

Digital Trade Facilitation and Supply Chains in the Post COVID-19 Era: Lao PDR Perspective

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Synopsis

- COVID-19 has adversely affected Lao PDR's tourism-related services and manufacturing activities through a decline in worldwide demand and disruptions in the supply chain.
- Before COVID-19, Lao PDR's participation in global value chains remained relatively low compared to that of regional peers, which can mainly be attributed to high trade costs.
- Lao PDR should continue to streamline and digitalize trade procedures because trade digitalization offers an opportunity to reduce trade costs, ensure a smooth supply chain, and facilitate the country's participation in global value chains.

The impact of the COVID-19 pandemic on supply chains in Lao PDR can be observed in tourism and export-oriented manufacturing activities. Tourism and travel-related services have been significantly affected by travel restrictions and border closures. According to a survey by ADB (2020), more than half of the 327 respondent firms temporarily closed their businesses. Other sectors in the supply chain of the tourism sector were also affected. For example, the sales volume of "Beerlao," which is the Lao beer brand with the largest market share, dropped by approximately 5% in 2020 and 50% in the first five months of 2021¹. Similarly, export-oriented manufacturing sectors have been affected by a decline in global demand and disruptions in supply chains. Based on the survey results of UNIDO (2020), the majority of exporters (56%) reported a decrease in orders. This can be observed in a drop in exports of photographic camera accessories and garment products. According to trade data², exports of photographic camera parts and accessories fell by 30% in 2020 and 6% in the first quarter of 2021, while exports of apparel and clothing accessories dropped by 11% in 2020 and approximately 9% in the first quarter of 2021. Additionally, manufacturing firms have faced difficulties in sourcing raw materials as the survey results of UNIDO (2020) revealed that approximately 90% of respondent firms cited a shortage of raw materials as their main concern. For example, when China introduced stringent measures to contain the spread of COVID-19, some garment firms in Lao PDR faced difficulties in sourcing inputs because 60% of their intermediate inputs were sourced from China (UNDP, 2020).

Despite COVID-19-related disruptions, the country's total exports of goods remained strong. Figure 1 presents the extent to which Lao PDR participated in global value chains (GVCs) in the pre-pandemic period and during the pandemic. Before COVID-19, Lao PDR's use of domestic inputs (share of domestic value-added in gross exports) generally increased between 2010 and 2019. On average, more than 80% of the intermediates used in the country's exports were sourced domestically. The share of domestic value-added embodied

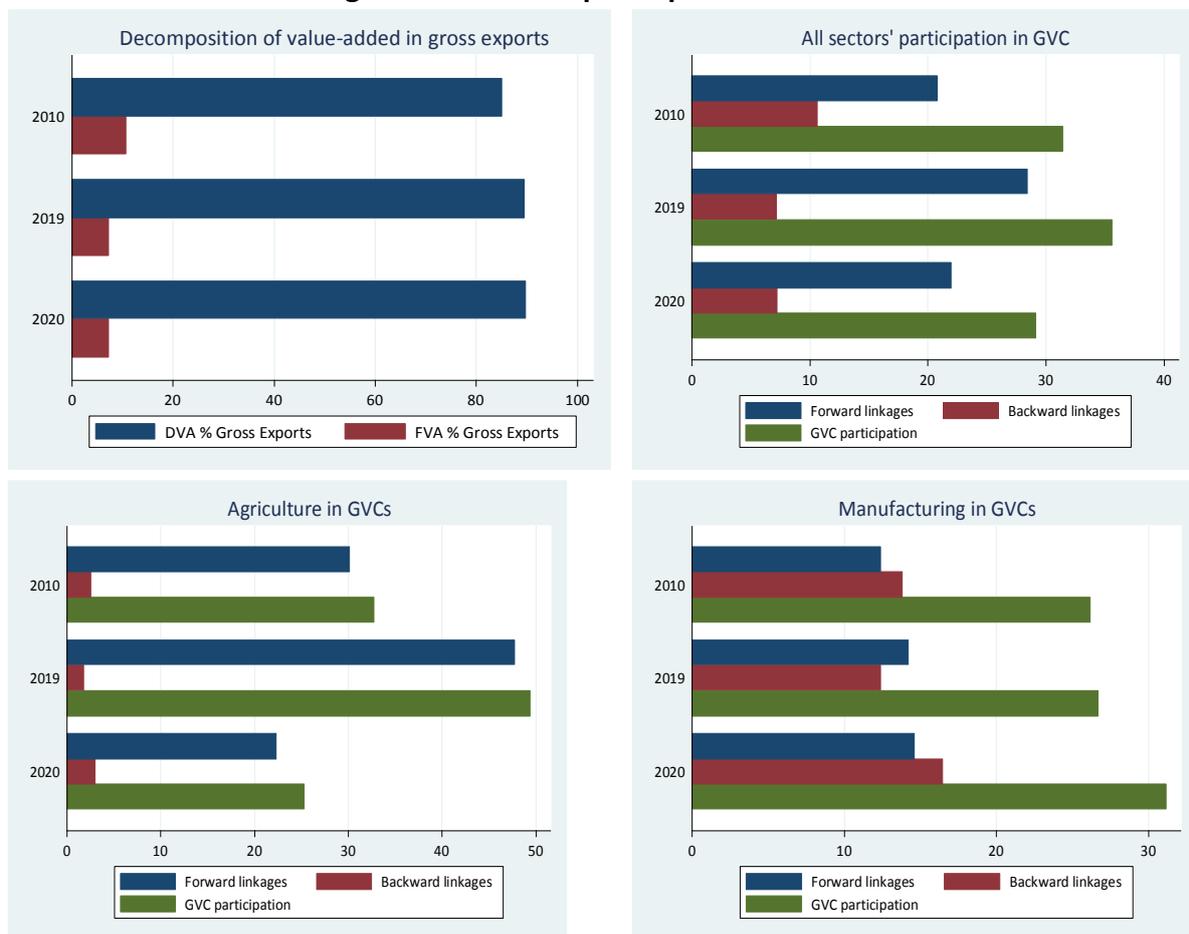
¹ This figure is based on data obtained from Lao Brewery Company.

² Based on the official data obtained from the Lao PDR's Ministry of Industry and Commerce.

in Lao PDR's intermediate exports that were re-exported by its trading partners increased marginally between 2010 and 2019, indicating a small increase in participation in GVCs through forward linkages. In contrast, the use of imported inputs (share of foreign value-added in gross exports) decreased from over 10% in 2010 to 7% in 2019, indicating a decline in participation in GVCs through backward linkages. At the sector level, both the agriculture and manufacturing sectors increased their participation in GVCs through forward linkages from 2010 to 2019.

In 2020, the share of both domestic and foreign value-added embodied in gross exports remained consistent at the 2019 level. Interestingly, the manufacturing sector experienced an increase in its share in the use of imported intermediates. The agriculture sector experienced a decline in its share in the use of domestic intermediates.

Figure 1: Lao PDR's participation in GVCs



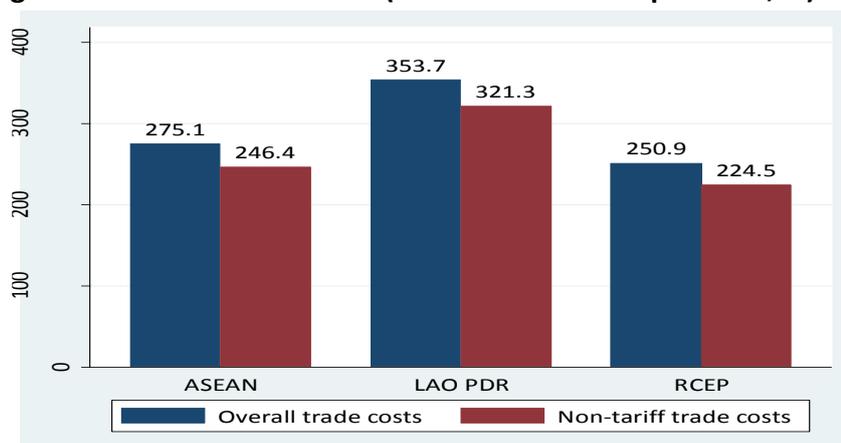
Note: DVA = domestic value-added, FVA = foreign value-added. GVC participation is measured as the sum of forward and backward linkages.

Source: Author calculations based on data from ADB MRIO.

Lao PDR's participation in GVCs remains relatively low compared to that of other ASEAN countries (ASEAN-Japan Center, 2021). Trade costs are among the main factors that determine a country's ability to participate in GVCs. Trade costs include tariffs, natural trade costs (geographic and cultural factors), and policy-related non-tariff barriers (legal and regulatory environment, trade procedures, infrastructure) (Duval & Utoktham, 2011). As shown in Figure 2, bilateral trade costs in Lao PDR are significantly higher than the ASEAN and RCEP regional averages in terms of both overall trade costs and non-tariff trade costs.

Tariffs are not considered as barriers to trade because they tend to be lower across most of the economies around the world. Therefore, we focused on non-tariff trade costs such as inefficient transport and logistics infrastructure and services, cumbersome administrative procedures, and unnecessary border formalities and documentation. These barriers can be reduced through policy actions.

Figure 2: Bilateral trade costs (ad valorem tariff equivalent, %) in 2019



Note: The latest data are not available for Japan, Myanmar, New Zealand, and Vietnam.

Source: ESCAP-World Bank Trade Cost Database, available at <https://artnet.unescap.org/databases> (accessed July of 2021).

To address non-tariff barriers to trade, Lao PDR has improved its trade environment since the mid 2000s (Shrestha & Kyophilavong, 2021). Ongoing reform is mainly attributed to the country’s commitments to trade facilitation under multilateral and regional trade agreements, including the WTO Trade Facilitation Agreement (TFA), ASEAN Single Window (ASW), and the recent Framework Agreement on the Facilitation of Cross-Border Paperless Trade in Asia and the Pacific (CPTA).

Table 1 highlights the progress in the implementation of trade facilitation measures in Lao PDR. Among the five categories, the “Transparency” measure is the most widely implemented, followed by the “Formalities” measure. The implementation of cross-border paperless trade remains restricted because paperless trade systems are still in the pilot stage, suggesting significant room for improvement.

Economies in Asia and the Pacific would benefit significantly from trade digitalization. According to Duval *et al.* (2018), full digital trade facilitation implementation beyond the WTO TFA could reduce trade costs by more than 13%. Similarly, our estimates suggest that the implementation of cross-border paperless trade measures is likely to reduce trade costs significantly within RCEP (Table 2).

Table 1: Implementation of trade facilitation measures in Lao PDR

Measures	2015	2017	2019
Transparency	80.0	80.0	80.0
Formalities	54.2	62.5	66.7
Institutional arrangement and cooperation	77.8	77.8	77.8
Paperless trade	44.4	48.1	48.1
Cross-border paperless trade	16.7	16.7	33.3

Source: UN Survey on Digital and Sustainable Trade Facilitation, available at <https://www.untfsurvey.org> (accessed October 25 of 2021).

Table 2: Gravity model estimation results

Variables	Overall trade costs	Non-tariff trade costs
Countries <i>i</i> and <i>j</i> share a common border	-0.484***	-0.475***
Geographic distance between countries <i>i</i> and <i>j</i>	0.163***	0.174***
Transparency_country <i>i</i>	0.737***	0.718**
Formalities_country <i>i</i>	-0.966***	-1.074***
Institutional arrangement and cooperation_country <i>i</i>	0.352***	0.357***
Paperless trade_country <i>i</i>	-0.0840	-0.0513
Cross-border paperless trade_country <i>i</i>	-0.384***	-0.387***
Transparency_country <i>j</i>	-	-
Formalities_country <i>j</i>	-0.611***	-0.727***
Institutional arrangement and cooperation_country <i>j</i>	0.455***	0.458***
Paperless trade_country <i>j</i>	-0.122*	-0.0885
Cross-border paperless trade_country <i>j</i>	-0.352***	-0.356***

Note: ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively. The gravity model is applied to estimate the effects of trade facilitation indicators featured in the WTO TFA, as well as paperless and cross-border paperless trade measures, using ordinary least squares across 15 RCEP members.

Source: Authors' estimation.

During COVID-19, when the cross-border movement of goods and people is restricted by public health measures, we must make additional efforts to ease trade flows, particularly for essential goods, and to make fragile supply chains more resilient. This crisis presents an opportunity to utilize digital technologies to address these challenges.

Going forward, Lao PDR should continue to move trade facilitation toward a digital trade environment through continued engagement in the implementation of trade facilitation measures under multilateral and regional initiatives (WTO TFA, ASW, and CPTA). Accordingly, national paperless trade systems need to be developed, including electronic single-window systems, the electronic application and issuance of import and export permits, recognized certification authorities, electronic exchanges of customs declarations, electronic exchanges of sanitary and phytosanitary certificates, and paperless collection of payments.

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