Economic Openness and Growth in Developing Economies: The Role of Institutional Quality

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Abstract
The present study hypothesizes that the positive growth-effect of FDI and trade openness are conditional on the quality of institutions in the host countries such that countries with strong institutional quality will acquire more benefits from FDI inflows and trade openness. In order to test the hypothesis, a linear interaction model is applied to a sample of 70 developing countries over the 1984-2021 period. The results of GMM estimation reveal that the positive growth-effect of FDI and trade openness monotonically increasing with institutional quality. This finding implies that countries with higher institutional quality will benefit more from MNCs presence as they are more able to absorb and internalize new technology.
Keywords: economic openness, growth, developing countries

1. Introduction
The literature of economic theories is full of studies that attempt to deepen our understanding of why some economies grow faster than others. According to Durlauf et al. (2020) and Sala-i-Martin (1997), there many factors and variables that are helpful to explain the performance of economic growth. Couple of them are foreign direct investment (FDI) and trade which have been regarded as one is viewed as one of the important channels for many countries (especially the developing ones) to enhance their growth performance.

FDI is defined as the process by which residents of the source country acquire ownership of assets in order to control the distribution, production, and other economic activities of enterprises in the host country (Musa, 2010; Ali, 2022). Many economies provide incentives, introduce foreign direct investment (FDI), and trade policies based on the expectation that multinational corporations (MNCs) bring huge benefits to host countries, especially in terms of technology spillovers.

FDI and trade are largely associated with high technology, as multinational corporations are known for their large investments in research and development (R&D) activities and the recruitment of large numbers of skilled and professional workers (Dunning, 1993). In addition, foreign direct investment and trade are expected to play an important role in narrowing the gap between savings and internal resources, improving the balance of payments, reducing foreign exchange shortages and reducing poverty traps (Nasir, 2022; Sadashiv, 2023). Theoretically, FDI and trade are considered main driver of higher economic activities and source of contribution in advanced technology transfer and accumulation of capital. FDI and trade have multiplier effects on economic growth and can affect directly and indirectly to stimulate the economic growth. FDI and trade have also the capacity for acquisition of capital stock through technology by new organization styles, training of labor, new management practices and new skills development which resultantly stimulate the economic growth (De Mello, 1999; Nasir, 2022). For developing countries, foreign direct investment play very crucial role in promoting the economic growth and many governments regarded FDI and trade as a driving force behind economic growth and consider it as a way of dealing with poverty trap.

Nowadays, developing countries are struggling alike to lure this important component of foreign assistance but significant shift has been observed in the attitude of FDI and trade especially for developing countries from the last two decades. Recently, many less developed countries (LDCs) are doing struggle to attract more FDI inflows to eradicate poverty, create new jobs and access to international markets (World Banks' Multilateral Investment Guarantee Agency).

2. Literature Review
Many studies have documented the catalyst effects of FDI and trade on economic growth in developing countries. This positive relationship between FDI and trade with economic growth is a source of rethinking and conviction among policy makers of developing countries that economic growth and productivity can be improved by making FDI and trade friendly policies for enhancing the level of inward FDI. Therefore, in recent years, developing countries have aggressively responded by such policies that are attracting the intentions of foreign investors. The recent study of Azman-Saini *et al*. (2010a) highlighted the issue more clearly and documented that FDI and trade have positive effect on economic growth. However, condition is institutional quality must exceed from a benchmark level in recipients countries. The study further elaborate the findings that government policies of host countries only centered to attract FDI and trade, and ignore the other key factors that affect the positive externalities and spillover effect of FDI and trade using the panel data of 91 countries over the 1975-2005 period. The study suggest that for gaining complete benefits of FDI and trade other sectors of host countries should also developed on new and advanced technologies such as financial market development.

Similarly, Barro and Sala-i-Martin, (1995) documented that through imitation host countries' domestic firms can adopt new and advanced technologies in the production process to reduce the cost of production. However, the studies of Hermes and Lensink, (2003); Durham, (2004); Alfaro *et al*. (2004) argued that FDI enhance economic growth through financial sector development, communication between foreign and domestic firms, introducing new products of foreign firms, new methods of production and improvement in human capital development (De Mello, 1997 and Borensztein *et al*., 1998). These are the positive externalities and spillover effects on the economic growth effects of FDI in host countries that are derived from the theoretical perspective. Furthermore, Blomstron *et al*. (2002) strongly argued that the impact of FDI and trade on economic growth is positive and significant.

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However, FDI does not directly affect the economic growth of host countries, but through absorption capacity of foreign technology, employment generation, capital formation, export promotion and promoting the financial market development. While FDI also has indirect effect on economic growth via increasing the mobility of labor, new and advanced infrastructure, domestic firm's adoption of imitation of foreign firm's methods of production and domestic firms increased productivity through demonstration effects. In addition, Chowdhury and Mavrotas (2003) investigated the bidirectional causality between FDI and economic growth for Thailand and Malaysia, while for Chile economic growth cause FDI, covering the period from 1969 to 2000. Likewise, FDI has strong positive effect on economic growth for transition economies of former Soviet Union and 25 Eastern and Central European economies during the period 1990-1998 (Campos and Kinoshita, 2002). Similarly, Karimi and Yusop, (2009) documented that FDI and economic growth in Malaysia have weak bidirectional relationship in both short and long-run.

The study analyzed the growth effect of FDI during the period 1970 to 2005 and applied the ARDL bound testing technique to find out he results in short and long-run. Further, FDI has direct and positive impact on economic growth in Malaysia. Similarly, the study of Anwar and Nguyen, (2011) also found the positive impact of FDI on economic growth for 61 provinces of Vietnam during the period 1996-2005. Additionally, the study of Omri, (2014) supported the results that in MENA economies FDI has significant positive effect on economic growth.

Although, a voluminous empirical literature exist that demonstrated the positive effect of FDI on economic growth, however, the issue is that through which channel FDI positively affect the economic growth of host countries. Many studies used the panel and time series data to find out this relationship that demonstrated with the mixed results. For example, Apergis *et al*, (2008) investigated the association between FDI and economic growth for transition economies and found the bidirectional causality and positive impact of FDI on economic growth. Likewise, for cross country analysis Khawar, (2005) also found positive impact of FDI on economic growth during the period 1970 to 1992. However, the study of Yao, (2006) for 26 Chinese provinces examined the positive and significant effect of FDI on economic growth in the period 1978-2000.

Additionally, Hsiao and Hsiao, (2006) investigated the causality between economic growth, exports and FDI inflows in South and East Asian eight economies applying the VAR technique on individual country's time series data and panel VAR for all these countries to conclude the results. The findings of the study using the Granger causality analysis indicated that each country has its own pattern to effect economic growth by inward FDI and time series causality analysis cannot be generalized for other countries. While causality of panel data analysis demonstrated unidirectional, from FDI to economic growth that revealed that panel data analysis generate better results than the time series data. In addition, Bhandari *et al*. (2007) supported the findings that FDI has significant positive relationship with economic growth for the case of East European countries.

Mostly, panel data studies have found the significant positive effect of FDI on economic growth such as the study of De Gregorio, (1992) examined the 12 Latin American countries and findings indicated that FDI has significant positive impact on economic growth of host countries for the period 1950-1985. Similarly, Blomstrom *et al.* (1992) also found the positive relationship between FDI and economic growth for a combination of 23 developed and 78 developing economies for the period 1960 to 1985, however, findings indicated that influence of FDI on economic growth for high income developing countries is confined. Similarly, Balasubramanyam *et al.* (1996) argued that output elasticity of FDI is higher in 46 cross-sectional countries that have higher domestic capital investment. Furthermore, FDI has stronger positive effect on economic growth of those host countries that have export promotion strategies rather than those that implement import substitution strategies.

However, Borensztein *et al.* (1998) examined FDI as the vehicle and main engine for transfer of technology, and in such countries that have higher level of human capital the growth effect of FDI is also higher for these economies. This conclusion has been drawn by study by covering the period 1970-1989 for 69 developing countries. Similarly, the study of Bengoa and Sanchez-Robles, (2005) also found positive relationship in host economies between FDI and economic growth for 18 Latin American countries that covered the period 1970 to 1999. Furthermore, Wang *et al.* (2004) indicated that FDI boost up the economic growth, however, its positive impact is higher for those economies that have higher income than low income countries. This study concluded results after analyzing the 79 countries that covered the period from 1970 to 1198, however, this study is criticized due to spurious results that attribute to existence of unit root in the data set.

3. Methodology
3.1. Empirical Model, Data and Econometric Technique

To empirically investigate this hypothesis, this study follows the model of Balasubramanian et al. (1996); Falki (2009); Azman Saini etc. (2010).

$$Growth_{it} = \alpha_0 + \alpha_1 FDI_{it} + \alpha_2 INS_{it} + \gamma Z_{it} + \varepsilon_{it} \tag{1}$$

$$Growth_{it} = \alpha_0 + \alpha_1 FDI_{it} + \alpha_2 INS_{it} + \alpha_3 (FDI_{it} * INS_{it}) + \gamma Z_{it} + \varepsilon_{it} \tag{2}$$

$$Growth_{it} = \alpha_0 + \alpha_1 TRP_{it} + \alpha_2 INS_{it} + \alpha_3 (TRP_{it} * INS_{it}) + \gamma Z_{it} + \varepsilon_{it} \tag{3}$$

Where Growth= real GDP per capita growth rate
FDI= foreign direct investment net inflows to GDP is used
INS= institutional quality
TRP=trade openness
Z= control variables vector
Which consists of life expectancy as a proxy for human capital (as reported by World Bank), investment ratio measured as a gross fixed capital formation over GDP, α_0 is unobserved country specific effect term and ε_{it} is the stochastic (random) error term. Similarly, γ is the slope coefficient of control variables, α_1 and α_2 are the slope coefficients of FDI (for model 3) or trade openness (for model 4) and regime durability respectively, where α_3 is the slope coefficient of interaction term to observe the indirect effect of FDI and trade (for model 3 and model 4) on economic growth (via regime durability).

The positive and significant slope coefficient of interaction term represent the marginal effect of FDI and trade depend on the level of institutional quality and growth effect of FDI and trade contingent with institutional quality, where as positive sign interpret that higher institutional quality enhance the positive impact of FDI and trade on economic growth. Furthermore, interaction term demonstrates whether institutional quality complement the inflows of FDI and trade in improving economic growth.

To achieve the research objective based on the empirical models that have been discussed above, Generalized Method of Moments (GMMs) is applied.

4. Results and Discussion

The empirical results of estimating equation (3) are presented in table 4. Several measures of institutional quality (i.e. durable from polity IV and government stability from ICRG are used as a proxy of regime durability) and regime type (i.e. democracy from Polity IV, democracy from Freedom House, from Polity IV and from ICRG. The different indicators of democracy from all sources are used as a proxy of institutional quality. The results show that the coefficients of FDI in all models are positive and statistically significant, suggesting a growth-enhancing effect of FDI.

The results also reveal that different measures of democracy appear to be important for promoting growth. However, the democracy measure of Polity IV in model 3 has a larger impact on economic growth compared to other indicators of democracy. The effect of political stability (Polity IV measure of political stability) on economic growth is negative and statistically significant in model 1, implies that political stability has detrimental effect on economic growth.

Table 1
(N = 70 countries; T = 8; Sample Period = 1984– 2021).

Variables	Polity IV			ICRG		Freedom
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
GDPI	0.218***	0.275***	0.169***	0.145***	0.134***	0.168***
	(0.068)	(0.045)	(0.038)	(0.049)	(0.064)	(0.042)
TRP	0.013***	-0.019***	0.024***	0.052***	0.072***	0.012*
	(0.006)	(0.005)	(0.004)	(0.016)	(0.012)	(0.003)
FDI	0.324***	-0.355***	-0.178***	-0.257**	-0.364**	-0.169***
	(0.124)	(0.105)	(0.034)	(0.118)	(0.175)	(0.059)
INSQD		-0.816**	-0.348***		-0.164**	0.725***
		(0.056)	(0.132)		(0.064)	(0.256)
INSQR	-0.295**			-0.365***		
	(0.116)			(0.056)		
IEFFECT	0.456***	0.364***	0.248***	0.458**	0.246***	0.134***
	(0.146)	(0.124)	(0.094)	(0.205)	(0.026)	(0.037)
HUMANC	-0.388***	0.124***	0.348***	0.547***	0.258***	-0.173***
	(0.135)	(0.045)	(0.114)	(0.095)	(0.057)	(0.024)
GRC	0.128**	0.326***	0.387***	0.645***	0.084***	0.457***
	(0.053)	(0.096)	(0.051)	(0.049)	(0.032)	(0.124)
Constant	7.345**	-9.879***	-3.458***	-7.456***	-6.489***	8.469*
	(1.689)	(2.489)	(1.156)	(1.984)	(2.849)	(3.127)
Sargan test	18.693	13.458	19.489	12.487	18.759	12.472
	(0.849)	(0.178)	(0.279)	(0.374)	(0.875)	(0.194)
AR(1)	1.1096	-1.6673	-1.4367	-1.3564	-1.6937 (0.349)	-1.7538 (0.678)
	(0.548)	(0.846)	(0.297)	(0.489)		
AR(2)	2.456 (0.287)	1.214 (0.341)	-2.451 (0.154)	-0.345 (0.781)	-0.489 (0.248)	0.319 (0.769)
Instruments	31	39	36	38	31	37
Observation	560	560	560	560	560	560

Notes: All models are estimated using the Blundell and Bond (1998) dynamic panel system GMM estimations (Stata xtdpdsys command). The standard errors are reported in parentheses, except for Sargan test, AR (1) and AR (2) which are p-values. ∗ ∗ ∗, ∗ ∗ and ∗ indicate significance at 1%, 5% and 10% levels, respectively. Time dummies are included in the model specification but the results are not reported to save space. IEFFECT=Interaction term between political stability, democracy and FDI.

However, the measure of political stability (ICRG measure of political stability) has positive and statistically significant effect on economic growth in model 4. Overall, all measures of regime type and regime durability (except Polity IV measure of political stability) have positive and significant effects on economic growth. This finding is consistent with other studies results such as Adams and Klobodo (2016) and Rado (2015) which states that political stability (derived from strategy IV) reduces growth, while political stability and other democratic indicators promote economic growth. In addition, gross fixed capital formation rate also contributes to economic growth. However, it has a smaller impact on economic growth, ranging from -0.0002 to 0.0004. Moreover, all models are clearly tested as they all pass two specific tests.

To assess the role of government persistence (political stability) and government type (democracy) in moderating the effect of FDI on economic growth, equation (3) is estimated and the results are shown in Table 4. The model is constructed using an interaction term as an outcome between political stability, democracy and foreign direct investment. As shown in Table 4, the interaction term has a positive sign and is statistically significant. This means that political stability and democracy are important for enhancing the

growth effects of FDI. The results are consistent with other studies of Radu (2015); Adams and Klobodo (2016). It is also found that higher levels of political stability and democracy allow recipient countries to benefit from trade and FDI inflows. Thus, this finding is consistent with the theory that host countries must have certain characteristics in order to absorb and internalize the new technologies associated with trade and FDI inflows. In addition, all control variables such as initial income, gross fixed capital formation, trade openness, and human capital are statistically significant except for human capital and population growth, which have negative signs. Finally, the model presented here is valid and well specified, as null values cannot be rejected in both specification tests.

5. Conclusion

The present study hypothesizes that the positive growth-effect of FDI and trade openness are conditional on the quality of institutions in the host countries such that countries with strong institutional quality will acquire more benefits from FDI inflows and trade openness. In order to test the hypothesis, a linear interaction model is applied to a sample of 70 developing countries over the 1984-2021 period. The results of GMM estimation reveal that the positive growth-effect of FDI and trade openness monotonically increasing with institutional quality. This finding implies that countries with higher institutional quality will benefit more from MNCs presence as they are more able to absorb and internalize new technology. The results are consistent with the understanding that the success of host economies to benefit from FDI inflows and trade openness depends on absorptive capacity of the host countries. Several sensitivity checks are implemented to ensure that the finding is not due to random chance. We exclude the outliers and use alternative measure of FDI, trade openness and institutional quality but the result remain unchanged.

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