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INSTITUTIONS AND FDI-GROWTH RELATION IN ASIA: DIRECT AND MODERATING EFFECTS FROM SYSTEM-GMM

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Abstract

The growth literature firmly establishes both foreign capital inflows and domestic institutional framework as crucial for long-run economic growth. Also, strong institutions are hypothesized as a critical transmission mechanism by enlarging a host country's absorption capacity and thereby maximizing the growth benefits of foreign direct investment (FDI).

This study seeks to empirically scrutinize how FDI and institutions affect growth, paying special attention to how institutional quality moderates the relation between FDI and growth. By making 5-years non-overlapping averages of the data from 1971 to 2023 for 31 Asian countries, a simple dynamic growth model is estimated via the System Generalized Method of Moments (GMM) estimator aiming to tackle potential endogeneity concerns. The findings explicate that albeit FDI and institutions individually happen significant in promoting growth but there happens no complementarity in both the factors in affecting growth. The policy suggestions stem out from these findings are that the policy makers focus should be on promoting FDI inflow and strengthening the institutions separately, and the later should not be viewed as significant moderator in the former nexus with the growth.

Key Words: FDI, Institutions, Economic Growth, Asia, Panel Data, GMM

1. Introduction

Economic theory propagates foreign capital flows as a crucial factor of economic growth. It creates jobs, improves productivity and expands the markets. It has become one of the most important driver of globalization and integration into global markets. Chenaf-Nicet and Rougier (2016) posit that it is a main source of new technology transfer and managerial skills from developed to

developing countries. The later countries have increasingly gone for FDI as a means of accelerating economic growth and fostering structural transformation.

This crucial role of FDI in steering growth to highness has resulted in voluminous of empirical literature seeking FDI role in economic growth, with some studies highlighting its direct positive contributions while others emphasize its conditional nature. This suggests that its growth effect is not independent and depend on complementary factors. One of the most important of these factors is the institutional environment. Good or bad institutional framework in the host economies matters a lot in extracting benefits from the external financial inflows in the economy. This has led to an enormous literature that has looked at the interaction between FDI and institutions in shaping economic performance.

Several recent studies confirm that institutions can significantly strengthen the FDI-growth nexus. For instance, Lee et al. (2024) find that FDI raises growth only when political stability reaches a certain level, showing that stable institutions create a supportive environment for foreign investment to generate real benefits. Similarly, Mensah et al. (2025) reported that institutional quality makes FDI more effective in promoting growth, especially in emerging economies. Abor et al. (2024) also showed that better institutional quality helps countries convert FDI into stronger growth and inclusive outcomes. These studies highlight that FDI alone is not enough, institutions are also important for FDI to produce sustainable growth.

Other studies provide more nuanced results, suggesting that the moderating role of institutions is conditional. Guenichi and Omri (2024) showed that FDI has different growth effects depending on the institutional environment: in countries with weak institutions, FDI can even reduce growth, but as institutional quality passes a certain threshold, the impact becomes positive. Likewise, Husnain et al. (2024) finds out that institutional quality bolsters the direct impact of FDI and domestic investment on growth in Latin America, but poor institutions weaken this impact. These findings mean that institutions moderate the FDI–growth relationship only under certain conditions, such as when property rights are well protected or governance is stable.

Asia has evolved into a hub region for foreign investors, and it significantly contributed to the region's growth. UNCTAD (2000) reports that annual FDI flows to Asia and the Pacific quintupled during the 1990s, with China, Singapore, and India among the major recipients. Beyond capital inflows, FDI has also facilitated technology transfer and improved the innovative capacity of domestic firms. Recent studies also confirm this trend. Chizema (2025), looking at South Asia and Southeast Asia between 2006 and 2022, finds out that FDI inflows had a clear major influence on economic growth through technology transfer and capital accumulation. Fazaalloh (2024), in a study on Indonesia, also showed that FDI inflows helped growth at both provincial and sectoral levels, supporting industrialization and development. Similarly, Kharisma et al. (2025), studying ASEAN countries from 2011 to 2020, find that FDI inflows has a major role in driving growth

alongside other domestic factors. These studies show that while Asia overall has benefitted from FDI, the amount and impact differ across countries, with high-income economies like Singapore and China gaining more, and some lower-income economies in the region attracting less investment and showing weaker growth outcomes.

The institutional environment in Asia is also very diverse, and it strongly shapes the region's growth experience. Some countries like Singapore, Japan, and South Korea have established effective institutions that protect property rights, reduce corruption, and enforce contracts, which made them attractive for FDI and supported long-term growth (Kaufmann et al., 2011). In contrast, other countries in South Asia and South-East Asia still face issues including political instability, weak governance, and corruption, which limit the benefits of FDI. Husnain et al. (2023), studying South Asia from 1996 to 2021, found that institutional quality had a strong positive association with growth when combined with FDI and domestic investment. Similarly, Kharisma et al. (2025) showed that both political and economic institutions significantly improved the growth effect of FDI in ASEAN countries. Nawaz et al. (2014), looking at Asian economies from 1996 to 2012, also concluded that institutional quality is a main driver of growth, especially in more developed Asian countries. Together, these studies show that Asia's mixed institutional quality makes this region a good setting for examining how institutions shape the growth impact of FDI.

Foreign investment is often seen as an important engine of growth because it brings new technologies, better management, and more capital into host economies. Borensztein et al. (1998) in a well-cited study, maintain that it can upturn the economic growth, only if coupled with adequate human capital to exploit it. Alfaro (2003) also found that FDI supports growth through productivity spillovers across sectors. Yet, the effect of FDI is not always automatic. Carkovic and Levine (2005), using robust econometric methods, showed that once endogeneity is considered, FDI does not always separately spur growth. These mixed results advocate that the impact of FDI is strongly subjected to the conditions of the host country.

Institutions are one of the most important of these conditions. North (1990) defined institutions as the "rules of the game" that guide human and economic interactions. Strong institutions protect property rights, lower the transaction costs, and provide the stability that investors need. Acemoglu et al. (2001) postulate that institutional quality is a significant driver of long-run development, while Hall and Jones (1999) finds out that inequality in productivity across countries can largely be defined by institutional quality. This means that without good governance and effective institutions, the possible growth gains of FDI might not be entirely actualized. Recent studies also suggest that the interaction between the two is critical. Durham (2004) stated that the impact of FDI on growth is determined upon institutional development, while Alfaro et al. (2004) emphasized that financial development and good institutions are necessary to gain from FDI inflows. These studies make it clear that institutions can act as a channel that either enhance or reduces the role of FDI in promoting growth.

Asia provides a strong case for testing this idea. Over the last fifty years, Asian economies have seen large inflows of FDI and very high growth, but the region also shows wide differences in institutional quality. Countries such as China, India, and Singapore have attracted large volumes of FDI and benefited from reforms and better governance, while other countries continue to struggle with corruption, weak legal systems, and political instability. This diversity makes Asia an ideal region to study whether institutional quality really matters in the scenario of FDI-growth nexus. By focusing on this question, the study targets to fill a clear research gap in the current literature and give new evidence from a region that has become central to the global economy. The central aim of this study is to examine the impact of FDI and institutional quality on economic growth in Asian countries. Specifically, the study seeks to appraise if institutional quality underpins the FDI-growth relation. By addressing these objectives, the study aims to provide valuable evidence for sustainable growth in the developing economies.

The significance of this study is in its contribution to the ongoing deliberation on the FDI, institutions, and economic growth relationship. While a substantial amount of research has examined these relationships, the evidence remains ambiguous and context-dependent. This study adds in the literature by focusing on Asian economies, a region that has experienced rapid growth, substantial FDI inflows, and diverse institutional environments over the past five decades. The findings aim to inform decision makers about the independent and interactive roles of FDI and institutions in promoting economic growth. By highlighting the role of institutional quality alongside foreign investment, the study provides practical insights for designing strategies intended at realizing long-term and sustainable economic development in the region.

This study is arranged as follows. Section 1 details the background of the study, stating the research problem, delineating the objectives, and highlighting its significance. Section 2 presents a comprehensive review of the relevant literature, focusing on FDI-growth and institutions growth nexuses, and the institutions moderating role in the former nexus. Section 3 describes the methodology of the study, including the empirical model, estimation technique, variable definitions and data sources. Section 4 discloses and interprets the empirical results, starting with descriptive statistics and correlation analysis, followed by the System GMM estimation outcomes. Finally, Segment 5 recaps the key findings, offers propositions for policymakers.

2. Literature Review

To have a holistic overview of the existing empirical landscape, the literature review is structured into three distinct strands. The first and second reviews the FDI-growth and institutions-growth nexuses respectively while the third one explore the institutions role in the FDI-growth relation.

2.1 FDI and Economic Growth

FDI is the cross-border investments, usually comprising long-term ownership or management influence. It involves long-term partnership characterized by sustained interest, control and active involvement by a firm in a foreign-based enterprise (UNCTAD, 2005).

FDI infusions have the potential to boost economic expansion. It has become a significant external funding source for emerging and developing nations. In addition to augmenting domestic investment, it also provides access to international markets, managerial knowledge, and advanced technologies. Many economists contend that by increasing productivity and generating jobs, FDI is crucial for promoting economic growth (Borensztein et al., 1998).

The importance of FDI lies in that it supplements domestic investment, transfer advanced technologies, and stimulate employment and productivity. In addition to capital accumulation and technological advancement, it introduces the managerial know-how, promotes competition, and facilitates integration into the global economy and productivity spill overs (OECD, 2022). According to UNCTAD (2023), for developing countries, FDI continues to be the main source of funding, surpassing aid and portfolio investment, and is critical for sustainable development goals (SDGs).

FDI is usually deliberated as a significant catalyst of economic expansion. Borensztein et al. (1998), showed that FDI can raise growth by transmitting advanced technologies and skills, but its impact depends on whether the host country possessing a minimal threshold of human capital to get these benefits. Alfaro (2003) found that FDI improves productivity and supports growth by creating spillover effects across different sectors of the economy. Hermes and Lensink (2003) argued that FDI can also help growth when financial markets are sufficiently developed to allocate these investments efficiently. More recently, Li and Liu (2005) confirmed that FDI underwrites growth by fetching in technology and encouraging competition, though its effect is stronger in countries with supportive domestic conditions.

Recent empirical studies consistently indicate that FDI has a growth enhancing effect across the Asian countries. Hornstein (2024) finds that FDI inflows are highly associated with increased GDP growth in Asian economies, emphasizing the growth-enhancing role of foreign capital inflows. Similarly, Chizema (2025), using data from South and Southeast Asia between 2006 and 2022, reports that FDI inflows wields a robust positive impact on regional economic development. Fazaalloh (2024) while studying Indonesia also confirms that FDI contributes directly to economic growth at both the provincial level and sectoral level, indicating that investment inflows strengthen industrial productivity and regional output. Supporting these findings, Sapkota and Gautam (2023) show that FDI has a direct impact on economic growth in South Asian economies, underscoring the prominence of sustained foreign investment in driving development.

2.2 Institutional Quality and Economic Growth

North (1990) defined institutions as "the rules of the game" in a society, or more formally, as the humanly constructed limitations that influence human interaction.
Good institutions are very important for economic growth. They create stability, protect property rights, and reduce uncertainty for investors and businesses. Acemoglu et al. (2001) showed that variation in income levels across nations can majorly be explained by difference in institutional quality, not just by resources or geography. Hall and Jones (1999) also argued that variation in productivity across nations are mainly due to variations in social structures, which includes the strength of institutions. Rodrik et al. (2004) added that institutions matter more than trade or geography in describing why some economies grow faster than others.
Recent empirical work shows that strong institutions tends to be directly related with high economic growth. For example, Liko (2024) finds a significant positive relation between institutional quality and GDP growth across developing countries. Mehmood et al. (2023) report that in South Asian economies the governance indicators of rule of law, accountability and corruption control all exert positive long-run impacts on growth. Adhikari et al. (2024) examine seven South Asian economies and find that corruption control, regulatory quality and government effectiveness all significantly boost economic growth. The analysis by Şit et al. (2024) for Sub-Saharan African countries also shows that better governance and institutional indicators positively affect economic growth outcomes. Finally, Duwal & Suwal (2024) look at 18 Asian developing countries over 2013-2020 and find that stronger institutions are positively linked with growth. Altogether, these studies reinforce the view that simply improving institutional quality alone can, all else equal, support higher economic growth.

2.3 The Moderating Role of Institutions in the FDI–Growth Relationship

Many studies have shown that FDI helps a country's economy grow by adding new capital and transferring technology and management skills. Nevertheless, the benefits that come from FDI are not automatic and often depend on nation's ability to absorb. For instance, Balasubramanyam et al. (1996) argue that trade acts as a key role in making FDI more productive, while Borensztein et al. (1998) emphasize that human capital is necessary to absorb new technology from foreign investors. Similarly, Alfaro et al. (2004) and Hermes and Lensink (2003) argued that financial development strengthens the direct relation between FDI and growth by improving how investment resources are allocated. Institutional quality has also been highlighted as a main variable, as shown by Azman-Saini et al. (2010), who found that the effect of FDI on growth becomes significant only in countries with strong institutions. More recently, Slesman et al. (2015) and Jude and Levieuge (2017) provide further demonstration that FDI can raise growth rates only when institutional quality reaches a minimum threshold.

In the past few years, many researchers have studied how institutions change the impact of FDI on economic growth. Saha et al. (2022) explained in his study that FDI exerts an economic impact on growth only when the institutional quality reaches a certain threshold. If the institutional quality is low, then the benefits from FDI are very weak or even absent. This means that institutions must be strong enough before FDI can really help the economy. Tan (2023) also found that the FDI and growth nexus depends on institutions, but in a different way. He showed that multinational companies (MNCs) decide where to invest depending on institutional quality, and when institutions are strong, these firms bring more asset-specific investments, which then lead to higher growth in the host country. Hornstein (2024) studied how incomplete FDI projects affect growth. He explained that when projects are approved but not fully carried out, the expected benefits of FDI are lost. But if institutions are strong and make sure that projects are delivered properly, then FDI does lead to growth. Adeniyi et al. (2012) also found similar results in Sub-Saharan Africa, showing that FDI contributes to growth more when institutions are effective. Hayat (2019) confirmed this too, saying that in countries with weak institutions, FDI does not have much impact on growth, but in nations with good institutions, the effect is strong.

3. Methodology

This section outlies the methodological roadmap adopted in this study. It first specifies the empirical model used to examine the proposed relationships. Then it describes the estimations strategy. Finally, it explains the data sources, sample structure, and the variables descriptions and measurement.

3.1 Empirical Model

The basic question we seek to address in this study is whether FDI, institutional quality as well as their interaction affect growth across countries. For this purpose, we build upon our empirical model on the footings of previous studies like Alfaro et al. (2004), and Adjasi et al. (2012) held in this area of investigation. The following model is specified for estimation:

$$Growth = \beta_0 Y_{it-1} + \beta_1 FDI_{it} + \beta_2 INS_{it} + \beta_3 (FDI_{it} * INS_{it}) + \acute{\beta} X_{it} + \mu_i + \omega_t + \varepsilon_{it}$$

Where the dependent variable, $Growth$, is the growth of real GDP per capita. The independent variables include Y, which represents real GDP per capita, FDI is the foreign direct investment inflows, INS captures institutional quality, $FDI * INS$ is the interaction term between FDI and institutional quality, X is a vector of control variables. Also, the model contains symbols like μ, ω and ε which represent country-effect, time-effect and error term respectively while the subscripts like i and t refer to cross-section and time respectively. All the variables are taken in the form of natural logarithm.

3.2 Estimation Technique

To estimate the model, the study applied System GMM developed by Arellano and Bover (1995) and Blundell and Bond (1998). This procedure is especially appropriate for dynamic panel models characterized by a small time dimension, and a significant cross-sectional dimension, as is the case in this study. It addresses potential endogeneity problems by applying internal instruments derived from lagged values of the explanatory variables. Moreover, it corrects for biases that arise when the lagged dependent variable is included as a regressor.

System GMM is preferred over other estimation techniques like pooled OLS, fixed effects, or difference GMM because it gives consistent estimates in the existence of endogenous regressors and unobserved heterogeneity. Pooled OLS fails to account for heterogeneity, while fixed effects estimators are biased in dynamic settings. Difference GMM, although useful, often face weak instrument problems. System GMM enhance efficiency by combining equations in differences with equations in levels, thereby generating more reliable results. In System GMM, there are two common ways to estimate the model: one-step and two-step estimation. In the one-step method, the model uses a simple weighting matrix and gives basic standard errors. It is useful, but sometimes the results are not very efficient. In the two-step method, the model first runs like one-step, and then it updates the weighting matrix using the results from the first step. This makes the two-step results more efficient and usually more accurate (Roodman, 2009). Also, the two-step method gives corrected standard errors, which are better especially when the sample size is not very large. Because of this, most researchers prefer two-step System GMM over one-step, therefore the current study opted the former for estimation purpose.

3.3 Data and Variables Description

The study relies on panel dataset of 31 Asian countries[1] covering the period 1971–2023. To streamline the short-term variabilities and reduce business-cycle effects, the data is converted into five-year non-overlapping averages. This provides more stable estimates and sanctions for the examination of long-run relationships. The dependent variable is economic growth. The set of covariates includes our focused variables such as FDI, institutional quality, their interaction while the selected control variables suggested by the previous economic growth literature include, domestic investment, government consumption expenditure, human capital, trade openness, and population growth. Data for all the variables were sourced out from World Development Indicators (WDI, 2024), with the exception of the institutional quality variable, which was obtained from Freedom House. The variables description and their construction is given in the following table.

[1] The list of the selected countries (which includes both from Asia as well as Pacific region) is given in Table A1 in the Appendices section of the study.

Table 1: Variables Description and Construction

Variables	Description and Construction
Growth	Log difference of GDP per capita (constant 2015 US$) (current year – lag year)
FDI	Net inflows (% of GDP)
Institutional Quality	Average of Political Rights and Civil Liberties
Government Expenditure	General government final consumption expenditure (% of GDP)
Domestic Investment	Gross fixed capital formation (% of GDP)
Human capital	School enrollment, tertiary (% gross)
Trade Openness	Trade (% of GDP)
Population Growth	Population growth (annual %)

4. Results and Discussion

This section outlines the empirical results of the study, beginning with a description of the data through summary statistics, correlation matrix, followed by the estimation results of the dynamic

Table 2: Summary Statistics

Variable	Observations	Mean	St. Dev.	Min	Max
Growth	473	1.95872	3.996062	-14.4907	18.75776
I. GDP	476	8.506912	1.524357	4.936451	11.67801
FDI	336	0.193011	1.744503	-7.00462	3.639925
INS	449	1.319784	0.569832	0	1.94591
D. INV	402	3.121239	0.429203	0.587963	4.180511
G. EXP	416	2.643166	0.49484	1.067783	4.11804
HC	402	2.656258	1.350371	-3.86915	4.841567
TO	426	4.244309	0.721768	-0.9584	6.044297
PG	441	0.621177	0.705562	-2.49661	2.537602

Notes: Authour's own calculation. **Growth** is the economic growth rate, **I. GDP** represents initial GDP per capita. **FDI** captures foreign direct investment, **INS** measures institutional quality, **D. INV** is the domestic investment, **G. EXP** refers to government expenditure, **HC** indicates human capital, **TO** denote trade openness, and **PG** represents population growth.

panel models. The summary measures offer initial comprehensions into the distribution, variability, and comparability of the variables employed in the analysis. By analyzing these descriptive measures, we can better understand the data characteristics before turning to the econometric estimations.

Table 2 summarizes the main variables used. The mean economic growth rate across 31 Asian countries is 1.96%, with a standard deviation of 3.99%. Economic growth varies widely, from –14.49% to 18.76%, with some countries seeing major contraction or expansion. The mean FDI inflow is 0.19% of GDP, indicating that foreign investment is present but remains modest in many economies. Institutional quality (INS) averages 1.32, ranging from 0.00 to 1.95, highlighting significant differences in governance and effectiveness that may affect development outcomes.

The control variables vary meaningfully. Domestic investment (D. INV) averages 3.12, showing active capital formation that drives productivity. Government expenditure (G. EXP) averages 2.64, showing moderate public-sector output and supporting infrastructure and services. Human capital (HC) averages 2.66 with a standard deviation of 1.35, revealing differences in education and skills across the region and affecting productivity and innovation. Trade openness (TO) averages 4.24, reflecting high global integration and likely facilitating international market access and economic growth. Population growth (PG) averages 0.62%, indicating stable demographics that potentially affect labor supply and growth.

Table 3 Correlation Matrix

Variables	Growth	I. GDP	FDI	INS	D. INV	G. Exp	HC	TO	PG
Growth	1								
I. GDP	-0.2993	1							
FDI	0.2353	0.1356	1						
INS	0.149	-0.4773	-0.0849	1					
D. INV	0.5293	0.0594	0.2983	-0.0658	1				
G. EXP	-0.1655	0.6133	0.091	-0.306	-0.0102	1			
HC	0.0001	0.6318	0.3552	-0.4016	0.2415	0.3093	1		
TO	0.0279	0.2439	0.47	0.2403	0.1109	0.2089	0.2237	1	
PG	-0.3049	-0.0164	-0.1733	0.2007	-0.3534	0.139	-0.4252	0.1152	1

Notes: Authour's own calculation.

Table 3 outlines the correlation coefficients of all main variables under consideration. The results show a positive correlation between economic growth and FDI inflows, institutional quality, trade openness, and domestic investment. This indicates that increases in FDI and improvements in

institutional quality are related with higher economic growth. Furthermore, institutional quality shows a positive correlation with FDI, indicating that countries with stronger institutions attract greater FDI.

Overall, the correlation coefficients are low. Most coefficients are below 0.80, indicating no significant multicollinearity in the dataset. The variables demonstrate minimal linear association, so they are appropriate for simultaneous inclusion in the regression model. The correlation structure appears typical and is consistent with established economic theory.

4.1 Discussion on the Empirical Results

A detailed deliberation on the estimated results is given here. First, a consideration is made on direct-effects analysis while then the moderation-effects are taken into deliberation account.

4.2 Direct-Effects Analysis

This subsection analyzes the direct growth impacts of our focused variables. The estimation process was carried out by using Stata software. Using estimates from two-step[2] System GMM regressions, the analysis addresses the issues like dynamic nature and potential endogeneity in the growth model. The primary objective here is to establish whether our focused variables each contribute individually to economic performance.

Table 4 presents the results. We have estimated 7 models as a whole. In model 1, we have initial income so as to show the dynamic nature of the model and the two of our focused variables: FDI and institutions. While retaining these three as independent variables, we add different control variables one by one and hence get Model 2 to Model 7. The last or model 7 retains only those control variables which happen significant in the earlier models. We followed this procedure as we were not able to include all the control variables due to Roodman (2009) proliferation of instruments condition[3].

Before going to explain and make an econometric interpretation of the parameters, three conditions must be met for the validity of the GMM estimations. These are Arellano-Bond tests for first order AR (1) and second-order AR (2) serial correlation and the Hansen J test of over-identifying restrictions. The null hypotheses of AR (1) and AR (2) tests are that there is no first-order and second-order serial correlation in the differenced residuals respectively. The null of Hansen J test is that the instruments are valid (i.e. they are uncorrelated with the error term). All of our estimated models meet the above three conditions. The AR (1) test is statistically significant while AR (2) and Hansen J test turn out insignificant. Overall, these tests collectively affirm the

[2] For comparison purposes, the estimates from Fixed-effects and one-step System GMM methods are given in Table A2 in the Appendices section of the study.
[3] The condition is that instruments should be less than the number of groups/countries.

Table 4 : Impact of FDI and Institutions on Economic Growth

Variables	Model-1	Model-2	Model-3	Model-4	Model-5	Model-6	Model-7
I. GDP	-3.238**	-0.539**	-2.341**	-1.300**	-2.119*	-0.260	-1.370***
	(1.258)	(0.253)	(1.082)	(0.586)	(1.036)	(0.312)	(0.256)
FDI	1.124*	0.425**	0.896***	0.145	0.894	0.570**	0.277*
	(0.572)	(0.308)	(0.294)	(0.411)	(0.608)	(0.224)	(0.134)
INS	3.601*	2.059**	2.785**	1.596*	4.341***	2.345***	1.392***
	(2.040)	(0.890)	(1.167)	(0.915)	(0.839)	(0.740)	(0.465)
D. INV		7.086***					3.097***
		(1.981)					(1.005)
G. EXP			-1.995				
			(2.660)				
HC				2.185**			1.400**
				(0.946)			(0.502)
TO					2.026		
					(3.387)		
PG						-1.572**	-1.173*
						(0.715)	(0.610)
Constant	24.3***	-15.22**	23.564**	7.370*	8.378	3.495	2.058
	(8.007)	(6.266)	(8.681)	(3.992)	(12.915)	(2.784)	(3.516)
Observations	221	195	195	183	200	198	146
Countries	28	27	27	27	27	28	24
Instruments	26	26	26	25	26	26	23
T. Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
AR (1) p	0.061	0.031	0.049	0.044	0.040	0.039	0.052
AR (2) p	0.566	0.633	0.238	0.969	0.451	0.176	0.451
Hansen p	0.169	0.235	0.226	0.768	0.709	0.393	0.956

Notes: Authour's own calculation. The dependent variable is growth. Windmeijer corrected standard errors are in the parentheses. *** p<0.01, ** p<0.05, * p<0.1

system GMM estimates. Moreover, the standard errors are robust, showing the Windmeijer correction for heteroscedasticity and autocorrelation in the standard errors. Also, each model incorporated time dummies so as to capture the unobserved time-specific effects.

Building on the above, we now explain the estimated results of the variables. As the case of FDI is concerned, its coefficient happens out positive and statistically significant in five out of seven estimated models, indicating a positive influence in the economic expansion of the sampled countries' economies. This impact is observed through mechanisms such as technology transfer, capital formation enhancement, and productivity spillovers. The magnitude of the coefficient suggests that even modest increases in FDI are associated with notable improvements in growth. This supports earlier literature on the topic like Borensztein et al. (1998) and Alfaro (2003).

Similarly, institutional quality coefficient comes out positive and significant in all of our estimated seven models. This demonstrates that institutional conditions matter for economic growth. Better institutions create conducive atmosphere in the economy where economic activities flourish leading to higher growth trajectories. Higher institutional quality enables countries to achieve more sustainable and inclusive growth, underscoring the critical relationship between robust institutions and economic performance, as emphasized by Acemoglu et al. (2001). Our outcomes are in alignment with the recent study of Zhang and Kim (2022). Their work, which also focused on Asian countries, highlighted the role of strong institutions in making FDI more effective and helping the economies to grow.

Looking at the control variables, the initial GDP per capita happens out negative and significant across all of our seven estimated models. Within the dynamic panel specification context, this entails persistence in economic growth and provide evidence of the catch-up effect. Specifically, this entails that poor countries with lower initial income tend to grow faster over time, thereby narrowing the gap with the rich economies. Domestic investment comes out positive effect and significant. This indicates that higher investment within the country helps increase production capacity and economic activity. Human capital also occurs with positive and significant association, showing that better education and skills improve worker productivity and help countries use new technologies more effectively.

While government expenditure comes out negative but mostly statistically insignificant. This suggests that in many Asian countries it is not efficiently used for productive purposes. Trade openness is positive but not statistically significant, which means that trade alone may not guarantee growth unless supported by other factors like industrial development and good policies. Population growth happens out negative and statistically significant, reflecting its pressure on the resources and capital hence slowing the pace of the economies.

4.3 Moderation-Effects Analysis

This section focuses on the moderation-effects analysis. Unlike the direct-effects analysis, the moderating-effect analysis is made through a single model incorporating FDI, institutional quality, and their interaction, while retaining only the significant covariates identified in Table 4. The estimated outcomes are set out in the Table 5.

Table 5 Moderation Effect of Institutional quality on the FDI- Growth nexus

VARIABLES	Model
I. GDP	-1.369***
	(0.243)
FDI	0.357*
	(0.206)
INS	1.458***
	(0.456)
FDI*INS	-0.062
	(0.148)
D. INV	3.119***
	(0.946)
HC	1.374***
	(0.488)
PG	-1.321*
	(0.673)
Constant	2.135
	(3.309)
Observations	146
Countries	24
Instruments	23
T. Dummies	Yes
AR (1) p	0.048
AR (2) p	0.393
Hansen p	0.941

Notes: See Table 4.

The coefficient of the interaction terms happens out statistically insignificant showing that institutional quality has nothing to do with the FDI-growth relation in the sampled Asian countries. Both the variables contribute independently to growth, but their effects do not reinforce each other. This implies that enhanced institutional quality will not necessarily boost FDI's growth impact.

This finding directly contrasts with the common theoretical wisdom and several relevant empirical studies in the literature (such as Durham, 2004; Li & Liu, 2005; and Zhang & Kim, 2022) which maintain that host country institutional environment is key in this scenario. This posits that institutional quality does matter for maximizing the benefits of the FDI. However, our finding backings the position that FDI generates growth benefits even in weaker institutional environments, as foreign investors rely on internal mechanisms or alternative arrangements to safeguard their investments. Variations in institutional structures across Asian economies likely dilute the moderating effect, leading to insignificant findings.

Nevertheless, we are in conformity with some of the recent studies like those of Koç and Çiftçi (2024), and Peres et al. (2018) who have established that institutional quality has no significant role in attracting FDI. This may be due to several factors. FDI in Asian countries is more inclined to resource-based and sector-specific and less sensitive to the institutional conditions in these countries. Second, some Asian economies like China, Vietnam, India, Pakistan and Bangladesh have received significant inflows of FDI despite their institutional weaknesses like weak governance indicators, enforcement of property rights, regulatory inefficiencies, bureaucratic delays, and political instability. These patterns suggest that in the Asian region, other factors like market size, cost competitiveness, macroeconomic stability, and strategic importance outweigh the worth of institutional consideration in enticing FDI and facilitating its contribution to growth.

Our this peculiar results outcome is also harmonized with of Agbloyor et al. (2016), who found that there was little correlation between FDI and institutional quality in Sub-Saharan African countries. Their study also testified that sound financial markets are more important than institutions when it comes to FDI's ability to spur growth. The study concluded that institutions act as a prerequisite for FDI in boosting growth only when the financial markets are weak. A more recent study by Zhang and Kim (2022) looked at Asian countries and found that institutions do matter a lot for FDI to bring good results. But even in their study, the effect was different for different countries. Some cases saw a strong interaction, others didn’t. Also, Alfaro et al. (2004) note that institutions and financial markets can improve the impact of FDI, but also mentioned that sometimes this effect is not clear unless the institutions are really strong.

The control variables happen out mostly alike with signs and significance as they appear in the model-7 in Table 4. For example, the initial GDP turns out negative and statistically significant, which supports the convergence theory again. It suggests that countries with lower starting income levels tend to grow faster than richer ones, assuming other things are equal. Domestic investment and human capital continue to have a positive and significant effect on growth, showing their

important role in economic development. Population growth still has a significant negative impact, suggesting that high population growth creates challenges for economic progress.

The diagnostic tests like AR (1), AR (2) and Hansen J test strongly support the robustness and validity our estimated results.

5. Conclusion and Recommendations

The scholarly consensus firmly establishes both foreign capital inflows and domestic institutional framework as crucial determinants of long-run economic growth. Also, theoretically, strong institutions are hypothesized as a critical transmission mechanism by enlarging a host country's absorption capacity and thereby enhancing the growth benefits of FDI.
This study aimed to examine the significance of FDI and institutions on economic growth in Asia, paying special attention to how institutional quality moderates the FDI-growth nexus. The research employed five-year non-overlapping average data from 1971 to 2023 and concentrated on the 31 Asian countries that were chosen. The study has included some of the most important macroeconomic variables, including domestic investment, human capital, government spending, trade openness, and population growth as control variables in the empirical model along with our focused variables. The study utilized the System GMM technique for estimation purposes.

The estimated results reveal that our key explanatory variables play a catalytic role in spurring economic growth. FDI helps countries grow by bringing capital, technology, and new business ideas. Good institutions support growth by stabilizing the economic environment and reducing investment risks. These findings show that both external investment and domestic institutions plays important role in improving the economic performance of Asian economies. The findings also show that the interaction between FDI and institutional quality is not statistically significant. This means institutions do not strongly moderate the relation between FDI and growth in Asia. Both FDI and institutions promote growth, but their effects are largely independent and distinct. FDI growth promotion effect is not reliant on the domestic institutional conditions, implying that both the factors affect growth through their individual direct channels.

Given the above results of the study, the decision makers are suggested to adopt a dual-track approach emphasizing independent focus on both FDI and institutional quality. The governments should simultaneously and individually prioritize both areas without making institutional reforms a strict prerequisite for FDI effectiveness. This will leverage the proven direct benefits of each factor to ensure robust and sustained economic growth. Policymakers should therefore focus on improving the quality and productivity of FDI inflows while continuing institutional reforms that create a stable and transparent economic environment. Attracting long-term, efficiency-seeking FDI in sectors like manufacturing, services, and technology can help transfer knowledge and improve productivity. At the same time, improving governance, regulatory frameworks, and property rights can ensure paving the platform for economic actors to excel and promote growth.

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Appendices

Table A1 List of Countries

S. No.	Country Name	S. No.	Country Name	S. No.	Country Name
1.	Australia	11	Korea, Rep.	21	Pakistan
2.	Bangladesh	12	Lao PDR	22	Palau
3.	Bhutan	13	Macao SAR, China	23	Papua New Guinea
4.	Cambodia	14	Malaysia	24	Philippines
5.	China	15	Maldives	25	Samoa
6.	Fiji	16	Marshall Islands	26	Singapore
7.	Hong Kong SAR, China	17.	Mongolia	27	Solomon Islands
8.	India	18	Myanmar	28	Sri Lanka
9.	Indonesia	19	Nepal	29	Thailand
10.	Japan	20	New Zealand	30	Turkiye
				31	Viet Nam

Table A2 The Direct and Moderating impact of FDI, Institutions on Economic Growth (Via Fixed-Effects and One-Step System GMM)

	Fixed-Effects		One-Step System GMM	
VARIABLES	**Direct Impact**	**Moderating Impact**	**Direct Impact**	**Moderating Impact**
Initial GDP	-4.988***	-4.981***	-1.366***	-1.351***
	(1.207)	(1.219)	(0.297)	(0.319)
FDI	0.551***	0.319	0.316*	0.396
	(0.160)	(0.297)	(0.160)	(0.234)
INS	-0.219	-0.131	1.484***	1.533***
	(0.795)	(0.821)	(0.499)	(0.533)
FDI*INS		0.269		-0.079
		(0.268)		(0.182)
D. INV	3.541**	3.263*	3.011**	3.063**
	(1.488)	(1.615)	(1.175)	(1.165)
HC	1.957***	1.950***	1.351**	1.337**
	(0.570)	(0.573)	(0.507)	(0.518)
PG	-1.204	-1.100	-1.540*	-1.544*
	(1.021)	(1.075)	(0.882)	(0.876)
Constant	28.142***	28.694***	2.747	2.467
	(8.301)	(8.343)	(3.949)	(4.170)
Observations	146	146	146	146
Countries	24	24	24	24
Instruments	---	---	23	23
T. Dummies	Yes	Yes	Yes	Yes
AR (1) p			0.033	0.033
AR (2) p			0.410	0.379
Hansen p			0.956	0.941
R-squared	0.505	0.507		

Notes: See Table 4.