

Enhancing GVC Participation for Inclusive Growth: Firm- Level Evidence from Laos

By: Sithanonxay Suvannaphakdy

Email: oudsdy@gmail.com

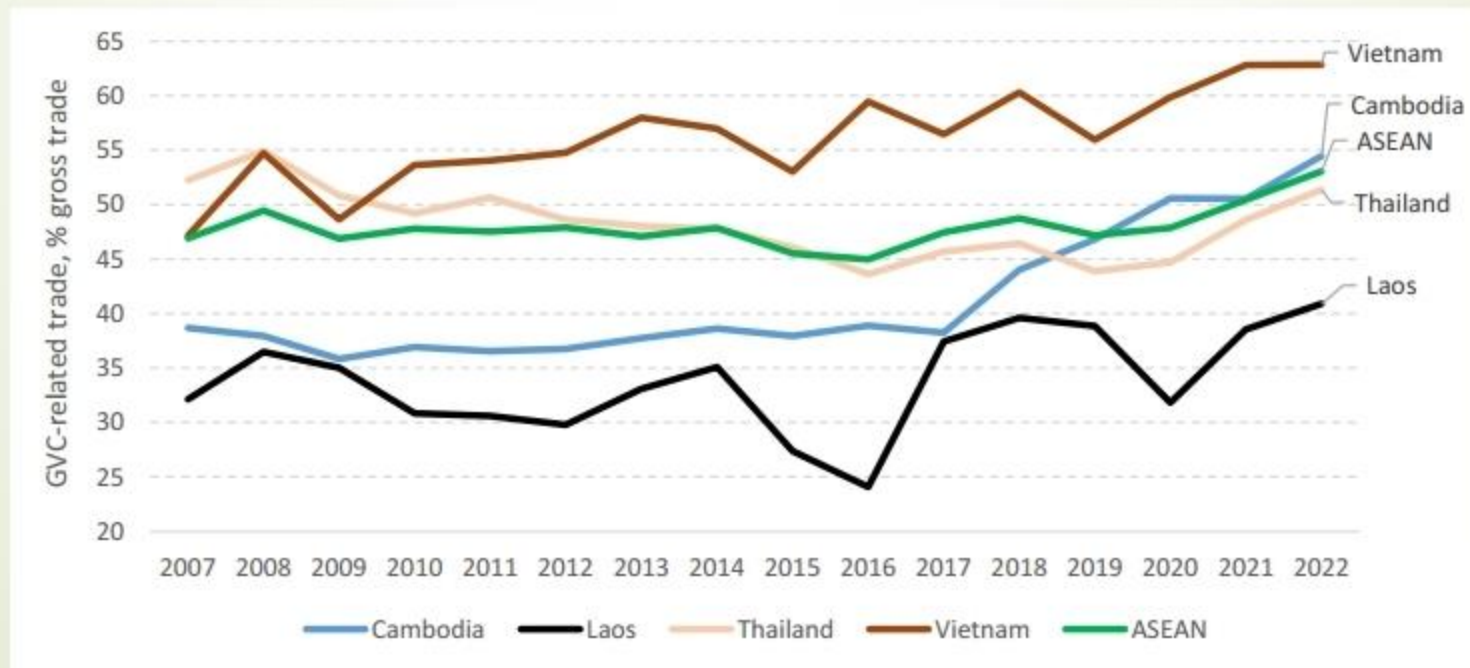
Presentation Outline

1. Recent trend of GVC participation in ASEAN
2. Objectives of the study
3. Methodology
4. Estimation results
5. Conclusion
6. Policy implications

1. Recent Trend of GVC Participation in ASEAN

- GVC participation is on the rise (Figure 1).
- GVCs generate job opportunities in formal sectors and led to higher wages, particularly for lower-skilled workers ([Park et al., 2023](#)).
- GVCs in industries such as apparel, footwear, and electronics, present opportunities for women in developing economies to benefit from international trade through job creation and higher wages ([Kumar, 2017](#)).

Fig.1: GVC-related trade for selected ASEAN countries, 2007-2022



Source: Author's compilation using data from World Bank's Global Value Chains WITS Database.

2. Objectives

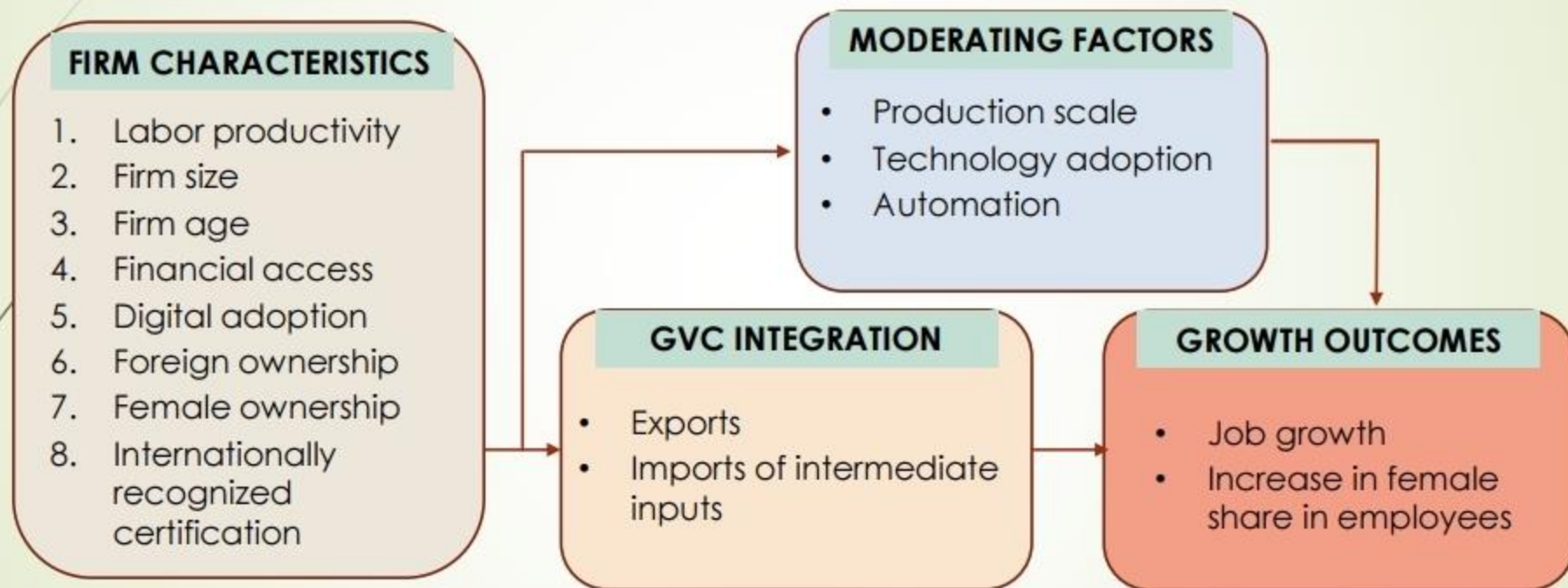
This study uses firm-level data from the World Bank's enterprise survey for Laos in 2024 to explore two objectives:

- **GVC participation:** Identify which Lao firms participate in GVC and the firm characteristics associated with GVC engagement.
- **Inclusive growth:** Estimate the impact of GVC participation on inclusive growth outcomes, specifically employment growth and the female share of employment.

3. Methodology

3.1 Conceptual framework:

Fig. 2: Conceptual framework – GVC for inclusive growth for Laos



3. Methodology

6

3.2 Econometric models:

1. GVC participation – Logit model

- **Dependent variable:** GVC firm (1 if both imports and exports, 0 otherwise)
- **Independent variables:** firm characteristics, sector dummy

$$GVC_i^* = \beta_0 + \beta_1 \ln(\text{labor_productivity}_i) + \beta_2 \ln(\text{Firm_size}_i) + \beta_3 \text{Firm_age}_i \\ + \beta_4 \text{Foreign_owner}_i + \beta_5 \text{Quality_certification}_i + \beta_6 \text{Finance_access}_i \\ + \beta_7 \text{Female_owner}_i + \beta_8 \text{Digital_adoption}_i + \varepsilon_i$$

$$GVC_i = \begin{cases} 1, & \text{if } GVC_i^* > 0 \\ 0, & \text{otherwise} \end{cases}$$

2. Impact of GVC participation on inclusive growth – Linear regression model

- **Dependent variables:** employment growth, female share in employees
- **Independent variables:** GVC-firm dummy, firm characteristics, sector dummy

$$\text{Inclusive_Growth}_i = \gamma_0 + \gamma_1 GVC_i + \gamma_2 \ln(\text{labor_productivity}_i) + \gamma_3 \ln(\text{Firm_size}_i) + \gamma_4 \text{Firm_age}_i \\ + \gamma_5 \text{Foreign_owner}_i + \gamma_6 \text{Quality_certification}_i + \gamma_7 \text{Finance_access}_i \\ + \gamma_8 \text{Female_owner}_i + \gamma_9 \text{Digital_adoption}_i + \vartheta_i$$

3. Methodology

3.3 Data description:

7

~ Pure exporters and large GVC firms are rare, suggesting that GVC integration in Laos is currently driven primarily by smaller enterprises, and there is significant scope to support more domestic-oriented firms in accessing global markets and supply chains.

- Most are either fully domestic or import inputs without exporting.
- Only about 21% (65 firms) are deeply engaged in global value chains, both importing and exporting ("GVC firms"), and most of these are actually small or medium-sized, not large.

Table 1: Pattern of engagement in foreign trade for the sample firms

		Engagement Patterns						GVC Firm (5+6)	Total
		1	2	3	4	5	6		
Sales	Domestic	Y	Y	N	Y	N	Y	N/Y	
	Exports	N	N	Y	Y	Y	Y	Y	
Inputs	Domestic	Y	Y	Y	Y	Y	Y	Y	
	Imports	N	Y	N	N	Y	Y	Y	
Firm size	Small(<20)	69	124	0	6	2	34	36	235
(number of employees)	Medium(20-99)	6	26	1	2	3	21	24	59
	Large(>99)	1	5	0	0	1	4	5	11
Total		76	155	1	8	6	59	65	305

Source: Author's calculation using World Bank's Enterprise Survey for Lao PDR in 2024.

3. Methodology

3.3 Data description:

8

- GVC firms tend to be larger, have higher rates of foreign ownership, higher likelihood of female ownership and workforce share, and stronger digital adoption, compared to Non-GVC firms.
- Size, foreign ownership, digital adoption, and female ownership/share are **statistically significant differences**.

Table 2: Sample Firm Characteristics: GVC vs Non-GVC Firms

No.	Variable	Mean			t-statistics
		GVC Firms	Non-GVC Firms	GVC Firms – Non-GVC Firms	
1	ln(Labor_productivity)	18.63	18.93	-0.3	-1.61
2	ln(Firm_size)	2.90	2.35	0.55	4.50***
3	Firm_age (years)	17.36	16.72	0.65	0.54
4	Foreign_owner	0.09	0.02	0.07	2.73***
5	Quality_certification	0.03	0.025	0.005	0.24
6	Finance_access	9.77	15.33	-5.56	-1.68*
7	Female_ownership	0.64	0.45	0.18	2.64***
8	Digital_adoption (website)	0.55	0.33	0.22	3.26***
9	Employment growth	1.69	1.41	0.27	0.52
10	Female share in full-time employees	0.47	0.38	0.09	2.05**

4. Estimation Results

9

4.1 Determinants of GVC Participation in Laos

- **Firm size, female ownership, and digital adoption** are **robust positive predictors** of GVC participation in Laos.
- **Labor productivity and finance access** surprisingly have **negative, significant associations**.
- **Firm age, foreign ownership, and quality certification** are **not significant** predictors in this context.

Table 3: Regression results – GVC participation (logit estimation) for all firms

Variable	Logit: GVC Participation							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ln(Labor_productivity)	-0.196*	-0.288**	-0.287**	-0.296**	-0.283**	-0.275**	-0.258**	-0.276**
	(0.114)	(0.121)	(0.122)	(0.122)	(0.122)	(0.123)	(0.128)	(0.130)
ln(Firm_size)		0.683***	0.720***	0.653***	0.681***	0.780***	0.860***	0.810***
		(0.155)	(0.164)	(0.177)	(0.179)	(0.186)	(0.192)	(0.194)
Firm_age (years)			-0.0129	-0.0117	-0.0104	-0.0142	-0.0176	-0.0122
			(0.0178)	(0.0178)	(0.0178)	(0.0181)	(0.0183)	(0.0185)
Foreign_owner				0.702	0.910	0.853	0.742	0.638
				(0.731)	(0.769)	(0.786)	(0.803)	(0.845)
Quality_certification					-1.060	-0.885	-0.949	-1.182
					(1.050)	(1.052)	(1.099)	(1.105)
Finance_access						-0.0179**	-0.0179**	-0.0186**
						(0.00768)	(0.00787)	(0.00796)
Female_ownership							0.860***	0.795**
							(0.315)	(0.319)
Digital_adoption (website)								0.740**
								(0.319)
LR chi2	3.31	24.11	24.64	25.56	26.71	33.1	40.92	46.28
Prob > chi2	0.191	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sector dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	305	305	305	305	305	305	305	305
Pseudo R2	0.01	0.08	0.08	0.08	0.08	0.10	0.13	0.15

4. Estimation Results

10

4.1 Determinants of GVC Participation in Laos

Table 4: Determinants of GVC participation in Laos – Marginal effects from logit model (8)

Variable	Marginal effects
ln(Labor_productivity)	-0.039** (0.018)
ln(Firm_size)	0.115*** (0.025)
Firm_age (years)	-0.002 (0.003)
Foreign_owner	0.091 (0.120)
Quality_certification	-0.168 (0.156)
Finance_access	-0.003** (0.001)
Female_owner	0.113** (0.044)
Digital_adoption (website)	0.105** (0.044)

- **Labor productivity (-):** firms with lower productivity are more likely to join GVCs, suggesting that less productive firms may be pulled into low-value GVC segments (assembly, basic processing).
- **Access to bank loans (-):** Firms with less access to finance are more likely to join GVCs, suggesting that GVCs offer alternative financing/credit via contracts, or financially constrained firms seek GVCs for growth.
- **Firm size (+):** Larger firms are much more likely to join GVCs as they may have more resources to meet export standards, manage international operations, or absorb shocks associated with global markets.
- **Female ownership (+):** Women-owned firms are more internationalized, possibly due to entrepreneurial drive, sector focus, or openness to adopting new business models.

4. Estimation Results

4.2 Impact of GVC Participation on Inclusive Growth in Laos

Table 5: Regression results – Growth impacts of GVC participation for all firms

Variable	Inclusive growth outcomes	
	Employment Growth	Female share in employees
GVC	-1.279** (0.623)	0.0485 (0.0451)
ln(Labor_productivity)	-0.422* (0.225)	0.0189 (0.0130)
ln(Firm_size)	2.196*** (0.567)	-0.0327 (0.0215)
Firm_age (years)	0.0390 (0.0247)	0.00216 (0.00253)
Foreign_owner	1.642 (2.049)	0.254*** (0.0501)
Quality_certification	2.929 (2.643)	-0.0172 (0.0544)
Finance_access	0.00220 (0.00764)	-0.000868 (0.000732)
Female_owner	0.615 (0.398)	0.110*** (0.0383)
Digital_adoption (website)	-0.266 (0.396)	0.0726* (0.0408)
Observation	304	173
R-squared	0.36	0.15
F-statistic	2.68	11.67
Prob > F	0.0038	0.0000

- **Employment growth:** GVC participation is associated with lower employment growth, and higher labor productivity is also associated with lower employment growth—consistent with efficiency-driven, not labor-intensive, adjustment.
- **Female employment share:** GVC participation is not associated with the female employment share; instead, foreign ownership and female leadership are strongly linked to higher female shares, with suggestive evidence that digital adoption may also help.

5. Conclusion

- **Overall**, Laos' GVC participation appears selective—favoring larger, digitally capable, and women-led firms. The employment effect of participation is muted or negative, while gender inclusiveness hinges more on ownership, leadership, and possibly digital practices than on GVC status per se.
- **Determinants of GVC participation:** Larger firms, female-owned firms, and digitally adopting firms are significantly more likely to participate in GVCs. In contrast, higher labor productivity and greater use of external finance are associated with lower likelihoods of GVC participation.
- **Employment growth effects:** GVC participation is associated with lower employment growth. Combined with the weakly negative association between productivity and employment growth, this pattern is consistent with efficiency-driven adjustment or outsourcing rather than workforce expansion.
- **Female employment share:** GVC participation does not increase the female share of full-time employment. Instead, foreign- and female-owned firms are more decisive for women's inclusion, while digital adoption shows a modest positive association, suggesting technology may open additional pathways for female employment.

6. Policy Implications

13

1. GVC participation:

- Policy attention should focus on helping firms scale, adopt digital technologies, and foster women's entrepreneurship—all of which correlate with higher GVC entry.
 - Support for scaling SMEs through targeted investment (e.g., co-investment for SME upgrades such as quality certification, machinery), export readiness training (e.g., standards and compliance, trade operation), or cluster development (e.g., sector-focused zones).
 - Enhance SME digitalization by offering grants to buy basic systems (e-invoicing, stock tracking, logistics tools) or engage in digital trade.
 - Promote women-led businesses by running fast-track export programs, introducing them to big buyers, and providing mentors.

2. Inclusive growth:

- Pair productivity improvements with workforce upgrading by offering targeted incentives for hiring, training, and inclusive employment in GVC-linked industries.
- Establish ongoing monitoring of GVC impacts—especially on jobs, gender, and skills—and use the results to steer policy. In particular, conduct periodic firm surveys and sector diagnostics, and set up a national GVC observatory to generate timely evidence and adjust Laos' value chain strategy as global supply chains evolve.

Thank You

Sithanonxay Suvannaphakdy
Email: oudsdy@gmail.com