Article

The Impact of Global Value Chain Participation in the Textile Industry on Economic Growth: Evidence from Developing Asian Economies

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Abstract

This study examines the impact of global value chain (GVC) participation in the textile industry on economic growth in developing Asian economies. The textile industry is a pivotal sector in these economies and contributes substantially to employment, trade, and industrialization. Through a panel data analysis of nine economies from 2007 to 2022, the study evaluates the roles of forward and backward GVC participation in the textile industry on GDP growth and the influence of institutional and policy environments. The results reveal that backward GVC participation significantly enhances economic growth, whereas forward participation has a negative effect. Additionally, strong institutional frameworks—such as high levels of financial and labor freedom—amplify the benefits of GVC participation, underscoring the importance of policy support. These findings highlight the potential of targeted GVC involvement in the textile industry to drive sustainable growth and suggest that policymakers in developing economies which focus on strengthening institutional quality and promoting higher-value-added activities within GVCs.

Keywords: Economic growth, Fixed effect, Global value chain (GVC), Textiles.

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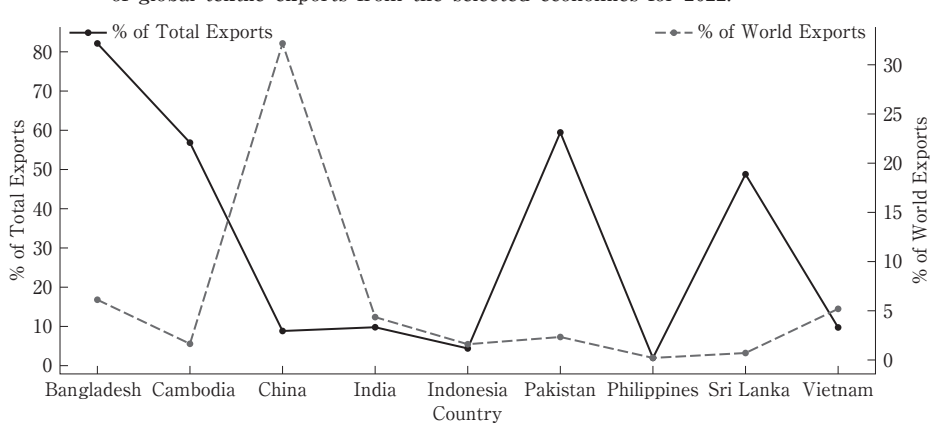
Ⅰ. Introduction

The textile industry is one of the most significant contributors to the global economy, particularly for developing nations. It is a critical engine for employment, trade, and industrial growth. The industry has undergone profound transformations in the last few decades due to the integration of global value chains (GVCs). Participation in GVCs allows countries, particularly in Asia, to specialize in specific stages of production, leading to increased efficiency, productivity, and economic growth. This study investigates the impact of GVC participation within the textile industry on the economic growth of developing Asian economies.

The rise of global value chains has led to a paradigm shift in international trade and production patterns. Firms are no longer confined to sourcing, producing, and exporting within a single country. Instead, production processes are fragmented across various countries, with each stage contributing to the final product. This division of labor, facilitated by GVCs, has allowed developing countries to insert themselves into international trade networks by specializing in specific activities such as manufacturing, assembly, or exporting textiles.

The textile industry is a significant contributor to the economies of several developing nations, particularly in Asia. Countries like Bangladesh, China, India, Cambodia, and Vietnam rely heavily on textile exports for economic growth. Figure 1 shows Bangladesh, with textiles making up 82.3% of its total exports, and Pakistan, with 59.5%, illustrate how essential this sector is for their economies. Similarly, though more diversified, China and India have textile exports accounting for 8.8% and 9.8% of their total exports, respectively. China also dominates global textile exports, holding 32.2% of the world's share, while India

Figure 1: The share of textile exports as a percentage of total exports, and the proportion of global textile exports from the selected economies for 2022.[1)]



contributes 4.36%. These selected Asian countries represent over half, specifically 54.48%, of global textile exports. Participation in global value chains (GVCs) has enabled these countries to specialize in various stages of production, such as garment manufacturing and textile assembly, thus leveraging their competitive advantage in low labor costs. The integration into GVCs has driven international trade, industrialization, and overall economic growth, underscoring the critical role of the textile industry for these economies and the global market.

Understanding the relationship between GVC participation and economic growth is essential for policymakers, especially in developing countries that sheek to maximize the benefits of globalization. The textile industry, with its labor-intensive nature and significant export potential, provides an excellent case study for analyzing these dynamics. This research specifically examines the impact of GVC trade on economic growth in selected Asian economies, with consideration of both forward and backward participation. In addition, this paper examines the role of various policy environments and institutional factors such as logistics performance, property rights, and financial freedom, in enhancing the benefits of GVC integration. The empirical methodology includes panel data analysis using a fixed-effects model that accounts for country-specific and time-specific effects.

While existing studies have shown that GVC participation can foster economic growth through technological spillovers, increased productivity, and access to international markets, the impact varies significantly across sectors and countries, often depending on the level of economic development and institutional quality. Much of the literature focuses on aggregate economic outcomes without adequately differentiating between specific sectors, such as textiles, or stages of GVC participation. Additionally, the role of policy environments and institutional factors, such as logistics performance and financial freedom, remains underexplored at the sectoral level. This research aims to fill this gap by examining the textile industry's GVC participation, specifically in developing Asian economies, and to analyze how different policy frameworks enhance or limit its impact on economic growth.

The results indicate that participation in GVCs of the textile sector significantly contributes to GDP growth. Still, the extent of this contribution is contingent on the quality of institutions and policy frameworks. Therefore, understanding these interactions can guide developing countries in formulating strategies to better integrate into global production networks and, in turn, achieve sustainable economic growth.

The paper is structured as follows: Section 2 concisely reviews the literature that connects trade and GVC-related trade to economic growth. Section 3 outlines the methodology and data used in this study. Section 4 presents and discusses the empirical findings. Lastly, Section 5 provides the concluding remarks.

Ⅱ. Literature review

Global value chains (GVCs) have transformed international trade and economic growth by shifting the traditional linear flow of goods to a complex web of production stages spread across multiple countries. This transformation allows countries, especially in the developing world, to specialize in specific stages of production, such as manufacturing or assembly, rather than entire products, facilitating their integration into global markets with fewer barriers to entry. GVCs drive economic growth through various channels, including technological spillovers, access to international markets, and productivity improvements (Criscuolo & Timmis, 2017; Pahl & Timmer, 2019). However, the impact of GVC participation is not uniform; it varies across countries and sectors depending on factors like the level of economic development, institutional quality, and policy environment (Taglioni & Winkler, 2016; Mettler & Williams, 2011). Previous literature and research highlight the need for more detailed analyses, especially in critical sectors like textiles, to fully understand the benefits and challenges of global value chain participation.

Developing economies often view GVC participation as a key strategy for economic growth and development, leveraging their comparative advantages, like low labor costs to attract foreign direct investment and boost export revenues. However, the impact of GVC participation on economic growth in these economies is mixed and highly dependent on specific contexts. For instance, Jithin et al., (2023) find that GVC participation positively influences economic growth in countries with higher initial levels of development, but it can have negative effects in nations with lower economic growth, indicating threshold effects. They employ a bootstrap-based bias-corrected fixed effects model with dynamic panel regression, using data from 62 countries over the period of 2000–2018. Only countries that have reached a certain level of development appear to benefit from GVC integration fully. Additionally, the direction of GVC participation matters; forward participation, which involves exporting intermediate goods, tends to be more beneficial in higher-growth economies, while backward participation, involving the import of intermediate goods, may have limited or even negative impacts in less developed economies (Jangam & Rath, 2021). Their analysis uses generalized method of moments (GMM) estimation and Borin and Mancini's decomposition for GVC trade, based on data from 58 countries between 2005 and 2015. According to Pierluigi Montalbano (2020), GVC participation fosters growth, but results vary across regions and sectors, particularly in agriculture. The study applies panel data analysis combined with cross-sectional methods, covering 158 panel IDs for the years 1995–2015. Despite these insights, much of the existing literature has focused on aggregate economic outcomes without adequately differentiating between sectors or stages of GVC

Table 1: Summary of Key Literature on GVC Participation and Economic Growth.

Paper	Dependent variable	Methodology	Data	Main Findings
Jithin et al., (2023)	GDP per capita	Bootstrap-based bias-corrected fixed effects model with dynamic panel regression	62 countries (2000–2018)	GVC participation positively impacts economic growth in high-growth countries. Forward participation has negative impacts on low-growth economies
Jangam & Rath, (2021)	GDP growth	GMM estimation with Borin and Mancini decomposition for GVC trade	58 countries (2005–2015)	GVC trade promotes economic growth, especially through regional value chains and functional specialization in trade
Pierluigi Montalbano, (2020)	Agriculture value-added per worker	Panel data analysis with cross-sectional analysis	158 panel IDs (1995–2015)	GVC participation fosters growth, but results vary across regions and sectors, particularly in agriculture
Kummritz et al., (2017)	Value-added gains from GVC participation	Panel regression with fixed-effect model	100 countries (1995–2011)	GVC participation increases value-added gains, particularly in backward participation
De Marchi & Alford, (2022)	Upgrading within global value chains (GVCs)	Systematic literature review	Case studies published between 2000 and 2021	State policies play a pivotal role in supporting GVC upgrading
Acquah et al. (2021)	Energy efficiency	Simultaneous equations with GMM and SBM model	20 countries panel data (1990–2018)	Trade in the GVC mechanism helps to promote energy efficiency

participation. This result underscores the need for more sector-specific studies, particularly in industries like textiles, which are vital to the economies of many developing countries.

Technology adoption and institutional quality are pivotal for maximizing GVC benefits. Kummritz et al., (2017) emphasize that institutional frameworks, such as financial freedom and governance quality, amplify GVC participation's positive effects on economic growth. They employ a fixed-effect model and a panel dataset covering more than 100 countries from 1995 to 2011. De Marchi & Alford, (2022) argue that state policies fostering innovation, investment, and industrial upgrading play a crucial role in helping economies move toward high-value-added segments of GVCs. They study a systematic literature review of 77 studies on GVCs and upgrading. However, the benefits of GVC participation in the textile sector often heavily depend on the quality of institutions and policy frameworks within the host country. For instance, effective logistics, strong property rights, and financial freedom are crucial in enhancing the positive outcomes of GVC integration (Acquah et al., 2021). They use simultaneous equations with GMM and score-based method (SBM) models, utilizing panel data from 20 countries from 1990 to 2018. Despite the recognized importance of these institutional and policy factors, research is limited on how they interact with GVC participation, specifically in the textile industry. Moreover, there is a need to explore how different stages of GVC participation—such as design, production, and marketing—contribute to economic growth in developing economies. A detailed comparison of these studies is

provided in Table 1, which summarizes the methodologies, datasets, and main findings across the key pieces of literature on this topic.

Ⅲ. Methodology and data

Ⅲ. 1 Methodology

This section discusses the methodology that examines the relationship between participation in the global value chain (GVC) and economic growth. The following model specifications:

$$lnGDP_{it}=\mu_0+\mu_1 GVC_{it}+\mu' X_{it}+\psi_{it} \quad (1)$$

$$lnGDP_{it}=\beta_0+\beta_1 GVC\_Tci_{it}+\beta' X_{it}+\rho_{it} \quad (2)$$

$$lnGDP_{it}=\gamma_0+\gamma_1 GVC\_Tci\_Fp_{it}+\gamma' X_{it}+\tau_{it} \quad (3)$$

$$lnGDP_{it}=\delta_0+\delta_1 GVC\_Tci\_Bp_{it}+\delta' X_{it}+\vartheta_{it} \quad (4)$$

$$lnGDP_{it}=\lambda_0+\lambda_1 GVC\_Tci_{it}*Policy_{it}+\lambda' X_{it}+\xi_{it} \quad (5)$$

The dependent variable is the real gross domestic product per capita (GDP) for country i over time t across all five equations. In equation 1, GVC refers to the selected countries' overall global value chain participation. Additionally, equation 2 (GVC_Tci) refers to the global value chain participation of the textile clothing industry. This study considers the forward participation (GVC_Tci_Fp) and backward participation (GVC_Tci_Bp) of the textile clothing industry subsequently in equations 3 and 4. To better understand how participating in global value chains (GVC) affects economic growth, equation 5 includes interaction terms between GVC and policy variables such as monetary freedom, labor freedom, government integrity, and other institutional factors. These interaction terms help show how government policies can influence the benefits of GVC participation. For example, countries with strong institutional factors are expected to benefit more from participating in GVC. Previous studies, such as those by De Marchi & Alford (2022) and Criscuolo & Timmis (2017), emphasize the importance of institutional quality and policy environments in improving the outcomes of GVC integration.

The control variables (X) include trade openness (TROP) to capture the degree of integration into the global market, a critical factor influencing GVC participation. Inflation (INF) reflects macroeconomic stability, while gross fixed capital formation (GFCF) measures investment levels, which are crucial determinants for economic growth (Rodrik, 2008; Bruns & Ioannidis, 2020). The coefficients μ, β, γ, δ, and λ to be assessed. Parameters ψ, ρ, τ, ϑ, and ξ are the error terms. All the variables are expressed in their natural logarithmic forms.

This study employs a fixed-effects model that accounts for unobserved heterogeneity by

controlling for country-specific and time-invariant characteristics (Wooldridge, 2010). This estimation isolate the effects of GVC participation, forward and backward, while mitigating bias from omitted variables that are constant over time. The model captures the within-country variations and ensures robust estimates by controlling for unobserved cultural, institutional, and historical factors (Baltagi, 2008; Wooldridge, 2010). The use of fixed effects helps in obtaining more reliable results regarding the relationship between GVC participation and economic growth, given the potential endogeneity and cross-country variations present in the data.

Ⅲ.2 Data for GVC

Data are sourced from the World Development Indicators (WDI) of the World Bank, the Asian Development Bank (ADB), and the Heritage Foundation, ensuring the reliability and comprehensive coverage of the economic dimensions and governance indicators for the analyzed economies. The appendix includes a description of the variables in Table A. 1, the correlation matrix in Table A. 2, and the descriptive statistics in Table A. 3.

Ⅲ.2.1 GVC indicators

The emergence and expansion of global value chains (GVCs) have transformed how we analyze international trade and the interconnectedness of global economies. Traditional trade statistics, which record gross flows of goods and services each time they cross a border, have historically been the primary method for assessing countries' participation in international trade. Notable studies, such as those by Koopman et al., (2012) and Borin & Mancini, (2019), have highlighted the need to address this issue and have provided methodologies for accounting for intermediates in trade data. These studies have shown that as GVCs have spread, the gap between production data and traditional trade statistics has widened. This divergence has led to new questions about the roles of countries and industries in global markets, emphasizing the need to assess the degree of participation accurately in international production sharing. To tackle these challenges, the ADB develops the global value chain indicator, which is based on Borin & Mancini (2019). This indicator provides insights into the value added by each country in producing goods and services traded internationally. It offers a more accurate picture of a country's involvement in GVCs and allows for measuring the value contributed by different countries in each stage of the production process and helps to address the issue of double-counting inherent in traditional trade statistics. The estimate of GVC participation is as follows:

$$GVC\_Tci_{sr}=\frac{GVC\_Tci\_backward_{sr}}{E\_Tci_{sr}}+\frac{GVC\_Tci\_forward_{sr}}{E\_Tci_{sr}} \quad (6)$$

Where GVC_Tci represents the level of participation in global value chains by measuring the value-added textiles exports E_Tci_{sr} from country s to country r.[2)3)]

Ⅲ.2.2 Backward GVC Participation

Backward global value chain (GVC) participation refers to the extent to which a country's exports rely on imported inputs. It is measured by the ratio of foreign value added (FVA) content in the country's exports to its total gross exports. This represents the "Buyer" perspective in GVCs, where an economy imports intermediates to produce goods and services for export. The following outlines the calculation for GVC Backward:

$$GVC\_Tci\_backward_{sr} = FAV\_Tci_{sr} + PDC\_Tci_{sr} \quad (7)$$

Here, FVA_Tci stands for foreign value-added, and PDC_Tci is pure double counting in gross textiles export.[4)]

Ⅲ.2.3 Forward GVC Participation

Forward global value chain (GVC) participation indicates how much of a country's domestic value added (VA) is used as input in other countries' exports. The ratio of domestic VA measures it sent to third economies to the country's total gross exports. This reflects the "Seller" perspective in GVCs, where an economy exports domestically produced inputs for further processing and re-export by other economies. The computation of GVC forward is presented below:

$$GVC\_Tci\_forward_{sr} = REX\_Tci_{sr} + REF\_Tci_{sr} \quad (8)$$

Here, REX_Tci stands for re-export from the importers, and REF_Tci is the intermediate export of textiles that finally returns home.[5)]

Ⅳ. Empirical findings

This section presents the empirical findings from analyzing global value chain (GVC) participation in the textile and clothing industry (GVC_Tci) and its impact on economic growth in developing Asian economies. The results are structured into five parts. First, the baseline regression results assess the overall GVC participation of selected developing Asian countries. Second, the analysis focuses on GVC participation, specifically within the textile industry. The third and fourth models examine the backward and forward GVC participation in the textile sector. Finally, the last model explores the interaction between policy variables and GVC participation in the textile and clothing industry.

Table 2 displays the baseline model results, in which GVC participation and other control variables are regressed on GDP per capita using a fixed effects model. The four models examine distinct aspects of GVC participation: Model 1, which assesses overall GVC participation, is represented by Equation (1). Model 2 evaluates the impact of GVC participation specifically within the textile industry and is captured in Equation (2). Models 3 and 4 fo-

Table 2: Results of GVC_Tci participation in economic growth.

	(1)	(2)	(3)	(4)
VARIABLES	Model-1	Model-2	Model-3	Model-4
TROP	−0.542**	−0.343***	−0.306***	−0.282**
	(0.208)	(0.107)	(0.110)	(0.114)
INF	−0.0600**	−0.0589**	−0.0609**	−0.0599**
	(0.0257)	(0.0240)	(0.0246)	(0.0247)
GFCF	0.181	0.337**	0.343**	0.392**
	(0.203)	(0.148)	(0.156)	(0.152)
GVC	1.242***			
	(0.286)			
GVC_Tci		0.304***		
		(0.0962)		
GCV_Tci_Bp			0.184**	
			(0.0816)	
GVC_Tci_Fp				−0.0591*
				(0.0307)
Constant	10.10***	7.869***	7.628***	6.923***
	(0.787)	(0.654)	(0.667)	(0.616)
Observations	133	133	133	133
R-squared	0.934	0.883	0.878	0.876
Number of ids	9	9	9	9
Fixed effect	Yes	Yes	Yes	Yes

Robust standard errors in parentheses
***p<0.01, **p<0.05, *p<0.1

cus on backward and forward GVC participation, respectively, and are described in Equations (3) and (4). Each equation provides a distinct perspective on the role and dynamics of GVC participation, offering valuable insights into the broader and sector-specific impacts on economic performance.

Across all three models, trade openness (TROP) negatively impacts GDP per capita. In model 2, the trade openness (TROP) indicates that a 1% increase corresponds to a 0.34% reduction in GDP. The findings indicate that trade liberalization could make these economies more vulnerable to external competition and trade shocks, potentially negating the gains from increased market access. Trade openness alone may not benefit GDP income unless paired with policies improving competitiveness and productivity. Without these complementary measures, the advantages of trade openness may primarily benefit more competitive international producers rather than local ones. This argument is backed by various reports and research findings (Morris & Barnes, 2009; Farole et al., 2010). In all the baseline models, the inflation rate (INF) harms GDP. For example, in Model 1, a 1% increase in INF results in a 0.06% decrease in real incomes and purchasing power and impedes economic growth. These findings align with existing literature Barro (1995) and Ghosh & Phillips (1998). The gross fixed capital formation (GFCF) shows a positive and statistically significant relationship with GDP per capita in all models except the first. For instance, a 1% increase in GFCF results in a 0.337% increase in GDP, highlighting the crucial role

Table 3: Results of GVC_Tci participation and policy interactions in economic growth.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	Model-1	Model-2	Model-3	Model-4	Model-5	Model-6	Model-7
TROP	−0.351***	−0.351***	−0.338***	−0.349***	−0.346***	−0.313***	−0.327***
	(0.105)	(0.108)	(0.109)	(0.108)	(0.108)	(0.104)	(0.108)
INF	−0.0541**	−0.0616**	−0.0581**	−0.0594**	−0.0701***	−0.0571**	−0.0578**
	(0.0236)	(0.0241)	(0.0244)	(0.0241)	(0.0246)	(0.0234)	(0.0243)
GFCF	0.291**	0.338**	0.411***	0.342**	0.343**	0.370***	0.374**
	(0.146)	(0.149)	(0.146)	(0.148)	(0.150)	(0.140)	(0.147)
GVC_Tci*GI	0.108***						
	(0.0275)						
GVC_Tci*BF		0.0722***					
		(0.0236)					
GVC_Tci*LF			0.0658***				
			(0.0244)				
GVC_Tci*MF				0.0695***			
				(0.0223)			
GVC_Tci*TF					0.0470**		
					(0.023)		
GVC_Tci*IF						0.0876***	
						(0.0214)	
GVC_Tci*FF							0.0734***
							(0.0258)
Constant	8.091***	7.885***	7.564***	7.872***	7.795***	7.643***	7.628***
	(0.644)	(0.662)	(0.637)	(0.657)	(0.661)	(0.600)	(0.638)
Observations	133	133	133	133	131	133	133
R-squared	0.888	0.882	0.88	0.883	0.874	0.89	0.881
Number of ids	9	9	9	9	9	9	9
Fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses
***p<0.01, **p<0.05, *p<0.1

of investment in driving growth. This finding aligns with traditional growth theory, which emphasizes the fundamental nature of capital accumulation for long-term growth (Mongi & Saidi, 2023).

In Table 2, overall GVC participation has a significant positive effect on GDP per capita. In Model 1, the coefficient for GVC participation suggests that a 1% increase in GVC participation boosts GDP by 1.242%, aligning with the findings of Jangam & Rath, (2021) and Jithin et al., (2023). Specifically, GVC participation in the textile and clothing industry (GVC_Tci) is associated with a 0.3% increase in GDP, supporting the idea that integration into GVCs, particularly through specialization in specific production stages, can enhance productivity and growth (Kummritz et al., 2017). A similar positive relationship is observed for backward participation (GVC_Tci_Bp). However, forward participation (GVC_Tci_Fp) shows a negative and statistically significant impact on GDP. This suggests that backward participation, which involves using foreign value-added inputs, is more beneficial for these economies than forward participation, where they often export low-value-added intermediate goods.

Table 3 assesses how GVC participation in the textile industry (GVC_Tci) interacts with policy variables to impact economic growth, we examine the results presented in Table 3, represented by Equation 5. The findings show that all policy variables—including govern-

ment integrity, business freedom, labor freedom, monetary freedom, trade freedom, investment freedom, and financial freedom—positively contribute to GDP growth. These results are consistent with previous findings by Jangam & Rath (2021), and reinforce the positive spillover effects of these policy factors on economic growth.

V. Conclusions

This study underscores the critical role of global value chain (GVC) participation in advancing economic growth in the textile sector of developing Asian economies. The findings reveal that GVC integration, particularly through backward participation, significantly contributes to GDP growth, which aligns with previous research on the productivity and economic benefits derived from specialized stages of production. Notably, backward GVC participation enables these economies to leverage imported inputs, which enhances productivity and facilitates technology transfer. Forward participation, however, tends to have a less favorable impact on economic growth, indicating that exporting lower-value intermediate goods may limit the potential benefits.

Furthermore, the policies and institutional factors are key determinants of growth outcomes. Countries with robust policy frameworks—such as strong investment, financial, and labor freedom—demonstrate greater economic gains from GVC integration. These findings suggest that enhancing institutional factors can maximize the economic benefits of GVC participation, making it imperative for policymakers to focus on strengthening these areas.

Eventually, the study highlights that while GVC participation in the textile sector offers substantial growth opportunities, the nature of the involvement and the supporting policy environment are crucial in shaping the economic trajectory of developing Asian economies. By fostering a conducive institutional environment and focusing on high-value-added stages of GVCs, these economies can further enhance their growth prospects and integration within the global economy.

This study employed the fixed effects (FE) estimation method to control for unobserved heterogeneity and resulted in statistically significant results. Although the study also tried to find the instrumental variables as well as the generalized method of moments (GMM) to address the endogeneity issues, the results were worse than the fixed effects estimation. A larger sample is required for GMM estimation as a remaining issue for further study.

Notes

1) Data sources: World Trade Organization (WTO) and national statistics from respective countries.

2)3)4)5) A detailed breakdown of the methodology is available in the paper Borin & Mancini,

(2019) and Asian Development Bank, (2021); Page Number: 247

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Appendix

Table A. 1: Description of the variables

Variables	Measurements	Sources
GDP	Real gross domestic product per capita	World Development Indicators, World Bank
GVC participation (GVC)	Global value chain (GVC) related trade, measured as % of gross exports	Asian Development Bank (ADB)
GVC participation (GVC_Tci)	GVC participation of Textile Sector, measured as % of textile exports	Asian Development Bank (ADB)
Forward GVC participation (GVC_Tci_Fp)	Forward participation in GVC of Textile, measured as % of textile exports	Asian Development Bank (ADB)
Backward GVC participation (GVC_Tci_Bp)	Backward participation in GVC of Textile, measured as % of textile exports	Asian Development Bank (ADB)
Trade openness (TROP)	(Export + import)/GDP	World Development Indicators, World Bank
Inflation (INF)	GDP deflator	World Development Indicators, World Bank
Gross fixed capital formation (GFCF)	Measured as gross fixed capital formation as % of GDP	World Development Indicators, World Bank
Government Integrity (GI)	Expressed on a scale of 0 to 100	Heritage Foundation
Business Freedom (BF)	Expressed on a scale of 0 to 100	Heritage Foundation
Labor Freedom (LF)	Expressed on a scale of 0 to 100	Heritage Foundation
Monetary Freedom (MF)	Expressed on a scale of 0 to 100	Heritage Foundation
Trade Freedom (TF)	Expressed on a scale of 0 to 100	Heritage Foundation
Investment Freedom (IF)	Expressed on a scale of 0 to 100	Heritage Foundation
Financial Freedom (FF)	Expressed on a scale of 0 to 100	Heritage Foundation

Table A. 2: Matrix of correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) GDP	1.000							
(2) TROP	−0.126	1.000						
(3) INF	−0.348	−0.133	1.000					
(4) GFCF	0.583	0.070	−0.112	1.000				
(5) GVC	0.234	0.851	−0.164	0.277	1.000			
(6) GVC_Tci	−0.067	0.712	0.044	−0.027	0.716	1.000		
(7) GCV_Tci_Bp	0.005	0.727	−0.042	0.076	0.737	0.933	1.000	
(8) GVC_Tci_Fp	−0.026	−0.492	0.215	−0.061	−0.442	−0.542	−0.726	1.000

Table A. 3: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
(1) GDP	144	7.713	.663	6.314	9.446
(2) TROP	139	4.034	.539	3.207	5.228
(3) INF	138	1.577	.798	−.708	3.889
(4) GFCF	139	3.275	.325	2.551	3.843
(5) GVC	144	−.995	.253	−1.508	−.367
(6) GVC_Tci	144	−1.124	.35	−1.853	−.292
(7) GCV_Tci_Bp	144	−1.484	.6	−2.465	−.33
(8) GVC_Tci_Fp	144	−2.823	.813	−5.308	−1.651

Table A. 4: List of countries

China	Indonesia	India	Bangladesh	Philippines	Viet Nam	Sri Lanka	Pakistan	Cambodia