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DRIVERS OF INDUSTRIAL DEVELOPMENT IN SOUTH ASIA: COMPARING PMG AND MG ESTIMATES OF FDI AND GOVERNMENT EFFECTIVENESS

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Abstract

This paper empirically examines the factors that influence industrial development in South Asian economies (Bangladesh, Nepal, Bhutan, India, Sri Lanka, and Pakistan), specifically how foreign direct investment (FDI) and government effectiveness affect industrial development, in the years 2004 to 2022. The region has an interesting case to study because of the different industrial arrangements, institutional differences, and the dire need of the sustainable structural change. The study uses panel data of six South Asian nations to identify the difference between long-run equilibrium and short-run dynamic adjustments using the Pooled Mean Group (PMG) and Mean Group (MG) estimators in an Autoregressive Distributed Lag (ARDL) model. All the findings point to the fact that industrial development in South Asia is essentially a long-run structural process driven largely by economic growth and trade openness, whereas FDI has an unexpected negative impact that contradicts the common wisdom. The popularity of the MG model helps to realize how country-specific industrial policies are more important than uniform strategies at the regional level. Policy-wise, these findings imply that South Asian economies need to be out of the traditional approach of only attracting FDI, but emphasize on how to enhance the quality, sectoral destination and industrial connection of foreign investment. Long-term industrial transformations require the strengthening of governance, encouraging export-oriented industrial competitiveness, effective management of urbanization, and encouraging industrial practices that are ecologically friendly. This research adds to the literature by generating strong econometric data on the non-homogeneous determinants of industrial growth in South Asia and states of action policy recommendations sensitive to the various structural features of the region.

Keywords: Foreign Direct Investment, Government Effectiveness, Industrial Development, South Asia, PMG-ARDL, MG-ARDL.

Advance Journal of Econometrics and Finance
Vol-4, Issue-1, 2026

1. Introduction

The industrial growth has been a core source of economic change, creation of jobs, and sustainable growth in developing economies. To South Asian economies, where almost 1.9 billion people live, and where demographic transitions and structural change are occurring at a blistering pace, industrialization provides all-important avenues of poverty alleviation, value addition and access to global value chains. The ability of the industrial sector to absorb labor, create productivity benefits, and establish forward and backward connections with the other sectors makes it a pillar of the economic development strategies in the region.

The idea of Foreign Direct Investment (FDI) has always been regarded as one of the crucial drivers of industrial growth in the developing world. In addition to its direct capital formation advantage, FDI also introduces transfer of technology, management skills, and access to foreign markets, as well as productivity spillovers to the domestic industries. The theoretical literature, especially the endogenous growth models of Lucas (1988) and Romer (1990) focuses on the fact that FDI may be a channel of bringing new technologies and managerial practices which boost total factor productivity. The success of FDI in industrial development, however, turns out to be highly dependent on the absorptive capacity and institutional environment of the host country.

The effectiveness of the government, which is determined as the quality of the services provided by the government, the quality of the civil service, not being under influence of political factors, the quality of the policy formulation and implementation, the credibility with which the government is committed to the policies is also found to be a critical determinant of the FDI attraction and its effects on development. Well-established governance systems that are typified by political stability, quality of regulation, and corruption control provide an enabling environment in which the private sector can develop, decrease the costs of doing business, and increase the productivity-enhancing impact of foreign investment.

The South Asian situation is an interesting place to explore this nexus. The region has had massive economic growth in the last twenty years but industrialization has not been evenly spread among the nations. Inflows of FDI in South Asian decreased by USD 56 billion in 2022 to USD 35 billion in 2024, and the share of the region in the world FDI became 2.3 percent, which is significantly less than the share of Southeast Asia 17 percent. This disjuncture poses fundamental questions regarding factors in structure that determine the effects of FDI on industrialization, and governance quality is one of the factors that stand out as defining.

Empirical evidence in the recent past has placed great emphasis on governance as a determinant of FDI outcomes. Ghosh and Saha (2025) have strong evidence of 135 developing nations indicating that FDI can only help to increase the level of economic growth when the institutional quality such as government effectiveness, regulatory quality and the rule of law are of high quality. In like manner, Tabash et al. (2024) determine that the quality of governance has a positive effect on FDI inflows in South Asia and that the aggregate governance index has significant positive effect on FDI attraction. Rabia et al. (2025) focus particularly on South Asian economies and determine the effectiveness of the government as a positive correlate of the long-term economic growth.

This research contributes to the body of literature in a number of ways. First, it offers an extensive empirical discussion of the combined effect of FDI and government effectiveness on industrial development in the South Asian economies. Second, it is based on strong panel econometric models, such as Panel ARDL with PMG and MG estimators, to provide short-run and long-run dynamics. Third, it provides the policy-relevant information to South Asian policy makers who aim to promote their industrial development by attracting strategic FDI and by improving their governance systems.

The rest of this paper has the following arrangement. Section 2 presents the literature review (both theoretical and empirical). Section 3 explains data and econometric methodology. The empirical results are reported in section 4. The last section (section 5) conclude study findings, and propose policy implications on the basis of findings.

2. Review of Literature

2.1 Theoretical Foundations

The conceptual connection between FDI, governance, and industrial development is based on several branches of economic philosophy. The concept of the neoclassical growth model considers FDI to be part of capital accumulation, which is capable of increasing output by increasing the physical capital stock. Nevertheless, long-run growth impact is affected by technological advancement due to a decrease in the marginal returns to capital.

The endogenous theory of growth offers a better theory of sustained effect of FDI. Lucas (1988) stresses on human capital accumulation, learning-by-doing, indicating that FDI could increase human labor productivity by transferring skills and developing workforce. Romer (1990) emphasizes on knowledge spill and innovation whereby it is argued that FDI acts as a channel of new technologies that enhance growth of total factor productivity. These paradigms suggest that the effects of FDI growth are conditional to the absorptive capacity of the host economy.

The institutional economics literature underscores that the quality of governance influences economic performances through lowering transaction costs, safeguarding property rights, and establishing predictable policy environments. According to the institutional theory proposed by North, powerful institutions can make markets operate effectively and weak institutions introduce uncertainty that discourages investment and productivity.

2.2 FDI and Industrial Development in South Asia

Empirical studies on FDI in South Asia indicate that the difference among countries is very heterogeneous. Research has shown that FDI does have a positive influence on the economic development, but the impacts are structural based. Using Fully Modified OLS (FMOLS) and Dynamic OLS (DOLS), with strong robustness controls, Sethi et al. (2022) revealed that financial development and FDI have a positive effect on GDP per capita of South Asian nations.

The author reviewed five South Asian countries during 1980-2017 and concluded that FDI had positive but statistically insignificant impacts on the GDP growth and domestic investment and human capital were important determinants (Sowrov 2019). This implies that the contribution of FDI can be indirect such that it works through its interaction with the factors of absorptive capacity, instead of directly. Maroof et al. (2019) particularly examined the determinants of industrial development in South Asia and found that governance, FDI, equity openness, and inflation played an important role in the development. Their Panel ARDL estimation showed that the variables play an important role in industrial value added within the region.

2.3 Governance and Industrial Development

The literature on the relationship between governance and industrial development is quite well-developed. Rabia et al. (2025) analyze the relationship between governance and economic development in South Asian developing countries between 2000-2020 and reveal that government effectiveness, political stability, gross capital formation, and labor force have a positive relationship with long-term economic development. It uses Panel ARDL/PMG approach and establishes that corruption is negatively connected to economic growth.

Advance Journal of Econometrics and Finance
Vol-4, Issue-1, 2026

Tabash et al. (2024) explore the place of governance in the attraction of FDI inflows in South Asia through FMOLS and DOLS models. The empirical study of eight South Asian economies in the year 2000-2019 shows that the aggregate governance index has a positive and significant impact on the FDI inflow, and hence, an improvement in the governance index can positively affect the attraction of FDI. The findings also indicate the adverse effects of inflation and positive effects of trade volume, population growth, labor force and financial development on FDI inflow.

Recent studies point out the moderating role of governance on the FDI and economic performance. Chanda et al. (2025) explore the presence of a moderating effect of governance on FDI inflows in BRICS through the panel ARDL. Their results disclose that good governance can mediate the connection between the FDI and environmental performance, which encourages the use of renewable energy. This implies that the quality of governance determines the translation of FDI into developmental results. Ghosh and Saha (2025) present strong evidence of 135 developing nations that show that FDI can only have a positive impact on economic growth when an institutional quality, such as the effectiveness of the government, the quality of regulations, and the rule of law, are high. On the other hand, weaker institutions can make countries not experience the growth benefits of FDI.

3. Data and Econometric Methodology

Our analysis will include data of six countries of South Asia- India, Bangladesh, Bhutan, Nepal, Pakistan and Sri Lanka- in the time dimension 2004-2022. The variables that will be used in this study are all obtained in World Development Database (WDI). A detailed summary of all variables are mentioned in Table 1.
The study uses the Im-Pesaran-Shin (IPS) unit root test and Kao cointegration test to find out the stationarity properties and to analyze the existence of long-run relationship. Moreover, to estimate both short-run and long-run coefficients, the panel Autoregressive Distributed Lag (ARDL) model has been used with the estimators of Pooled Mean Group (PMG) and Mean Group (MG). The ARDL approach is appropriate when variables are integrated of order I(0) or I(1) or a combination of both.

The model specification is:

$$\Delta lindustry_{it} = \alpha_i + \beta_{ij}\,\Delta lindustry_{it-1} + \sum \gamma_{it-j}\,\Delta fdi_{i,t-j} + \sum \delta_{it-j}\,\Delta GE_{i,t-j} + \sum \theta_{it-j}\,\Delta X_{i,t-j} + \phi_i\,(lindustry_{it-1} - \lambda_{1i}\,fdi_{it-1} - \lambda_{2i}\,GE_{it-1} - \lambda_{3i}\,X_{it-1}) + \varepsilon_{it}$$

where $X_{i,t}$ represents control variables (*fdi, lup, lton, lgdp*), and λ coefficients represent long-run relationships. Evidence from emerging nations about several economic indices is well explained in by employing advance econometric techniques (Sanneh et al. (2026a); Sanneh et al. (2026b); Akbar et al. (2026c); Akbar et al. (2025(a)); Akbar et al. (2025(b)); Akbar et al. (2025(c)); Akbar et al. (2025(d)); Akbar et al. (2025(e)); Akbar et al. (2025(f)); Akbar et al. (2025(g)); Akbar et al. (2025(h)); Ali et al., 2024; Sana et al., 2024; Akbar et al., 2024(a); Akbar et al., 2024(b); Raza et al., 2021(a); Raza et al., 2021(b)).

4. Empirical Results

A detailed description of variables used in our study is mentioned in Table 1 with source of data and descriptive statistics of variables.

Table 1: Variable Definition, Source and Descriptive Statistics

Variable	Definition	Source	Obs	Mean	Std. dev.	Min	Max
lindustry	Industry value added (% of GDP)	WDI	114	3.21	0.33	2.47	3.73
fdi	Net FDI inflows (% of GDP)	WDI	114	1.06	0.91	-0.64	5.88
GE	Government effectiveness index	WDI	114	40.47	18.54	12.38	74.29
lup	Log of Urban Population	WDI	114	3.32	0.32	2.70	3.78
lgdp	Gross Domestic Product (Current US$)	WDI	114	25.11	2.18	20.73	28.72
lton	Log of Trade openness	WDI	109	3.84	0.39	3.21	4.68
lco2	CO2 omission	WDI	114	3.64	2.44	-0.73	7.92

The results of Im-Pesan-Shin (IPS) panel unit root test, as shown in Table 2, show that there is a mixed order of integration of the study variables. FDI and government effectiveness (GE) are stationary at level form, whereas trade openness (lton) is weakly stationary at the 10% level of significance. Conversely, the non-stationary at level are industrial development (lindustry), GDP (lgdp), urban population (lup) and carbon emissions (lco2). First differentiation, however, makes all non-stationary variables stationary, which proves that they are order-one integrated, I(1). On the whole, the results indicate that the variables are both I(0) and I(1), which justifies the appropriateness of the panel ARDL estimation method to the empirical analysis.

Table 2: IPS Unit root Test Results

	Variable	IPS Statistic (W-t-bar)	p-value	Decision
At Level	lindustry	0.39	0.6524	Unit Root
	FDI	-3.53	.0002***	Stationary
	GE	-2.91	.0018***	Stationary
	lgdp	0.89	0.8124	Unit Root
	lup	-0.17	0.4334	Unit Root
	lton	-1.37	.0855*	Stationary at 10% level
	lco2	1.14	0.8721	Unit Root

Advance Journal of Econometrics and Finance
Vol-4, Issue-1, 2026

At 1st Difference	Δ.lindustry	-6.05	.0000***	Stationary
	Δ.lup	-3.47	.0000***	Stationary
	Δ.lgdp	-4.72	.0000***	Stationary
	Δ.lco2	-6.40	.0000***	Stationary

Table 3: Kao Cointegration Test Results

Test Statistic	Statistic	P-value	Decision
Modified Dickey–Fuller *t*	1.5192	0.0529	Cointegration
Dickey–Fuller *t*	1.5679	0.0524	Cointegration
Augmented Dickey–Fuller *t*	1.4629	0.0531	Cointegration
Unadjusted Modified Dickey–Fuller *t*	1.8406	0.0203	Cointegration
Unadjusted Dickey–Fuller *t*	1.6929	0.0442	Cointegration

Results of the Kao cointegration test, Table 3, give a moderate indication that the variables have a long-run relationship. Though the value of the Modified Dickey Fuller, Dickey Fuller and Augmented Dickey Fuller tests is just marginally significant at the 10 percent level, the unadjusted Modified Dickey Fuller and unadjusted Dickey Fuller tests are significant at the 5 percent level. These results are evidence of partial support of cointegration, that is, the variables can move together in the long run, but the consistency of the evidence is not equally strong on all Kao test statistics.

In Table 4, the estimates of PMG-ARDL give valuable evidence on the long run and short run determinants of industrial development in South Asia. Since the dependent variable is D.lindustry, the model offers the dynamic adjustment of industrial development though it separates the relationship between equilibrium and short-term variations. The findings suggest that the long-run structural factors, as opposed to the short-run disturbances, are the major determinants of industrial development in South Asia, and this is also in line with the gradually changing nature of industrial development.

Table 4: Long-run and Short-run Estimates using PMG-ARDL Model, Dependent Variable Industry

Variable	Coefficient	Std. Error	z-value	p-value
Long-Run Estimates				
FDI (L1.)	-0.3050***	0	-8676.79	< .001
GE (L1.)	1.212047	0.103391	11.72	< .001
lup (L1.)	-0.3137***	0.0023	-137.54	< .001
lgdp (L1.)	0.3015***	0.0003	1167.15	< .001
lton (L1.)	0.3659***	0.0003	1297.97	< .001
lco2 (L1.)	-0.1549***	0.0003	-455.41	< .001
Short-Run Estimates				
ECM	-0.0492	0.0585	-0.84	0.4
ΔFDI	-0.0162	0.0144	-1.13	0.26
ΔGE	-24.0595	28.5613	-0.84	0.4
Δlup	4.6931	3.9169	1.2	0.231
ΔlgdpP	0.6106*	0.3445	1.77	0.076
Δlton	0.1021*	0.0538	1.9	0.058
Δlco2	-0.1677*	0.0858	-1.96	0.051
Constant	-0.2911	0.2195	-1.33	0.185

FDI has a negative and statistically significant impact on industrial development in the long run with a coefficient of -0.305. This observation implies that an increase in foreign direct investment is linked with a decrease in industrial development with time. Despite the traditional view in which FDI is supposed to enhance industrialization due to the accumulation of capital, transfer of technology, and productivity spillovers, the implication means that in the South Asian context, FDI has not been adequately invested in productive industrial sectors. Rather, they could have focused foreign inflows in non-industrial or low-linkage sectors and thus restricted their contribution to development. The same conclusion also suggests that FDI can in certain instances crowd out, as opposed to complement, domestic industry. Thus, the role of FDI seems to be less about its amount, but its sectoral structure, its ability to absorb and its policy conformity to the national industrial goals. In the long-run specification, the coefficient of government effectiveness is positive, which implies the possibly positive role of institutions in promoting industrial development. The positive sign is economically significant because good governance may boost the growth of industrial groxes by boosting the quality of regulations, good administration of the government, consistency in the policy, and efficient delivery of infrastructure. In the developing countries like South Asia, where the institutions tend to restrict the growth of industries, the quality of governance is a very important facilitating factor. The findings also indicate that the urban population negatively and statistically significantly influences the industrial development in the long run. This implies that in South Asia urbanization has not necessarily been accompanied by productive industrial growth. Instead, it could be a tendency toward unplanned or consumption-based urbanization, in which urban growth is faster than the industrial infrastructure, gainful employment, and production capacity. Urbanization can lead to a situation where pressure on housing, transport, labor markets, and public services is heightened without the creation of industrial dynamism in such an environment. In comparison, GDP has a positive and very significant long-run effect, which implies that the general economic growth is favorable to industrial development. This observation is theoretically in line and indicates that increased income levels, domestic demand, investment capacity and expansion of structural transformation will favor industrial growth. Indelibly, the long-run relationship between trade openness and industrial development is positive and statistically significant. This means that the increased involvement in the global markets promotes the

performance of the industry through increased access to the export markets, foreign capital goods, technology and competitive advantages. The outcome affirms the argument that external openness can lead to the growth of South Asian industrial sectors provided that it is coupled with sufficient competitiveness and facilitating infrastructure. The coefficient of emission of carbon is negative and significant in the long-run, which implies that the growth patterns that are not environmentally sustainable hinder the growth of industries in the long-run. This implies that the efficiency of long-term productivity and competitiveness can be diminished in pollution-sensitive or energy-inefficient industrial setups. This observation is especially applicable in the South Asian context where industrial development tends to be accompanied by environmental degradation, energy shortages, and poor sustainability systems. The finding thus indicates the significance of environmental friendly production systems, cleaner technologies and green industrialization.

Speaking of the short-run dynamics, the error-correction term is a negative value, which theoretically should be the case, however, it is not statistically meaningful. This is to mean that even though the system is inclined towards a long-run equilibrium following a shock, the rate of adjustment is slow. As a practical matter, the equilibrium is not repaired quickly indicating that the South Asian industrial development is slow to respond to temporary shocks. This will come as no surprise since long-term investment horizons, institutional inflexibility, and slow institutional reactions tend to define the nature of industrial growth. Majority of the short-run coefficients have statistical significance of zero and this implies that instant alteration of the explanatory variables does not have a strong influence on industrial development. In particular, the FDI and the effectiveness of the government do not exhibit any significant short-term impact, implying that their effect is more structural in nature and is only realized in the long run. Equally, the short-term urban population shifts do not seem to have a significant impact on the performance of industries. Nonetheless, GDP and trade openness only show positive and slightly significant short-term effects, which means that the current economic growth and external opening can offer some short-term benefits to the industrial life. Conversely, carbon emission is negative and only marginally important in short term, which supports the opinion that environmental inefficiency can have both short-term and long-term negative impacts on the industrial performance.

The aggregate implications of the PMG results are that industrial development in South Asia is essentially a long-run structural process, in which economic growth and trade openness are the primary driving forces, whereas FDI and environmental pressures have a more complex and possibly negative impact. What is of particular significance is the negative sign of the coefficient on FDI which counterfeits a widespread belief that foreign capital must necessarily lead to industrialization. Rather, it can be concluded that the developmental effects of FDI are dependent crucially on the condition of whether the FDI is oriented to productive industrial processes and is complemented by efficient institutional and policy frameworks. Similarly, the evidence highlights that industrial development cannot be maintained with growth and openness per se unless it is supported with institutional effectiveness, fruitful urbanization, and environmental sustainability. Policy wise, the findings imply that South Asian economies must go beyond an exclusive policy of only attracting FDI to expand their efforts on enhancing the quality, destination and industrial connectivity of the foreign investment. Meanwhile, enhancing governance, industrial competitiveness in terms of exports, more productive management of urbanization, and environmentally sustainable industrial practices are all pivotal to industrial transformation in the region in the long term.

Table 5: Long-run and Short-run Estimates using MG-ARDL Model

Variable	Coefficient (β)	Std. Error	z-value	p-value
Long-Run Estimates				
FDI (L1.)	0.0956	0.1183	0.81	0.419
GE(D1.)	-0.0343	0.0356	-0.96	0.336
lup (L1.)	21.8607	21.3674	1.02	0.306
lgdp (L1.)	-3.8275	3.9615	-0.97	0.334
lton (L1.)	-3.9863	4.0518	-0.98	0.325
lco2 (L1.)	-0.4088	0.606	-0.67	0.5
Short-Run Estimates				
ECM	-1.7094***	0.51	-3.35	0.001
ΔFDI	0.0054	0.0215	0.25	0.801
ΔGE	0.0055	0.0036	1.53	0.127
Δlup	-68.3522	52.7937	-1.29	0.195
Δlgdp	-0.3202	0.5896	-0.54	0.587
Δlton	0.2977	0.2784	1.07	0.285
Δlco2	-0.0077	0.2499	-0.03	0.975
Constant	-9.1169	14.814	-0.62	0.538

The MG estimation in Table 5 that provides the capacity of full long-run heterogeneity across the countries generated a slightly different image. According to the MG framework, all the long-run explanatory variables were statistically not significant, and this implies that the determinants of industrial development vary significantly across countries. It means that the industrial impacts of FDI, governance, trade, and macroeconomic variables differ in South Asian economies and cannot be completely represented by one common long-run coefficient. The MG model, however, showed a negative and statistically significant error-correction term, which substantiates the presence of a valid long-run adjustment process and indicates that the industrial disequilibrium is remedied quite fast when country-specific dynamics are put into consideration. Just like PMG, short-run coefficients in MG model were not very significant, which confirmed that industrial transformation is not highly sensitive to short-term fluctuations in the explanatory variables.

Advance Journal of Econometrics and Finance
Vol-4, Issue-1, 2026

Table 6: PMG vs MG Model, Hausman Test

Variable	MG Estimate (b)	PMG Estimate (B)	Difference (b − B)	Std. Error of Difference
FDI (L1.)	0.0956	-0.305	0.4006	0.2399
lup (L1.)	21.8607	-0.3137	22.1744	43.3222
lgdp (L1.)	-3.8275	0.3015	-4.1291	8.032
lton (L1.)	-3.9863	0.3659	-4.3522	8.215
Lco2 (L1.)	-0.4088	-0.1549	-0.2539	1.2286
Test Statistic	Value			
Chi-square (χ^2)	55.74			
Degrees of Freedom	5			
p-value	< .001			

Lastly, the Hausman test overwhelmingly rejected the null hypothesis of long-run homogeneity meaning that the MG estimator is statistically favored as compared to PMG, Table 6. This finding confirms that the association between FDI, institutions, and South Asian countries does not show a similar association of these three variables across all countries. On the whole, the results indicate that the industrial development in the area is associated with a long-run equilibrium process, but the major drivers are not similar in all countries. The findings thus underscore the need to have country-specific industrial policies, better institutional quality and productive sectoral allocation of FDI, strategic trade integration and environmentally sustainable growth in order to realize better industrial development in South Asia.

5. Conclusion

The paper offers a subtle economic analysis of industrial development determinants in South Asia, a comparison of PMG and MG estimators in an ARDL model. The Hausman test conclusively rejects the null hypothesis of homogeneity in the long run (χ^2 = 55.74, p = 0.001), meaning that the MG estimator is statistically preferred and that the relationships between FDI, government effectiveness and industrial development are statistically significant and different across the countries of South Asia. In the heterogeneous MG model, none of the explanatory variables, FDI, governance, urbanization, GDP, openness to trade, or carbon emission, can be found to play a universally important long-run role in the industrial development. This observation highlights the importance of the fact that the industrial trajectories of the countries like India, Pakistan, Bangladesh, Sri Lanka, and Nepal are influenced by specific structural, institutional, and policy conditions instead of being shaped by a regional trend. However, the error-correction term in the MG model (-1.7094, p = 0.001) is highly significant and negative, which proves that the industrial development in South Asia can be ruled by a valid process of long-run equilibrium, and the deviations are corrected rather fast as soon as country-specific processes are considered. The difference in the PMG and the MG outcomes, especially negative and significant FDI coefficient in PMG and insignificant but positive coefficient in MG, underscores that the homogeneity assumption of pooling countries is likely to mask important cross-country differences and thereby draw misleading generalizations to policy conclusions. All the findings together suggest that although the process of industrial development in South Asia is essentially a long-run structural process, not all the main driving forces of the process are homogeneous in the region, and thus require specific analytical and policy responses.

5.1. Policy Implication

The empirical findings have some significant policy implications to the South Asian economies that aim at accelerating the process of industrial transformation. To begin with, the denial of long-run homogeneity suggests that harmonization of regional policies, though helpful in trade and cooperation, should not be used instead of country-specific policy in industries. The policymakers should understand that the effects of FDI on the industrial development are not consistent across national settings; thus, the attraction of foreign capital must be accompanied by sectoral targeting policies, domestic absorptive capacity building, and country-specific linkage promotion policies. Second, since the MG model shows no long-run determinants that are statistically significant across all countries, governments are advised to undertake intensive country-specific diagnostics in order to detect binding constraints to industrialization such as poor governance, inefficient patterns of urbanization, inadequate trade integration, or inefficient environmental policies and focus interventions. The extremely important error-correction rate indicates that industrial disequilibria are relatively fast to correct in the dynamics of the countries of origin meaning that properly designed, contextually-specific policy interventions may produce timely adjustments. Third, the noteworthiness of short-run substantial impacts of most variables in both PMG and MG models implies that industrial policy must follow long-run, structural orientation instead of anticipating short-term outcomes of short-term stimulus actions. The governments must invest in consistent institutional changes, infrastructure, and human capital instead of the occasional policy interventions. Lastly, the negative coefficient of carbon emissions in the PMG model, although not always important at the national level, is an indication that environmental sustainability could not be decoupled with industrial policy; South Asian countries should gradually decouple industrial incentives with cleaner technologies of production, energy efficiency standards, and emission reduction goals to prevent long-term productivity losses and loss of competitiveness. A common, yet adaptable regional system that can exchange knowledge on successes to industrial policy and failures and responding to national heterogeneity would be better to address the industrial development goals of South Asia than the rigid common policies.

5.2. Limitations and Future Research.

This research has a number of limitations. To begin with, the analysis considers FDI as a total flow i.e. that is not split up into sector and type. Future studies may further unpack FDI to determine the different effects in manufacturing, services, and extractive sectors. Second, the exploration of six South Asian economies is restrictive to generalization; incorporating Afghanistan and Maldives in the analysis once they become available would be more comprehensive. Third, the research will finish in 2023; it would be interesting to extend the research to cover post-pandemic dynamics. Fourth, the particular measures of government effectiveness such as quality of regulation, rule of law and corruption control could be studied individually to define what is most important.

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