: first, possession points of interest: These are critical determinants of FDI that show that components, for example, innovative work and publicising consumption, administrative assets, innovation, capital power, work abilities, firm size, scale economies, and experience affect exercises of FDI or global ventures (Faeth, 2009). Second, site advantage: a bit of leeway is given to a speculator firm on the off chance that it begins its tasks in the particular host country (rather

2 Pooled Mean Group (PMG): It is a method for estimating panel data. The PMG estimator allows short-run coefficients and error variances to differ across groups but constrains long-run coefficients to be identical. Moreover, if we follow unit root processes, the PMG estimator considers both the case where the regressors are stationary. For both cases, there is asymptotic distribution as T tends to infinity (see. Pesaran et al. 1999).

than another country or financial specialist's nation of origin) (Tintin, 2013). Furthermore third, interior change includes: a favourable position is given to a speculator firm on the off chance that it packages its creation or administration as opposed to unbundling specialised discussion, support, and others (Tintin, 2013).

Contrarily to the relationship between FDI, financial development and economic growth, which has generated a wide range of literature since the past decades, the relationship between FDI, economic growth, and financial development, as well as financial development, foreign direct investment and economic growth, can be seen as a new area of research. The data on financial development is the critical factor that has recently stimulated literature on this subject. Furthermore, many research papers have emerged in the past few years covering many geographic locations, using various standard economy tools, including a range of control variables. Many studies focused on the specific country, while others were based on a group of countries within the plate data framework.

Table 1 summarises the selected studies' findings on the relationship between foreign direct investment, economic growth and financial development. Studies are divided into three classes. First; Studies on the relationship between FDI, economic growth and financial development. Seconds; Studies on the relationship between FDI and financial development. And third; Studies on the relationship between FDI and growth economic.

Furthermore, based on the results of this research presented above, and have that much of the literature refers to a positive association between economic growth, financial development, and FDI inflows, we hypothesise that financial development and economic growth positively impact FDI inflows in the N-11 countries. So to answer the previous problem and achieve the desired research objectives, we propose the following set of hypotheses:

H1: Economic growth and financial development also affect FDI flows in N-11 countries in the long run.

H2: Economic growth and financial development also affect FDI flows in N-11 countries in the short run.

H3: There is an impact positive and significant for economic growth and financial development on FDI flows in N-11 countries in the long run for each country separately.

H4: There is an impact positive for economic growth and financial development on FDI flows in N-11 countries in the short-run for each country separately.

Table 1. Studies Summary on the relationship between FDI, economic growth and financial development

Study	Methodology	Main findings
Adeniyi et al. 2012	Granger causality	Financial development is essential in raising FDI and economic growth rates in Ghana, Sierra Leone and Gambia. However, Nigeria has no relationship between the three variables.
Hermes & Lensink, 2003	Panel data	Sixty-seven financial sector developments have contributed to both the rise of economic growth and FDI.
Anetor, 2020	VAR Approach	There is a positive impact of FDI and financial development shocks on economic growth, and that effect is not present for portfolio investments.
Riache et al., 2021	Granger causality	There is a Bi-directional Granger causality between FDI and economic growth.
Omran & Bolbol. 2003	Panel data	The domestic financial reforms policies should promote FDI.
Nasir et al. 2019	Panel data	FDI, economic growth and financial development lead to an increase in environmental degradation in ASEAN-5 countries.
Ogbuagu et al. 2020	Panel data	the threshold level of financial development is 22.8 % for convergence between cross-sectional.
Sghaier et al. 2013	GMM	There a positive relationship between FDI and economic growth. Moreover, the development of the domestic financial system is essential for FDI to affect economic growth positively.
Tang & Tan. 2014	Granger causality	The energy consumption and economic growth Granger causes each other in the short and long term.
Shahbaz & Rahman. 2012	ARDL	FDI, Financial development and imports have a positively and significantly effect on economic growth.
Choong. 2012	GMM	To the positive effect of FDI on economic growth, the domestic financial system must be developed.
Nwosa et al. 2011a	ARDL	There are effects adverse for financial development and FDI on economic growth in Nigeria.

Studies on the relationship between FDI, economic growth and financial development

Studies on the relationship between FDI, economic growth and financial development	Suliman & Elian. 2014	VECM	In order to the positive effect of FDI on economic growth, must be developed the financial markets.
	Choong & Lam. 2011	GMM	To the positive effect of FDI on economic growth, it must have a certain level of financial sector development.
	Jahfer & Inoue. 2014	VECM	Economic growth and financial development cause FDI, but there is no substantial evidence on the contrary.
	Pradhan et al. 2018	Panel data	A long and short-run causal relationship exists between the FDI, financial development, mobile phones and economic growth.
	Alzaidy et al. 2017	ARDL	The developed financial sectors facilitate FDI spillover and yield economic growth.
	Faisal et al. 2017	ARDL	There is unidirectional Granger causality in the short-run that runs from stock prices to economic growth and from economic growth to FDI.
Studies on the relationship between FDI and financial development	Henri et al. 2019	Panel data	In the long run, the FDI promotes financial development in African countries.
	Dutta & Roy. 2011	Panel Data	If the financial development transgressed, the threshold level becomes harmful for FDI.
	Ang. 2009	VECM	In the long run, FDI impacts negatively on output expansion; economic development stimulates by financial development.
	Abidin et al. 2015	Panel Data	Unidirectional causality exists from FDI inflows to EC and EC to trade in the short-run.
	Korgaonkar. 2012	Panel Data	The analysis suggests that FDI does not flow into financially weak countries and is dependent on both the banking sector variables and the stock market variables.
	Shahbaz et al. 2011	ARDL	Financial development is stimulating FDI and Portugal's economic growth.
	Akinlo. 2004	ECM	There is a negative impact on financial development on economic growth.

Studies on the relationship between FDI and growth economic	Azman-Saini et al. 2010	Panel Data	The freedom of economic activities promotes gain significantly from multinational corporations.
	Bengoa & Sanchez-Robles. 2003	Panel Data	In the host countries, there is a positive impact of FDI on economic growth.
	Iamsiraroj. 2016	Panel Data	A causal relationship exists between FDI and economic growth.
	Wang & Wong. 2009	Panel Data	if the level of human capital reaches the threshold, the FDI affect productivity.
	Iamsiraroj & Ulubaşoğlu. 2015	Panel Data	Regional growth variation rather than within a country and contemporary FDI rather than ex-FDI are essential for growth.
	Borensztein et al. 1998	Panel Data	When a sufficient absorptive capability of advanced technologies is available in the host economy, the FDI affects economic growth.

Source: prepared by the authors

3. Research methodology

This section focuses on data collection and definition of the variables and determines the assessment tool that achieves the study objectives.

3.1. Data collection and research variables

To study the relationship between FDI, economic growth and financial development at present. The study relies on panel data of eleven countries named Next-11: Bangladesh, Egypt, Indonesia, Iran, Mexico, Nigeria, Pakistan, Philippines, South Korea, Turkey, and Vietnam from 1985 to 2019. So its sample consists of 372 observations. Moreover, the study variables' obtained the annual data were from the World Bank's (World Development Indicators (2020)).

This study's dependent variable indicates the inflow of FDI as a percentage for each country; it was also adopted in previous experimental researches in this field (Riache et al., 2021, Omran & Bolbol, 2003, Adeniyi et al. 2012). The flow of FDI was taken as a percentage instead of FDI flow as a value because the relative change is considered more accurate to study the relationship between the variables. Moreover, to achieve compatibility with other variables, which is also taken as a percentage.

This investigation's independent variables are the financial development represented in Domestic credit of the private sector over GDP (DCPS) as a percentage for each country. The economic growth represented in the gross domestic product as a percentage for each country.

The data sources and the expected sign of the study variables are summarised and described in table 2.

Table 2. Variables, Measurements and Data Collection Sources

Variable	Proxy	Description	Expected Sign
Foreign Direct Investment	FDI	flows FDI percentage of GDP	
Growth Economic	GDPG	The annual per cent change of GDP	+
Financial Development	DCPS	Domestic credit of the private sector over GDP	+

Source: all data are from the World Development Indicators' Data Bank by the World Bank 2021 (databank.worldbank.org/wdi)

3.2. Model and technique of estimation

This paper aims to test the effect of economic growth and financial development on FDI flow in the group of N-11 countries; based on previous empirical research that studied this relationship, we mention the most important of them (e.g. see Riache et al., 2021, Omran & Bolbol, 2003, Adeniyi et al., 2012). Therefore, the experimental model for this research can be determined in the equations follow:

$$FDIG_t = f(DCPSG_t, GDPG_t) \quad (1)$$

$$FDIG_t = \beta_0 + \beta_1 * DCPSG_t + \beta_2 * GDPG_t + \varepsilon_t \quad (2)$$

Where $FDIG_t$: flows FDI percentage of GDP, $DCPSG_t$: Domestic credit of the private sector over GDP, $GDPG_t$: the annual per cent change of gross domestic product, $\beta_0, \beta_1, \beta_2$: is the parameters and ε_t : is the error term.

In this research, the PMG method was used to estimate the model and verify that both economic growth and financial development affect foreign

direct investment in the study countries. The PMG estimation method called the mean group estimator (MG) assumes the regression coefficients and the error differences are identical. In this method, an intermediary procedure was proposed by Pesaran et al. 1999, the mean group (PMG) estimator, which allows short-run coefficients and error variances to differ across groups, but restricts long-run coefficients to be identical. The case in which the regression factors are constant and how the unit root operations are followed are considered. The cases derived from the asymptotic distribution of the PMG capacities tend to be infinite.

Moreover, this method provided higher efficiency parameters, low co-linearity and degrees of freedom are more significant (Lee & Wang., 2015). Moreover, the assumption of the existence of cointegration between study variables, to be I(1) or a mixture of I (1) and I (0) (Mameche & Masood, 2021). Additionally, the PMG estimator is best suited for estimating the dynamic model used in our study since the period (34 years) is larger than the cross-sectional dimension (11 countries). To achieve the above, we relied on Pesaran et al. (1999) to produce a heterogeneous model represented in panel-ARDL (p,q) shown below:

$$\begin{aligned}
 FDI_{it} &= \sum_{j=1}^p \pi_{ij} FDI_{i,t-j} + \sum_{j=0}^q \rho_{ij} DCPSG_{i,t-j} + \sum_{j=0}^q \theta_i GDPG_{i,t-j} + \mu_i + \varepsilon_{it} \\
 FDI_{it} &= \sum_{j=1}^p \pi_{ij} FDI_{i,t-j} + \sum_{j=0}^q \rho_{ij} DCPSG_{i,t-j} + \sum_{j=0}^q \theta_i GDPG_{i,t-j} + \mu_i + \varepsilon_{it}
 \end{aligned} \tag{3}$$

Where $FDIG_t$: Flows FDI percentage of GDP, $DCPSG_t$: Domestic credit of the private sector over GDP, $GDPG_t$: the annual per cent change of gross domestic product, respectively. π_i is scalar, and θ_i is the coefficient of explanatory variables. μ_i represent the fixed effects. Furthermore, ε_{it} is the error term.

We can specify two error correction models, where affected the deviation from equilibrium, assuming that the three variables are co-integrated. Moreover, by changing function 3 as follows:

$$\begin{aligned}
 \Delta FDI_{it} &= \\
 \phi_i FDI_{i,t-1} + \beta_i DCPSG_{it} + \alpha_i GDPG_{it} + \sum_{j=1}^{p-1} \pi_{ij}^* \Delta FDI_{i,t-j} + \sum_{j=0}^{q-1} \rho_{ij}^* \Delta DCPS_{i,t-j} + \sum_{j=0}^{q-1} \theta_{ij}^* \Delta GDPG_{i,t-j} + \mu_i + \varepsilon_{it} \\
 \Delta FDI_{it} &= \\
 \phi_i FDI_{i,t-1} + \beta_i DCPSG_{it} + \alpha_i GDPG_{it} + \sum_{j=1}^{p-1} \pi_{ij}^* \Delta FDI_{i,t-j} + \sum_{j=0}^{q-1} \rho_{ij}^* \Delta DCPS_{i,t-j} + \sum_{j=0}^{q-1} \theta_{ij}^* \Delta GDPG_{i,t-j} + \mu_i + \varepsilon_{it}
 \end{aligned} \tag{4}$$

Where, $i= 1, \dots, N$, $t= 1, \dots, T$, $\phi_i = -(1 - \sum_{i=1}^p \pi_{ij})\phi_i = -(1 - \sum_{i=1}^p \pi_{ij})$,
 $\beta_i = \sum_{i=0}^q \rho_{ij}\beta_i = \sum_{i=0}^q \rho_{ij}$, $\alpha_i = \sum_{i=0}^q \theta_{ij}\alpha_i = \sum_{i=0}^q \theta_{ij}$.
 $\pi_{ij}^* = -\sum_{m=j+1}^p \pi_{im}$, $j = 1, 2, \dots, p - 1$ $\pi_{ij}^* = -\sum_{m=j+1}^p \pi_{im}$, $j = 1, 2, \dots, p - 1$,
 $\rho_{ij}^* = -\sum_{m=j+1}^p \pi_{im}$, $j = 1, 2, \dots, q - 1$ $\rho_{ij}^* = -\sum_{m=j+1}^p \pi_{im}$, $j = 1, 2, \dots, q - 1$,
 $\theta_{ij}^* = -\sum_{m=j+1}^q \pi_{im}$, $j = 1, 2, \dots, q - 1$ $\theta_{ij}^* = -\sum_{m=j+1}^q \pi_{im}$, $j = 1, 2, \dots, q - 1$.

4. Empirical results

4.1. Descriptive analysis

Table 3 shows the descriptive analysis of the study variables. Such a table indicates that the set of panels used for N-11 countries includes 372 observations throughout the year. The FDI variable has a positive mean of 1.65, with a min of -2.75 and a max of 9.71. This table also shows that the average DCPSG for our selected countries is 36.27, between 4.95 and 151.69. Furthermore, the GDPG is 4.59 between -13.13 and 15.33.

Table 3. Descriptive Analysis

	FDI	DCPS	GDPG
Mean	1.659890	36.26925	4.558703
Median	1.156545	26.34250	5.003232
Maximum	9.713081	151.6883	15.32916
Minimum	-2.757440	4.948032	-13.12673
Std. Dev.	1.765888	29.74471	3.368776
Observations	372		

Source: own study

4.2. Matrix of panel correlation

Table 4 demonstrate a positive correlation between FDI and DCPSG, GDPG at a value of 0.21, 0.16, respectively. Additionally, the correlation matrix's empirical

results indicate the absence of multicollinearity among the examined variables because all the variables have less than 80 per cent correlation coefficients.

Table 4. Panel Correlation Matrix

	FDI	DCPS	GDPG
FDI	1		
DCPS	0.21	1	
GDPG	0.16	0.1	1

Source: own study

4.3. Cross-sectional dependence Test (CD)

The cross-sectional dependence test is analysed using Eviews 11. The dataset consists of eleven countries (Bangladesh, Egypt, Indonesia, Iran, Mexico, Nigeria, Pakistan, Philippines, South Korea, Turkey and Vietnam), each observed for 34 years (1985–2019) and a panel, declared as strongly balanced, results are shown in table 5. The findings are depicted in the table, which confirms the rejected hypothesis of the study variables' cross-sectional independence. Thus, this examination utilises two tests that consider the cross-sectional reliance issue: the cross-sectionally LLC test unit root test (CADF) proposed by Pesaran (2007). This test's benefit is that it represents cross-segment reliance and heterogeneity among the example of nations Bhattacharya et al. (2016).

Table 5. Cross-sectional dependence Test (CDT)

Test	Statistic	P-value	Obs	Number of cross-sections
Breusch & Pagan LM	128.6995	0.0000	372	11
Pesaran & Scaled LM	7.026970	0.0000		
Pesaran CDT	3.659712	0.0003		

Source: own study

4.4. Test of Panel Unit Root

Table 6 presented panel unit root (IPS & LLC) tests at the level and first difference for all the series in our dataset (FDI, DCPS and GDPG). As can be seen, LLC and IPS results show that the dependent variable FDI is stationary at the level of I(0). Moreover, the independent's variables are integrated of different orders: I(0) and I(1) according to results of test IPS & LLC, where the variable DCPS is integrated at the first difference I(1), and the variable GDPG is stationary at the level of I(0).

Table 6: Results of Panel Unit Root test (IPS & LLC)

Variables	Method	At level		At ^{first} difference		Order of Integration
		Statistic	P-value	Statistic	P-value	
FDI	LLC test	-3.54176*	0.0002	-	-	I(0)
	IPS test	-4.19007*	0.0000	-	-	I(0)
DCPS	LLC test	0.62074	0.7326	-6.69129	0.0000	I(1)
	IPS test	1.73786	0.9589	-6.89364	0.0000	I(1)
GDPG	LLC test	-4.67078	0.0000	-	-	I(0)
	IPS test	-5.93359	0.0000	-	-	I(0)

Note: ***, ** and * indicate the reject of the null hypothesis at 10per cent, 5per cent and 1per cent, respectively

Source: own study

4.5. Panel cointegration tests

Table 7 presents the Pedroni test of panel cointegration (Pedroni, 2004) and the Kao test of residual cointegration (Kao, 1999); the results indicated a rejection of the null hypothesis of no-cointegration various significance levels for every single region, which confirms the presence of cointegration or a long-run relationship among foreign direct investment, financial development and economic growth in study countries.

Table 7. Panel cointegration Test Results

Pedroni Panel cointegration test			
Alternative hypothesis		Statistic	P-value
AR coefs common. (within-dimension)	Panel V Statistic	1.402189***	0.0804
	Panel RHO Statistic	-1.503654***	0.0663
	Panel PP Statistic	-2.261262**	0.0119
	Panel ADF Statistic	-2.646459*	0.0041
AR coefs individual. (between-dimension)	Group RHO Statistic	-0.380581	0.3518
	Group PP Statistic	-1.933589**	0.0266
	Group ADF Statistic	-2.594452*	0.0047
Kao Residual cointegration test			
	ADF	-6.166*	0.000

Note: ***, ** and * indicate statistically significant at 10 per cent, 5 per cent and 1 per cent, respective

Source: own study

4.6. Estimation of Pooled Mean Group (PMG)

In this section, we divide it into two parts:

All group countries PMG long and short-run estimation: the results summarised in Table 8, in the long-run coefficients of the panel ARDL (2.1.1) (PMG) regression, there is both financial development and economic growth on the flow of FDI to the N-11 countries, as there is a positively and statistically significant impact of financial development on the flow of FDI to the study countries as a whole in the long run. Moreover, there is a positively and statistically significant impact of economic growth on the flow of FDI to the study countries as a whole in the long term. As for the short-run coefficients from the panel ARDL (PMG) regression, the coefficient of the error correction term (-0.39) is negative, less than one and significant at a 1 per cent significance level. We confirm that our model's equilibrium nature is valid in the long run (Pesaran et al., 1999). So there is an impact positive of foreign direct investment for last

year (FDI_{t-1}) on the flow of foreign direct investment to the N-11 countries in the short run. And positive impact but not significant of financial development on the flow of FDI to the study countries as a whole in the short term. As for economic growth, there is a negative impact but not significant on the flow of foreign direct investment to the study countries as a whole in the short run, the opposite of what was expected.

Table 8. Estimation of long and short-run for study countries as a whole

Variable	Coefficient	P-value
Long Run Equation		
DCPS	0.016940**	0.0123
GDPG	0.076841***	0.0475
Short Run Equation		
COINTEQ01	-0.391219*	0.0000
D(FDI(-1))	0.129288***	0.0525
D(DCPS)	0.000937	0.9644
D(GDPG)	-0.013406	0.7413
C	0.379745**	0.0035

Note: ***, ** and * indicates statistic significance at 10 per cent, 5 per cent and 1 per cent, respectively. FDI: Dependent Variable

Source: own study

Estimation of PMG short-run for country-by-country: the difference between across units considered an advantage of the PMG estimator in the short-run. This advantage is important because an adjustment in the short term may depend on many country-specific characteristics, such as political systems and economic reforms. Table 9 summarises the error correction models and findings in each country alone. The table's look confirms heterogeneity regarding the short-run relationship between FDI, financial development, and economic growth. These results based on the group into four categories. *First*, South Korea has an impact in the short-run but not significant because ($ECT_{t-1} = -0.019$ and P-Value = 0.3) the opposite of what

is expected, which is inconsistent with the study of: (Adeniyi et al. 2012). *Second*, Indonesia there is an impact in short-run because ($ECT_{t-1} = -0.31$ and P-Value = 0.0003). There is a positive effect for both the change in the flow of foreign direct investment for year t-1 ($\Delta FDI_{t-1} \Delta FDI_{t-1}$), the change in the financial development ($\Delta DCPS_t \Delta DCPS_t$) and the change in the growth economic ($\Delta GDPG_t \Delta GDPG_t$) on the flow of foreign direct investment ($FDI_t FDI_t$) as expected; it corresponds to the study of: (Suliman & Elian. 2014, Choong & Lam. 2011). *The third*, as for the rest of the countries, has a short-term impact because it has a negative error correction term ($ECT_{t-1} \leq 0$), and the probability (P-Value) has a statistical significance of 1 or 5 per cent. However, the impact of the variables of the study is different. The change in FDI flow for year t-1 ($\Delta FDI_{t-1} \Delta FDI_{t-1}$) negatively impacts foreign direct investment ($FDI_t FDI_t$) in Bangladesh and Mexico and positively impacts Nigeria, Egypt, Pakistan, Iran, Philippines, Turkey and Vietnam. The change in financial development ($\Delta DCPS_t \Delta DCPS_t$) negatively impacts foreign direct investment ($FDI_t FDI_t$) in Bangladesh, Egypt, Iran, Mexico and the Philippines and positively impacts Nigeria, Pakistan, Turkey and Vietnam. Moreover, the growth economic ($\Delta GDPG_t \Delta GDPG_t$) change negatively impacts foreign direct investment ($FDI_t FDI_t$) in Nigeria, Mexico, Iran, Philippines, Pakistan, Vietnam and Turkey, and positive impact in Bangladesh and Egypt.

Table 9. Country-by-country PMG short-run estimates

Variable	Bangladesh	Egypt, Arab Rep.	Indonesia	Iran, Islamic Rep.	Korea, Rep.	Mexico	Nigeria	Pakistan	Philippines	Turkey	Vietnam
COINTEQ01	-0.269143* (0.0026)	-0.454398* (0.0000)	-0.310095* (0.0003)	-0.41134* (0.0016)	-0.0194 (0.3037)	-0.3468* (0.0004)	-0.6556* (0.0003)	-0.2738* (0.0000)	-0.7699* (0.0003)	-0.4495* (0.0001)	-0.3431* (0.0005)

C	D(GDPG)	D(DCPS)	D(FDI(-1))
-0.0534*** (0.0386)	0.0051*** (0.0984)	-0.0167* (0.0005)	-0.0961*** (0.0717)
0.6310* (0.0017)	0.3451* (0.0001)	-0.1606* (0.0000)	0.5186* (0.0001)
0.0903*** (0.0418)	0.0488* (0.0001)	0.0546* (0.0000)	0.0196 (0.5383)
-0.0301 (0.2635)	-0.0154* (0.0001)	-0.0316* (0.0001)	0.0774 (0.1610)
0.0327 (0.3626)	-0.0064* (0.0001)	-0.0180* (0.0000)	0.2135** (0.0130)
0.6969* (0.0035)	-0.0550* (0.0000)	-0.0312* (0.0001)	-0.3198* (0.0011)
0.8323* (0.0042)	-0.1364* (0.0000)	0.0561* (0.0060)	0.1492** (0.0117)
0.1236* (0.0005)	-0.0493* (0.0000)	0.0929* (0.0000)	0.3396* (0.0003)
0.6080* (0.0024)	-0.0592* (0.0004)	-0.0286* (0.0001)	0.1282*** (0.0312)
0.0440 (0.1109)	-0.0472* (0.0000)	0.0518* (0.0000)	0.2499* (0.0020)
1.2016*** (0.0841)	-0.1774 (0.2525)	0.0415* (0.0001)	0.1417** (0.0155)

Note: ***, ** and * indicates statistic significance at 1 per cent, 5 per cent and 10 per cent, respectively.

Source: own study

5. Discussion of results and conclusion

The aims of this paper examine empirically the impact of economic growth and financial development on the flow of FDI in Next -11 countries between 1985 and 2019, a period in which the economies of the N-11 countries developed and pursued several economic reforms.

The empirical investigation provides evidence on the association between inflows of FDI and financial development and economic growth within the context of Next-11 countries. The current international literature lacks empirical studies on the relationship between variables of study for the Next-11 countries. The study based on data covering the period 1985–2019 and the PMG estimator, a set of findings has been reached. It is shown that there exists an impact positive for financial development and economic growth on the flow of FDI in study countries in long-run; this corresponds with the findings of other researchers

(e.g., Riache et al., 2021, Bengoa & Sanchez-Robles, 2003; Iamsiraroj & Ulubaşoğlu, 2015; Azman-Saini et al., 2010; Iamsiraroj, 2016; Henri et al., 2019; Shahbaz et al., 2011) and confirms the hypothesis H1, this is because the N-11 countries have sought to develop their financial sector to advance their economies in recent years, by diversifying their sources of income in various sectors, the most important of which are tourism, agriculture and industry ... which contributed to increasing the flow of FDI in the long term. In the short term, no effect has been confirmed for the sample as a whole this result is in contrast to the outcome obtained by (Suliman & Elian, 2014) and corresponds with (Lee & Chang, 2009) negates the hypothesis H2.

Additionally, the PMG estimator shows the heterogeneity of results across countries. This subtraction corresponds to a study (Sghaier & Abida, 2013), and it confirms the H3 hypothesis in Indonesia. It denies it in the State of South Korea. As for each independent country's long-term impact, there is a positively and significantly impact on each country's economic growth and financial development separately, which confirmed the H4 and consistent with the study (Riache et al., 2021, Nwosa et al. 2011a). Consequently, the country's analysis results need to be considered when studying the relationship between the study variables.

There is hold several necessary implications in the finding in this study. First, the results of this research are essential for decision-makers in the countries of the study, as they must pay attention to attracting foreign direct investment through developing their financial sector and paying attention to economic development. Second, the results of this study are also crucial for researchers and academics regarding the determinants of foreign direct investment in the Next-11 countries and the most important determinants of financial development and economic growth. Third, there are positive impacts of both financial development and economic growth on the flow of foreign direct investment in the Next-11 countries, helping investors and company managers make the right decisions. Fourth, the results of this study are of great importance for other developing countries, through the effects of financial development and economic growth on foreign direct investment flows for developing countries as a whole.

This research has some limitations like other research we mention. First, this study neglected some variables that could give us different results. Second, if the same study works on another economic group, such as the European Union or the Gulf Cooperation Council countries, we can get different results. Third, the factor of information asymmetry is not reflected in our model. Thus, this factor can be important for economic growth and financial development on FDI inflows.

Given the above-proposed limitations, this paper suggests several fruitful avenues for further study. Firstly, future research may test causality between financial development, economic growth, and foreign direct investment in Next -11 countries; secondly, the relationship of asymmetry between economic growth, financial development, and FDI in Next -11 countries is considered a new proposal that could contribute to future study. Thirdly, adding control variables such as education and inflation to this study could be problematic for new research.

Summary

The relationship between foreign direct investment, financial development and growth economic in Next-11 Countries: a PMG/ARDL estimation

This study investigates the relationship between FDI, economic growth and financial development in the Next 11 countries. An analysis of the results was performed accordingly on the panel data gathered from the Next 11 countries from 1985 to 2019—using the Pooled Mean Group (PMG) estimation method and the Autoregressive Distributed Lag model approach (ARDL). The results indicate an impact of both economic growth and financial development on the FDI flows to the study of countries during the period between 1985 and 2019 in the long run, while no such proof is affirmed in the short run. This study's contribution provides a better understanding of the dynamic relationship between FDI, economic growth, and financial development by providing decision-makers to understand the nature of the dynamic association between the study variables. This study provides empirical evidence about the association between inflows of FDI, economic growth and financial development within the context of the Next-11 countries. The previous literature lacks empirical study on the relationship between variables of study for the Next-11 countries.

Keywords: *Foreign Direct Investment, Financial Development Growth Economic, Next-11 Countries.*

JEL

Classification : *F23, F43, F34.*

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