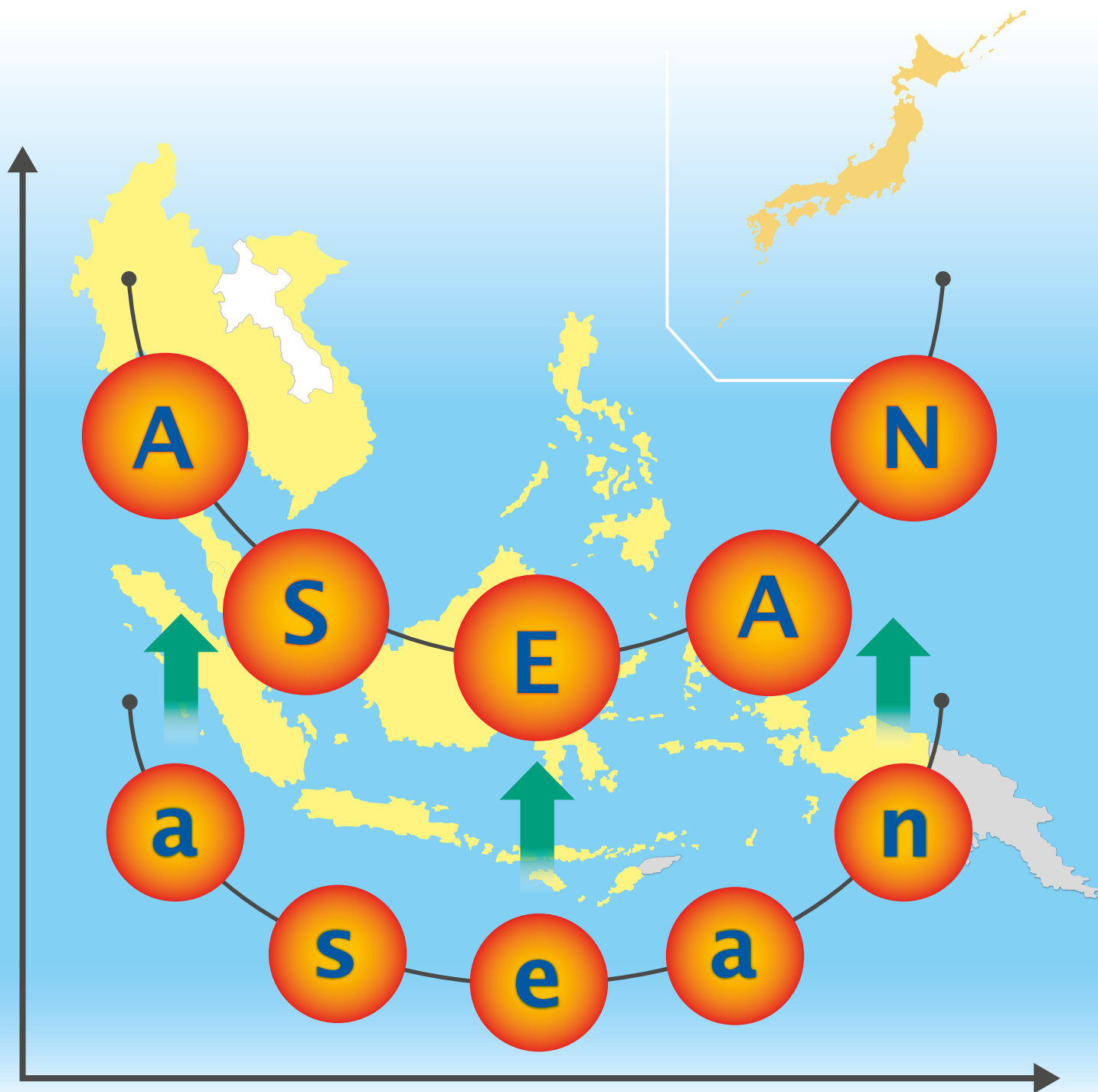


Global Value Chains in ASEAN

Lao People's Democratic Republic

PAPER 5
MARCH
2021



国際機関 日本アセアンセンター



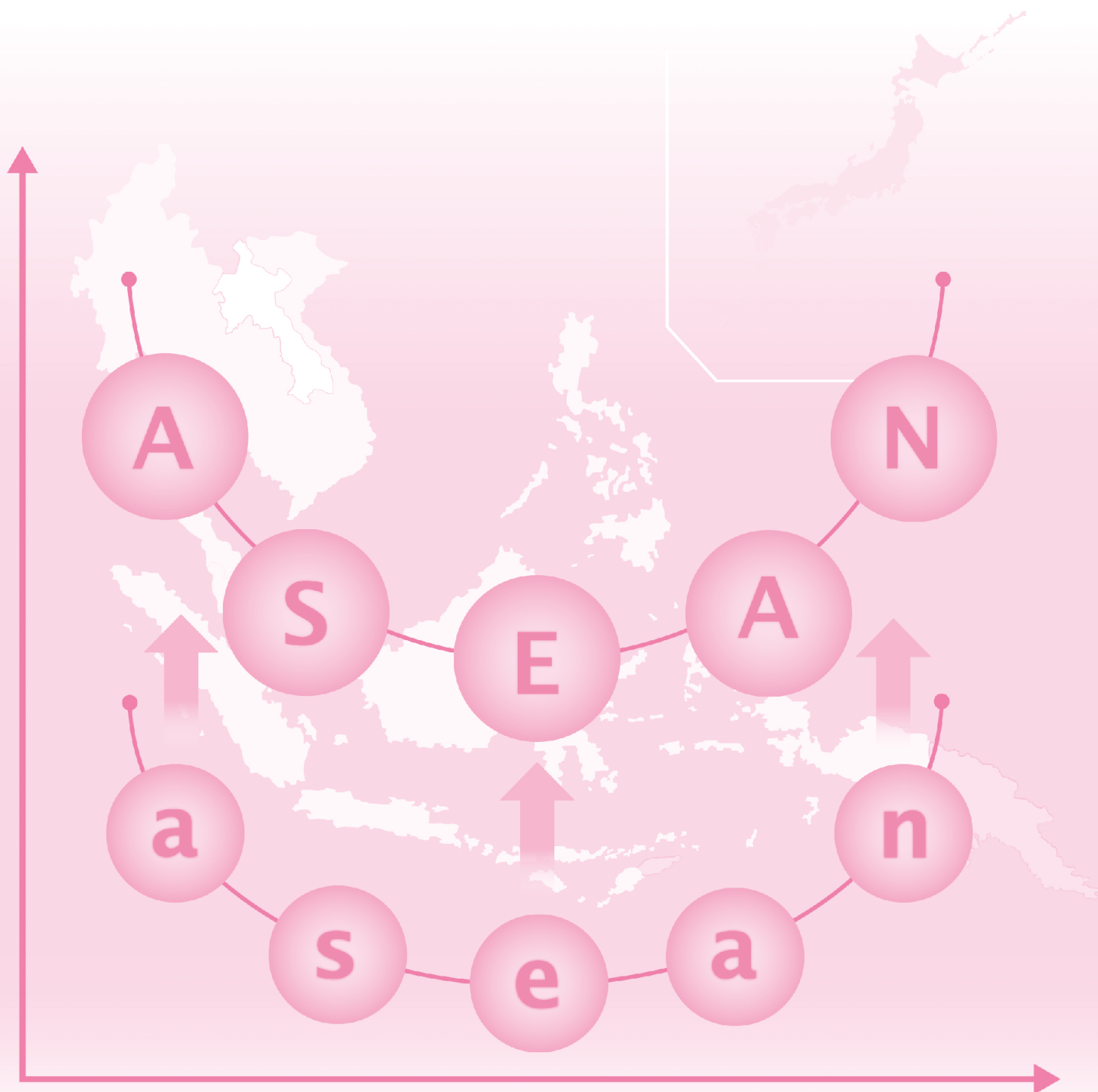
**For inquiries, contact ASEAN-Japan Centre
(ASEAN Promotion Centre on Trade, Investment and Tourism)**

1F, Shin Onarimon Bldg., 6-17-19, Shimbashi,
Minato-ku, Tokyo 105-0004 Japan
Phone/Fax: +81-3-5402-8002/8003 (Office of the Secretary General)
+81-3-5402-8004/8005 (Research and Policy Analysis (RPA) Cluster)
+81-3-5402-8116/8005 (Capacity Building (CB) Cluster)
+81-3-5402-8006/8007 (Trade and Investment (TI) Cluster)
+81-3-5402-8008/8009 (Tourism and Exchange (TE) Cluster)
+81-3-5402-8118/8003 (PR)
e-mail address: info_rpa@asean.or.jp
<https://www.asean.or.jp>

Global Value Chains in ASEAN

Lao People's Democratic Republic

PAPER 5
MARCH
2021



ASEAN-JAPAN
CENTRE

国際機関 日本アセアンセンター



NOTES

The terms “country” and “economy” as used in this study also refer, as appropriate, to territories or areas. The designations employed and the presentation of the material do not imply the expression of any opinion whatsoever on the part of the ASEAN-Japan Centre concerning the legal status of any country, territory, city, or area or of the authorities, or delimitations of frontiers or boundaries.

The following symbols have been used in the tables:

- Two dots (..) indicate that data are not available or are not separately reported.
- A dash (–) indicates that the item is equal to zero or its value is negligible.
- Use of a dash (–) between dates representing years, e.g., 2015–2016, signifies the full period involved, including the beginning and end years.
- Reference to “dollars” (\$) means United States dollars, unless otherwise indicated.

List of papers under the project on global value chains in ASEAN by the ASEAN-Japan Centre

The current paper is the 5th of a series of 16 papers on ASEAN GVCs. The other 15 papers have been published or are forthcoming.

Paper 1. A Regional Perspective (first published in September 2017; revised in January 2019)

Paper 2. Brunei Darussalam (published in February 2018)

Paper 3. Cambodia (published in March 2019)

Paper 4. Indonesia

Paper 5. Lao People’s Democratic Republic

Paper 6. Malaysia

Paper 7. Myanmar (published in February 2021)

Paper 8. Philippines (published in July 2017)

Paper 9. Singapore (published in August 2018)

Paper 10. Thailand (published in March 2019)

Paper 11. Viet Nam (published in May 2020)

Paper 12. Automobiles (published in January 2020)

Paper 13. Electronics

Paper 14. Textiles and clothing (published in March 2020)

Paper 15. Agribusiness (published in March 2020)

Paper 16. Tourism (published in March 2018)

Prepared by Dr. Phanhpakit Onphanhdala (Lao National Institute for Economic Research) and staff members of Research and Policy Analysis Cluster of ASEAN-Japan Centre (AJC) under the direction of Masataka Fujita (AJC). The authors wish to thank Rafaelita C. Castro (AJC) and other staff members of the AJC for their comments. The manuscript was edited by Lise Lingo and typeset by Laurence Duchemin. Errors and omissions are only those of the authors and should not be attributed to their respective organization.

KEY MESSAGES

Lao PDR is a country rich in natural resources and associated with underdeveloped manufacturing. Although there has been an improvement in economic growth with the effects of the New Economic Mechanism since 1986 and of foreign direct investment (FDI) in energy and mining since 2000, trade diversification is still limited. Exports are mainly concentrated in timber, electricity, raw metals and agricultural products. The country needs to acquire more technology and know-how in agriculture, manufacturing and services production by extending its engagement in global value chains (GVCs).

The share of foreign value added (FVA) is small, accounting for 6 per cent. A lower FVA share in gross exports implies in some sense low engagement in GVCs. Domestic value added (DVA) accounts for the balance of 94 per cent, because most value added products are resource-based (e.g., copper ores, electricity) and do not require inputs from foreign companies.

Lao PDR is categorized as a country with limited manufactured commodities. The manufacturing sector leads in GVC participation, though it is far smaller than that in other ASEAN countries. It is followed by the extractive (agriculture and mining) sector, then the services sector. The low participation in GVCs implies that industrial development in the country has not reached the complicated technological production stage as in many advanced ASEAN member countries.

Thailand, China and Viet Nam are significant contributors to Lao FVA, while the European Union (EU) and Japan play smaller parts. These countries are also major contributors to Lao value added incorporated in other countries' exports (DVX). The small share of FVA indicates that Lao PDR imports fewer value added products for manufacturing, and more for consumption. Companies based in Lao PDR that are involved in GVCs are still limited in number.

During 1990–2019, GVC participation was between 35 and 48 per cent, while regional value chain (RVC) participation ranged between 13 and 25 per cent. The share of RVC participation in GVC participation is more than 45 per cent on average. A higher percentage of RVC participation in GVC participation and greater engagement of certain industries at the regional level, such as in woods and wood products, implies that Lao production engages in ASEAN value chains rather than global ones.

Because the relationship between GVC participation and economic growth is positive, greater participation in GVCs could strengthen the Lao economy. It is thus essential to expand GVC participation and upgrade industries by promoting four important determinants of participation: logistics, policies, market accessibility, and labour and capital endowment. To spread benefits to all, the government should improve coordination between relevant agencies and the private sector.

A. INTRODUCTION

The concept of the global value chain (GVC) has been developed over several decades. In the 1960s, the value chain was referred to as a tool for understanding economic processes, particularly for agricultural production and distribution and specifically applied to domestic value chains. In the 1970s, it was developed to encompass commodity chains, attempting to explain the complexity of value chain activities in capitalist economies, with varied labour-intensive production in different regions. With globalization, production outsourcing from multinational manufacturers extended to low-wage countries and international trade of intermediate and final commodities. In the 1980s, the concept of in-house value added was explained in terms of value chains. The most famous thinker during this period was Porter (1985), who developed the concept of value chains through an analysis of each stage of activities that creates value added at the firm level. However, this concept was limited to understanding the linkages between firms. In the 1990s, the concept of the global commodity chain was developed by focusing on industrial goods produced in globally linked systems, which showed a larger picture of the commodity chain at the global level. This term is now commonly used for the sequence of activities required to produce a final product that is carried out in different countries and regions.

GVCs are playing an important role in economic integration. In today's world, a given country is part of global linkages producing commodities that can be counted as inputs in another country. At each stage of production in two or more countries, value added is generated. Overall, GVCs are expected to contribute to economic growth and job creation. Development of trade, investment, logistics and information and communication technology (ICT) fosters the growth of GVCs. Connectivity of trade and investment is also associated with the rise and fall of larger players. During the global economic crisis in 2008–2009, however, the effects of globalization shocked the entire world. When global consumption declined, it led to a decrease in global production and caused the unemployment rate to surge. The shift from north–south trade to south–south trade, when producers tried to reduce costs by outsourcing their production to low-wage countries, made such countries become exporters. The rapid growth of the East Asian economies was due to significant growth in their exports. It is worth noting that countries that engage in GVCs can experience both benefits and losses, in different degrees; therefore, their involvement in GVCs needs to ensure sustainability.

As a natural resource-rich country with natural resource exploitation contributing to its economic growth, Lao PDR plays only a small role in GVCs. This country is at an early stage of GVC participation in terms of production. It is associated with primary production and limited manufacturing, focused on agricultural products, natural resources and raw materials. A shift from low value added activities to high value added activities requires more technology and know-how in agriculture, manufacturing and services production. The limited extent of engagement in GVCs means the country has more opportunity to increase employment, because the GVC linkage is a powerful determinant of growth and productivity as it entails importing skills and technology. Since the 2010s, major suppliers have been sourcing labour-intensive parts and components from Lao PDR, but they are still limited in number. In 2020, the outbreak of the COVID-19 pandemic temporarily restricted global connectivity. The disruption in logistics and labour movements led to an economic slowdown and high unemployment. This is the price of GVCs. Lao PDR should thus consider strengthening its production linkages through improving logistics and labour productivity, and through reforming policies.

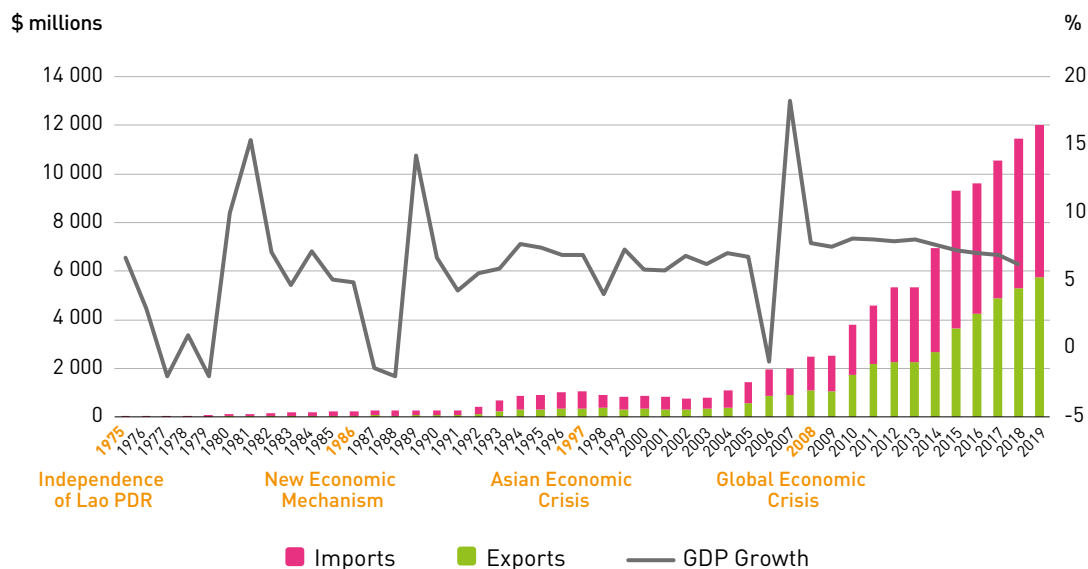
The next section (section B) shows the current economic outlook for Lao PDR and the limitations of its trade data. It discusses the Lao merchandise trade and trade partners. Section C investigates GVC participation in the country and identifies trends and patterns in it by employing data from the AJC-UNCTAD-Eora database on ASEAN GVCs. This reveals the opportunities and challenges Lao PDR

faces in seeking to enter GVCs and upgrade its position within them. Section D analyzes the current situation and challenges of five industries participating in GVCs, namely agribusiness, automobiles, electronics, textiles and clothing, and tourism. The last two sections discuss the impact of global value chain participation on the Lao economy (section E) as well as policy implications (section F).

B. LAO PDR CURRENT ECONOMIC OUTLOOK

Over the past two decades, trade diversification in Lao PDR has been limited because of the dominance of commodity production. Although Lao exports have improved slightly since the significant introduction of the New Economic Mechanism in 1986 and in response to changes in global market demand, major exports still are such primary products as timber, electricity, raw metals and some agricultural products. In the early 1990s, most production was labour-intensive, with more than 90 per cent of the work force engaged in the agriculture sector. State enterprises are few and rely on exploitation of natural resources. Timber exploitation played an important role in the national economy during that time, with high-value hardwood, namely teak wood and padauk wood, becoming major exports, accounting for about 30 per cent of the total (Bourdet, 2000). The share of timber in exports decreased in the late 1990s, when more hydropower dams were built in response to the national strategy that aspired to turn Lao PDR into an energy supplier in the region. The value of electricity exports doubled to about \$272 million in 2010 from \$108 million in 2001 (Trade Map, 2016). A few years later, the mining sector stole the spotlight with a significant amount of FDI inflows, which reached \$2.1 billion during 2011–2015 (IPD, 2020) and contributed to rapid economic growth. Copper production, which was about 60,000 metric tons in 2007, increased twice: in 2009, and from 2014 to 2017, contributing about 700,000 metric tons to total world production (Reichl, Schatz and Zsak, 2013; Reichl and Schatz, 2020). Over the past decade, exports of mining and electricity played crucial roles in Lao’s 6.7 per cent rate of economic growth (ADB, 2020).

Figure 1. Lao trade balance and GDP growth, 1975–2019 (Millions of dollars and per cent)



Source: UNCTADstat and World Bank World Development Indicators.

In 2018, the Lao economy continued to grow at about 6 per cent. The total value of exports was \$5.1 billion then and increased to \$5.8 billion in 2019 (ASEAN Stats, 2020). The major exports were still resource-based products, led by electricity, copper ores and refined copper, which accounted for half of the total value. Electricity was mainly exported to Thailand, the largest import partner, together with refined copper, machine parts and vegetables, which accounted for more than half of total exports. With China, the second-largest import partner, the value of copper ore and refined copper exports was about \$710 million. In addition, agricultural products such as rubber, corn, rice and wood products were in high demand in the Chinese market. Sixteen agricultural products of Lao PDR are eligible for export preference with unlimited volume to China. In Japan, the country's third-largest import partner, exports seem to be more diverse. In addition to raw material exports, a variety of textiles, clothing, footwear, semiconductors and agricultural products are exported to Japan, but those products were relatively low value, accounting for only 3 per cent of total exports (ASEAN Stats, 2020). They were similar to products exported to many other countries in Europe and to the United States. Exports to Thailand and China varied but relied on resource-based products, and those exports were inputs for their manufacturing that may be partly exported back to Lao PDR.

In 2019, the total value of imports was \$5.8 billion, a decrease from \$6.2 billion in 2018. The main products were machines, electronic equipment, refined petroleum, vehicles, food products and other consumer products (ASEAN Stats, 2020). Almost 70 per cent of goods imported came from Thailand. They included fuel, electrical machinery, vehicles and final goods. Similar goods were imported from China and accounted for about 23 per cent of total imports. Thailand and China were followed by Japan (2.1 per cent of total imports), the Republic of Korea (1.4 per cent), and the Russian Federation (0.9 per cent). Lao PDR imports products such as fuel and products that would be costly to produce internally. Lower-priced goods that come from countries with cheaper labour costs, such as Lao PDR, cannot compete with products from high-productivity countries such as China, Thailand and advanced ASEAN countries. Therefore, Lao PDR tends to import manufactured and technologically advanced products more to meet domestic demand.

While higher value added products are imported into Lao PDR, lower value added products are exported. This pushed Lao PDR into a trade deficit over the past decades. There are many reasons why the country struggles to produce high value added products. First, most labour is still engaged in agriculture. The proportion of employment in the agriculture sector is high, though declining. In 2019, about 63 per cent of the labour force participated in the agriculture sector, while only 12 per cent worked in the industrial sector and 25 per cent in the services sector (World Bank, 2020a). Investors find it difficult to attract cheap labour. Second, capital-intensive industries increase costs and decrease investors' profits. Because of this, expensive innovative machines are not used in production, and Lao PDR remains a country with limited manufactured commodities. It is a tricky matter for Lao PDR to incorporate capital-intensive production technology that can lead to high wages and provide workers with choices but not hurt the labour force. Third, low labour productivity prevents Lao PDR from competing with other countries in the region such as Cambodia, Myanmar and Viet Nam. For example, the highest minimum monthly wage rate in Cambodia and Viet Nam was \$190 in 2020, while in Lao PDR it has been \$124 since 2018 (ASEAN Briefing, 2020). In addition, labour productivity in these countries is higher than in Lao PDR, which means they attract more investors; however, a key factor in trade improvement in Lao PDR is its geographical advantage. The development of logistics hubs, the Lao-China railway project,¹ and other expressways has the potential to benefit the Lao

¹ The Lao-China railway project or the Lao-Chinese High-Speed Railway is part of a planned Kunming–Singapore railway. The 414-kilometer railway lies wholly within Laos, from Boten (border crossing point with China) to a new border crossing point with Thailand in the capital of Vientiane. At Boten, the railway will connect with the Belt and Road Initiative network in Kunming through another 595-kilometer railway link. This project began in 2016 and is expected to be completed by 2 December 2021 (the 46th National Day of Lao PDR) (Keola, 2019; World Bank, 2020c).

trade and manufacturing sector. Capacity-building for skilled and productive labour is an essential key development to improve the Lao economy.

The import data mentioned earlier, obtained from customs-clearance trade data, illustrate the status of Lao trade in merchandise. Nevertheless, when a country is involved in the global production process, value added trade plays a more important role as a contributor to engagement in GVCs. For example, Lao PDR smelts and exports copper ores to China in the form of ore or refined copper. It becomes an input for Chinese copper wire factories. In the other direction, Chinese products are exported to other territories as inputs for different industries and can be imported back by Lao PDR. Although re-exports from Lao PDR are small because export commodities are resource-based, the calculation of exports often excludes re-export values, leading to an underestimation of the trade amount. The concept of value added can shed light on the situation of trade and investment and how they contribute to economic growth, as discussed in the next sections.

C. TRENDS AND PATTERNS OF GVCs IN LAO PDR

The World Bank defines a GVC as “the series of stages in the production of a product or service for sale to consumers. Each stage adds value, and at least two stages are in different countries” (World Bank 2020d). In this context, GVC participation is the sum of FVA and DVX (for GVC terminology, see box 1). As an example, a semiconductor of a specific machine is produced in Lao PDR, and inputs used in this production are imported from Thailand, China and Japan. This import added in value is FVA, which is counted as a sum of the import value added from these three countries. The export value of these semiconductors is DVA; in other words, DVA indicates value added that is generated within a country to produce goods and services for export.

Box 1. GVC terminology used in the AJC paper series

A country's exports can be divided into domestically produced value added and imported (foreign) value added that is incorporated into the country's exported goods and services. Furthermore, exports can go to a foreign market either for final consumption or as intermediate inputs to be exported again to third countries (or back to the original country). The analysis of GVCs takes into account both foreign value added in exports (the upstream perspective) and exported value added incorporated in third-country exports (the downstream perspective). The indicators used in this paper, as well as the other 15 papers in this series, are as follows:

1. **Foreign value added (FVA):** FVA indicates what part of a country's gross exports consists of inputs that have been produced in other countries. The FVA share is the share of the country's exports that do not add to its gross domestic product (GDP).
2. **Domestic value added (DVA):** DVA is the part of exports created in-country, i.e. the part of exports that contributes to GDP. The sum of foreign and domestic value added equates to gross exports. DVA can be put in relation to other variables:
 - As a share of GDP, it measures the extent to which trade contributes to the GDP of a country.
 - As a share of global value added trade (the “slice of the value added trade pie”) it can be compared with a country's share in global gross exports (relative value capture from trade).
3. **Value added incorporated in other countries' exports (DVX):** This indicates the extent to which a country's exports are used as inputs to exports from other countries. At the global level, the sum of this value and the sum of FVA are the same.

.../

Box 1. GVC terminology used in the AJC paper series (Concluded)

4. **GVC participation** indicates the share of a country's exports that is part of a multistage trade process, by adding to the FVA used in a country's own exports DVX, the value added that is supplied to other countries' exports (that is, FVA + DVX). Although the degree to which exports are used by other countries for further export generation may appear less relevant for policymakers, as it does not change the DVA contribution of trade, the participation rate is a useful indicator for the extent to which a country's exports are integrated in international production networks.

The GVC participation rate corrects a limitation of the FVA and DVA indicators by which countries at the beginning of the value chain (e.g. exporters of raw materials) by definition have a low FVA content of exports. It gives a more complete picture of the involvement of countries in GVCs, both upstream and downstream.

GVC indicators can also be used to assess the extent to which industries rely on internationally integrated production networks. Although a number of complex methods have been devised in the literature to measure GVC length, the degree of double-counting in industries, conceptually, can serve as a rough proxy for the length of GVCs. Data on value added trade by industry can provide useful indications of the comparative advantages and competitiveness of countries, and hence form a basis for development strategies and policies.

Source: Adapted from UNCTAD (2013).

According to the AJC-UNCTAD-Eora database on ASEAN GVCs and the UNCTAD database on trade (goods and services), a comparison of total value added exports and export value in Lao PDR shows a difference in value, but a similarity in pattern (table 1). Lao value added data obtained from the database covers 22 base industries (annex table 3 for 21 industries and "unspecified"). Gross exports (goods and services) of \$103 million in 1990 rapidly increased, thanks to the boom in the energy sector (e.g. mining and hydroelectric generation projects), to \$1.3 billion in 2010 and \$2.1 billion in 2019. Exports recorded in the balance of payments in 2019 indicate a larger amount of Lao exports to the world but cannot identify value added that contributes to the economy.

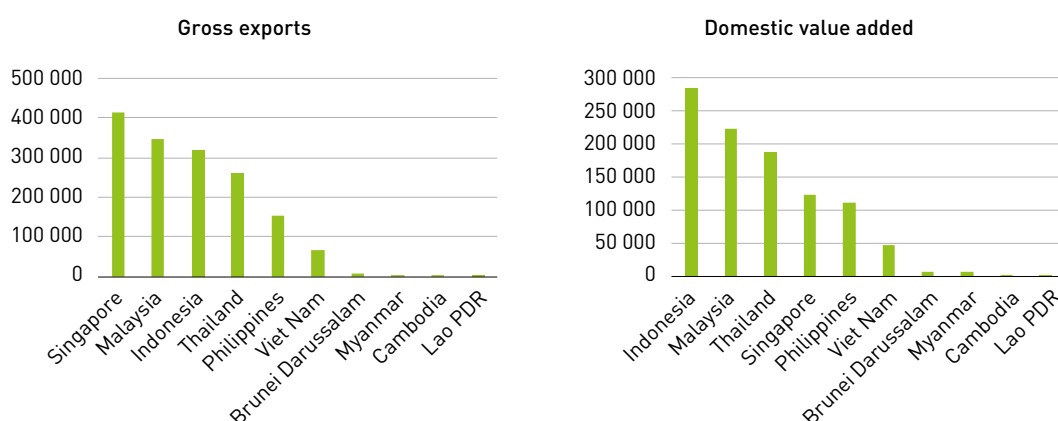
Table 1. Comparison of Lao PDR's value added exports (gross exports) and exports as reported in the balance of payments, 1990–2019 (Millions of dollars)

Year	Value added exports (gross exports)	Exports in BoP
1990	103	102
1995	228	408
2000	249	506
2005	471	757
2010	1 286	2 126
2015	1 626	4 345
2016	1 686	4 950
2017	1 757	5 579
2018	1 936	6 060
2019	2 052	..

Source: Value added exports from AJC-UNCTAD-Eora database on ASEAN GVCs; exports in BoP from UNCTADstat (www.unctadstat.unctad.org).

A comparison of gross exports of ASEAN members shows that Lao PDR had weak global trade participation in terms of both FVA and DVA. In 2019, the share of its gross exports in ASEAN gross exports was less than 0.5 per cent, trailing both Myanmar and Cambodia. Gross exports were \$2.1 billion, as compared with Myanmar at \$6.1 billion and Cambodia at \$3.3 billion (figure 2). When it comes to DVA, the share in gross exports accounted for more than 90 per cent, larger than the average across ASEAN, with the balance attributed to FVA. The DVA share in the Lao GDP accounted for only 11 per cent, while across ASEAN that share was 33 per cent. DVA makes a small contribution to the Lao economy. This point is explained in detail at the sector level later.

Figure 2. Value added exports (gross exports) and domestic value added in exports from Lao PDR as compared with other ASEAN countries, 2019 (Millions of dollars)



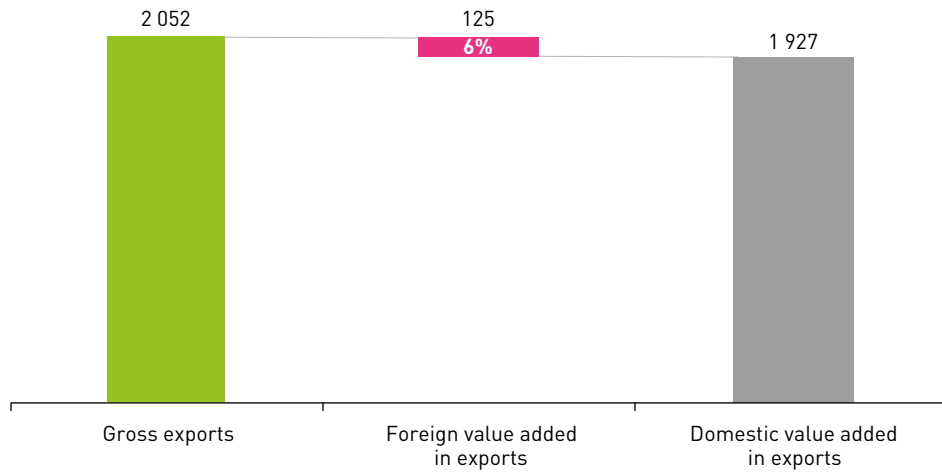
Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

Note: Gross exports refer to the sum of domestic value added and foreign value added. For definitions, see box 1.

In terms of share of FVA in total gross exports, Lao PDR was the smallest, at only 6 per cent, while Singapore, Malaysia and Thailand had the largest shares (figure 3). Meanwhile, ASEAN's FVA share was 36 per cent and the world average was 28 per cent. Despite the tremendous volume of imports in Lao PDR, this small share of FVA indicates only a minor contribution of foreign inputs to Lao manufacturing. In addition, the small FVA reflects the fact that Lao PDR does not have a high presence of FDI, even though sizeable amounts of FDI inflows started after 2007–2008. Furthermore, as FDI inflows focus only on resource-based production such as in mining, they barely contribute to economic growth in the country.

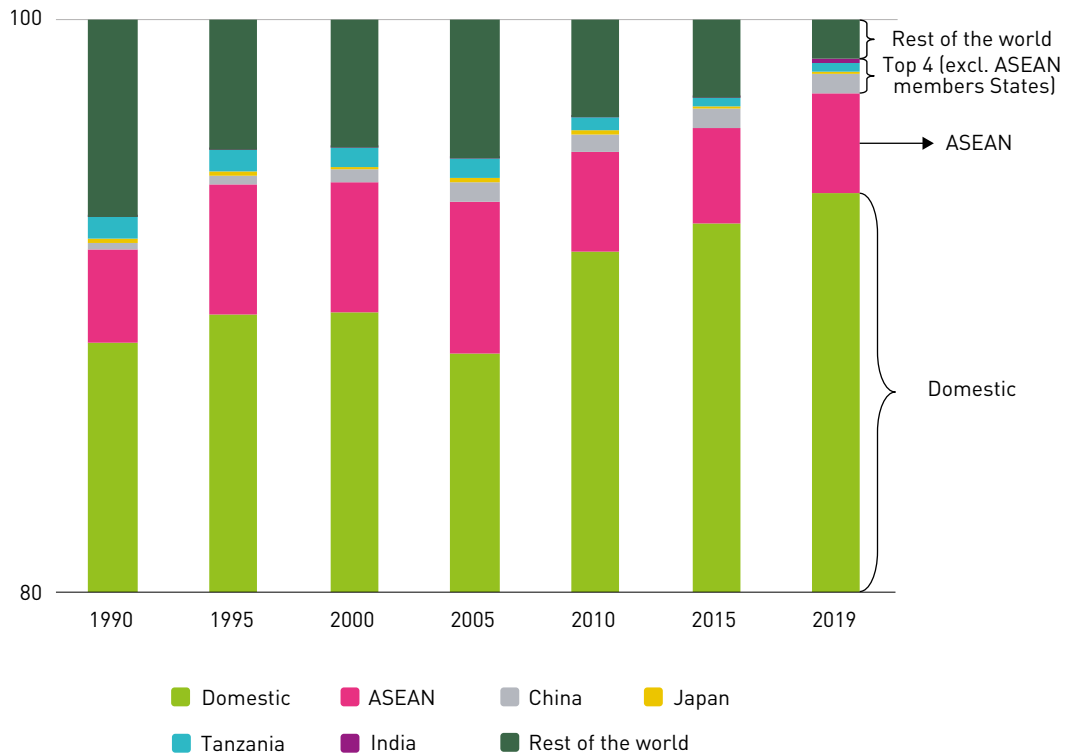
In Lao PDR, DVA went up and down for three decades but mostly stayed above 90 per cent (figure 4). Because of the nature of its main exports during the past three decades, Lao PDR has not needed many foreign inputs. Thus, its FVA share in gross exports accounted for only 6 per cent or about US\$125 million in 2019 (figure 3). Based on value added data, the largest trade partners in terms of FVA were Thailand (2.5 per cent of total gross exports), China (0.7 per cent), Viet Nam (0.5 per cent), Tanzania (0.2 per cent) and India (0.2 per cent) (figure 4). Figure 4 also shows a decreasing trend in FVA, while DVA was increasing. A higher DVA share in gross exports implies an increase in local content; however, as those value added products were essentially resource-based, this might be considered a competitive disadvantage of Lao PDR in the global market.

Figure 3. Value added exports from Lao PDR, 2019 (Millions of dollars)



Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

Figure 4. Value added exports from Lao PDR, by creators of value added: domestic, ASEAN and next four foreign countries, 1990–2019 (Per cent)

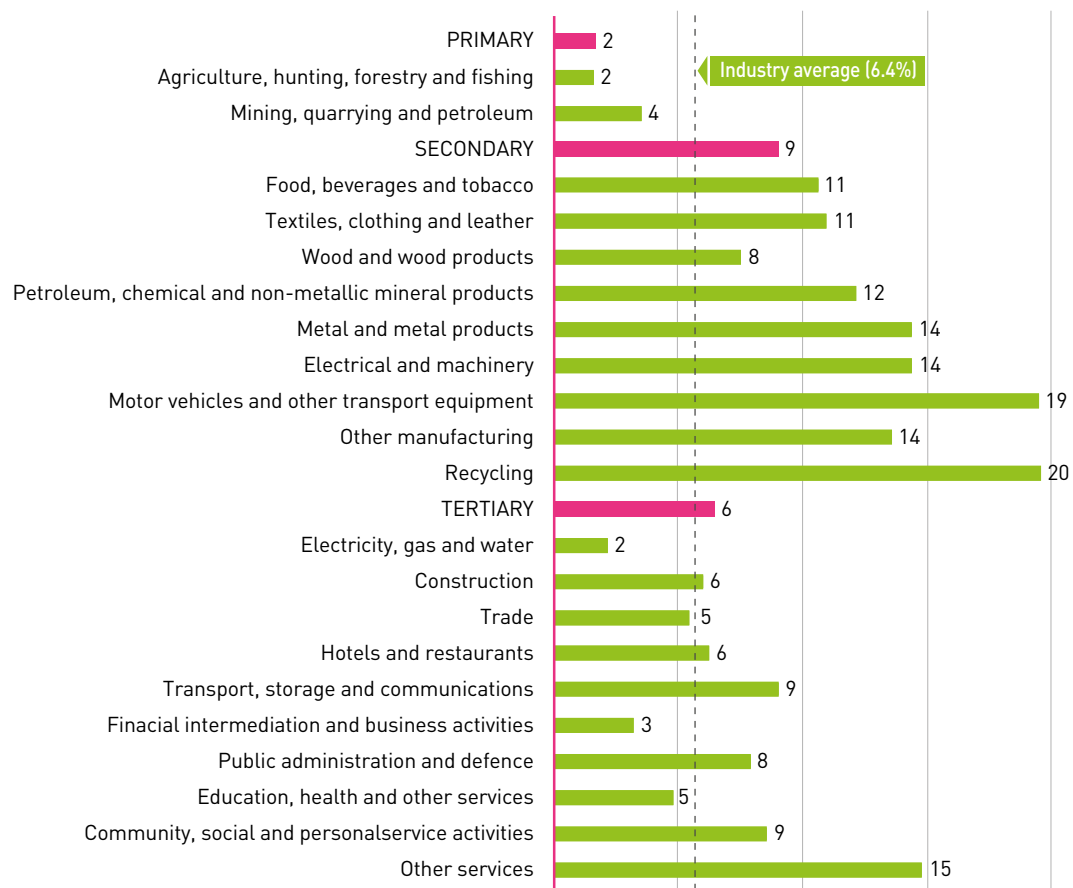


Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

To be more specific by industry, the structure of total value added exports shows that the manufacturing sector leads the Lao economy in GVC engagement (42 per cent), followed by the primary sector (agriculture and mining) with 29 per cent, and the services sector with 28 per cent.

However small FVA is in value terms, industries with a higher FVA share tend to be exporting industries. This is probably because the country imports inputs from abroad for their export as intermediate or final products. In Lao PDR, the manufacturing sector (secondary) has the largest share of FVA at 9 per cent, followed by the services sector (tertiary) at 6 per cent and the primary sector at 2 per cent (figure 5).

Figure 5. Share of foreign value added in Lao PDR exports, by industry, 2017 (Per cent)



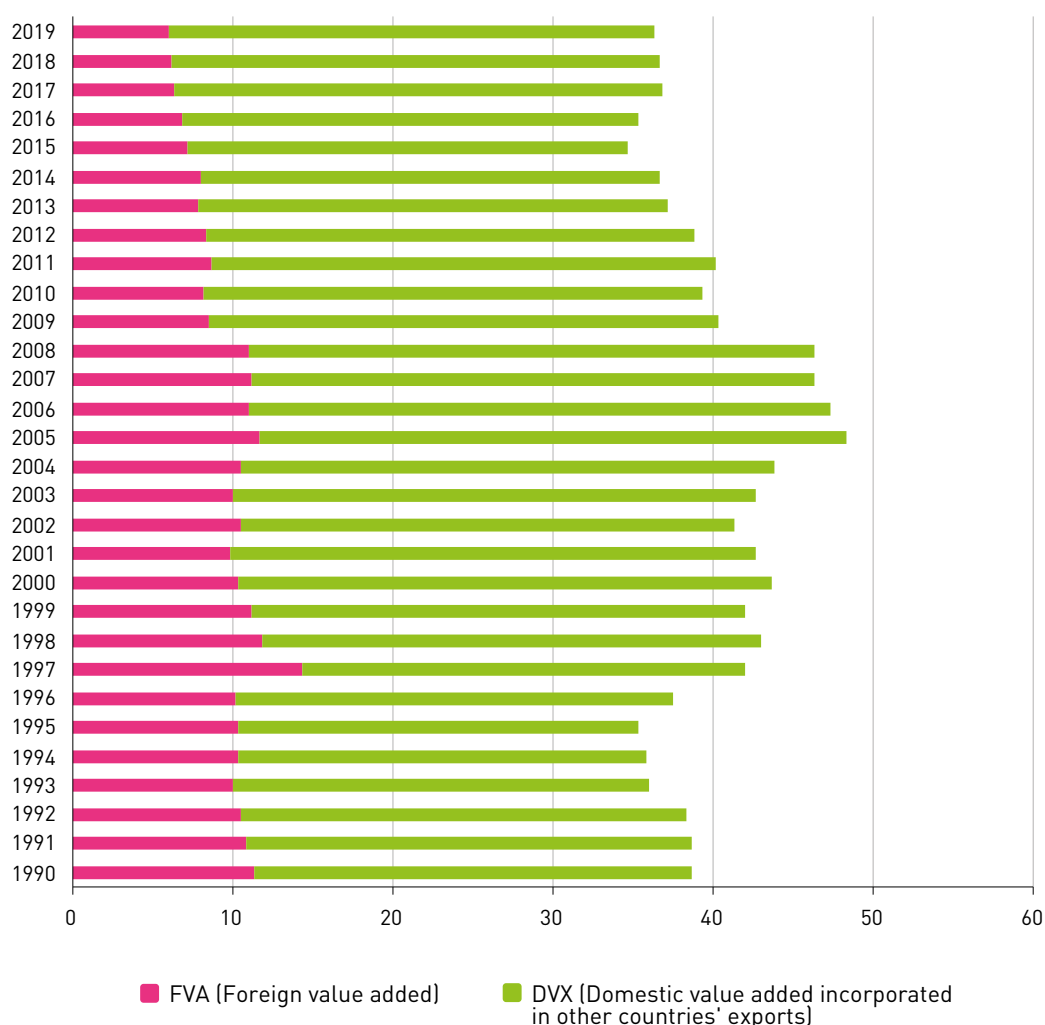
Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

A higher share of FVA means greater usage of foreign inputs. For example, the recycling industry imports recycled materials from other countries for its production. However, despite its high share of FVA, this industry contributes less to national income and produces wastes that pollute the environment. Another example is the high FVA share in motor vehicles and other transport equipment industries, which indicates a greater use of raw materials imported from foreign countries to assemble or produce equipment parts.

In contrast, a smaller share of FVA means less use of foreign inputs. This is the case in agriculture and mining. Shares of FVA in gross exports in both are small, lower than the 6.4 per cent average for industry. Agricultural businesses tend to produce raw products for domestic and international markets; only a small number of them operate food-processing factories to produce higher value added products. The mining industry plays a similar role, exporting copper ore or refined copper without transforming it into other products – probably because of the high cost burden of setting up a total package factory to produce any commodity requiring copper. For the services sector, the FVA share was also lower than both the manufacturing sector and the industry averages. This is because services utilize few inputs from other industries and provide inputs for other industries.

In 2018, the GVC participation rate – the sum of FVA and DVX, divided by gross exports (box 1) – was 61 per cent for ASEAN. In Lao PDR, it has been smaller, at most about 40 per cent (figure 6). This implies that Lao businesses have the potential to increase their participation in GVCs. Data on FVA (or upstream engagement in GVCs) shows Thailand, China, Viet Nam, the EU and Japan were the

Figure 6. GVC participation in Lao PDR, 1990–2019 (Per cent)



Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

main intermediate exporters for Lao exports in 2019. The small FVA share indicates that Lao PDR imports fewer value added products for its GVC, and rather more for consumption. Nonetheless, the relatively high share of value added incorporated in other countries' exports (the downstream part of GVCs) indicates that resource-based commodities (e.g. energy, raw materials) from Lao PDR are used as inputs to produce value added commodities in other countries. This pattern in the upstream and downstream parts of GVCs shows that companies based in Lao PDR that are involved in GVCs are still limited in number.

Like other ASEAN countries, Lao PDR is integrated in both international and regional production networks (table 2). During 1990–2019, GVC participation in the country remained at about the same level, between 35 and 48 per cent, while regional value chain (RVC) participation lay between 13 and 25 per cent. The share of RVC participation in GVC participation is greater than 45 per cent on average. A higher share indicates greater engagement of industries at a regional level. This thus implies that Lao production engages in ASEAN value chains rather than global ones.

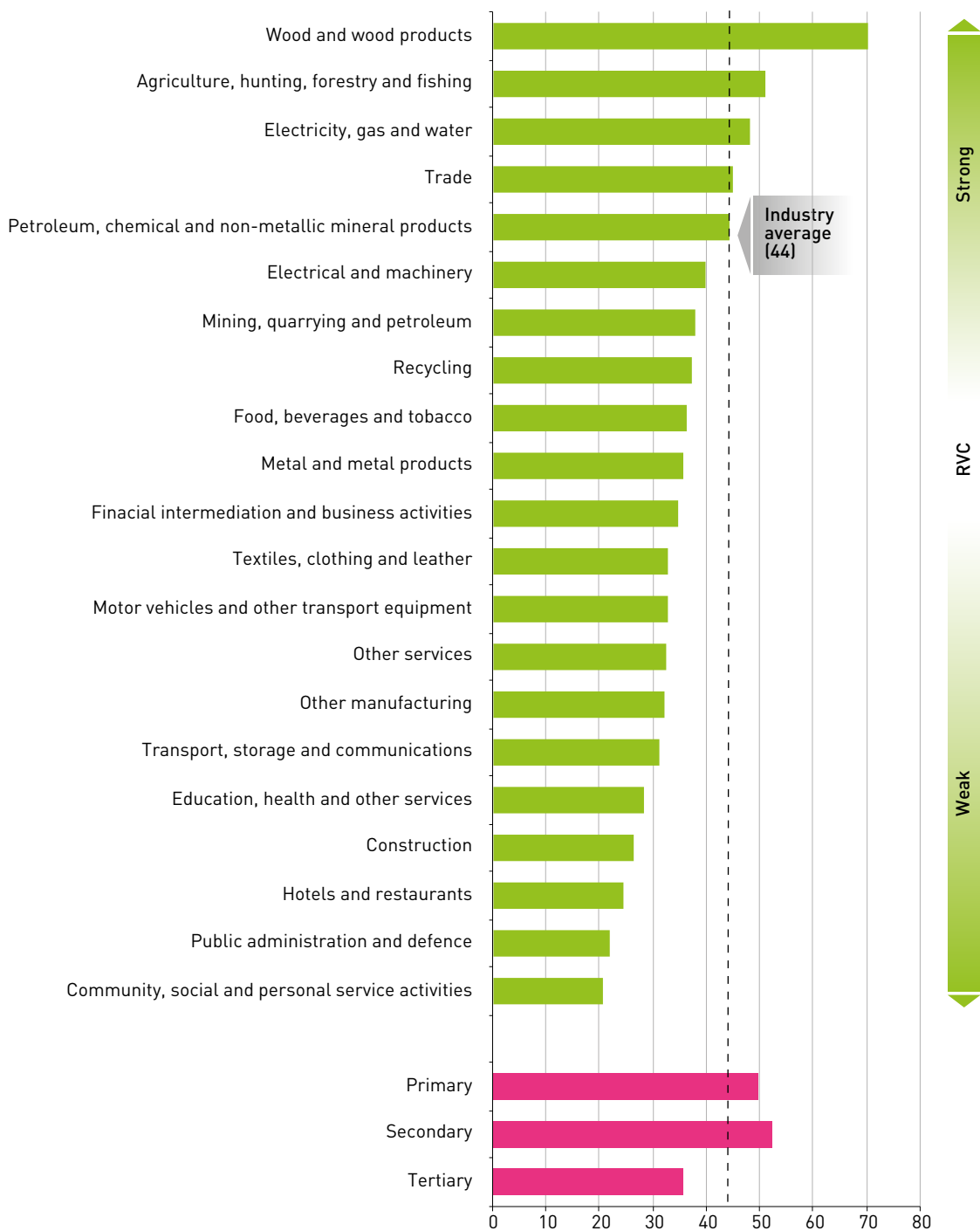
The largest involvement in RVCs in Lao PDR were for wood and wood products; agriculture, hunting, forestry and fishing; electricity, gas and water; trade; and petroleum, chemical and non-metallic mineral products. These sectors tend to expand regionally rather than globally. This implies that industries in Lao PDR generally extend their production chains within ASEAN, especially into Thailand and Viet Nam. At the other extreme, the industries with the smallest involvement in RVCs included community, social and personal service activities; public administration and defense; hotels and restaurants; construction; and education, health and other services, which tend to be domestically oriented. Generally speaking, the manufacturing and primary sectors have a larger share of RVC in GVC participation, which tends to spread regionally, unlike the tertiary (services) sector (figure 7).

Table 2. GVC and RVC participation in Lao PDR, 1990–2019 (Per cent of total exports)

Year	FVA: Foreign value added			DVX: Domestic value added incorporated in other countries' exports			Value chain participation	
	Total (A) = (B+C)	Created outside ASEAN (B)	Created within ASEAN (C)	Total (D) = (E+F)	Incorporated outside ASEAN (E)	Incorporated within ASEAN (F)	GVC participation (A + D)	RVC participation (C + F)
1990	11.2	8.1	3.2	27.4	17.8	9.6	38.6	12.8
1995	10.3	5.8	4.5	25.0	13.0	12.0	35.3	16.5
2000	10.3	5.7	4.5	33.4	16.1	17.4	43.7	21.9
2005	11.7	6.4	5.3	36.6	16.7	19.9	48.3	25.2
2010	8.1	4.6	3.5	31.2	16.2	15.0	39.3	18.4
2015	7.1	3.8	3.3	27.5	13.4	14.1	34.6	17.4
2019	6.1	2.6	3.5	30.2	17.4	12.8	36.2	16.2

Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

Figure 7. Importance of RVCs and GVCs in Lao PDR, by industry, 2017
(Share of RVC participation in GVC participation)



Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

Note: The higher the share of RVC participation in GVC participation, the more production networks are established in the region.

D. INDUSTRIES SUBJECT TO CASE STUDY

The five industries selected for further study are agribusiness, automobiles, electronics, textiles and tourism.

- Agribusiness is associated with the food business, including producing raw materials, processing food and storing food. In the current situation in Lao PDR, agribusiness focuses mainly on agricultural production and food processing; however, it should also cover the services sector. Given the small evidence of services providers, such as cold chain managers, this study focuses on agriculture and the food and beverage industries.
- For the automobile industry, local and foreign automobile factories are not involved in massive production; they produce only parts of motor vehicles, specifically for motorcycles. This industry is part of the motor vehicles and other transport equipment industry.
- Like the automobile industry, the electronics industry plays a small part in manufacturing, aiming to produce only semiconductors or parts of sensors for air conditioning and some electronic parts. In this study, electronics denotes the electrical and machinery industry.
- Textiles and clothing manufacturing is a fundamental industry in Lao PDR. It involves various stages of production.
- Tourism is categorized in the services sector, because it aims to provide leisure experiences to its services receivers or customers from traveling, eating, shopping, sightseeing, entertainment and the like. Given the data limitations, however, for this study the tourism industry consists only of hotels and restaurants, and transport, storage and communications.

Agribusiness

The agribusiness industry covers the primary sector (agriculture, hunting, forestry and fishing) and the secondary sector (processed food and beverages with agricultural materials as inputs). According to the AJC-UNCTAD-Eora database on ASEAN GVCs, gross exports from agribusiness increased from \$27 million in 1990 to \$57 million in 2000 and \$510 million in 2017. FVA has been a small part of gross exports. Agribusiness firms in Lao PDR evolve around primary products, import few foreign inputs for their production and are involved in domestic value chains.

Lao agribusiness mainly involves agriculture, hunting, forestry (non-timber) and fishery. Its gross exports accounted for only a quarter of total exports. Although 60 per cent of the labour force works

Table 3. Value added exports in agribusiness from Lao PDR, 1990–2017 (Millions of dollars)

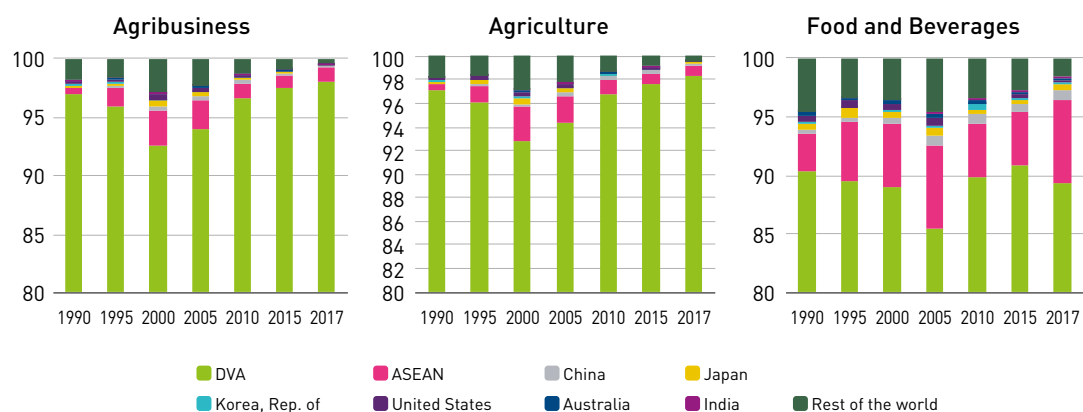
Year	Agribusinesses			Agriculture			Food and beverages		
	Total	Foreign value added	Domestic value added	Total	Foreign value added	Domestic value added	Total	Foreign value added	Domestic value added
1990	27 498	853	26 646	26 439	750	25 689	1 059	103	957
1995	60 652	2 447	58 205	59 072	2 281	56 791	1 580	166	1 414
2000	57 939	4 296	53 643	55 543	4 031	51 512	2 396	265	2 131
2005	126 411	7 522	118 889	122 596	6 970	115 625	3 815	552	3 264
2010	373 718	12 538	361 180	363 594	11 503	352 091	10 124	1 035	9 089
2015	500 117	12 665	487 451	488 537	11 608	476 929	11 579	1 057	10 522
2017	510 005	9 634	500 371	494 217	7 960	486 257	15 789	1 674	14 115

Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

in the agriculture sector, most agricultural production is from smallholding farmers, who have limited capital and labour to expand their businesses. Contract farming is playing an important role in the sector, particularly for exports to China and Thailand. Contract farming with Chinese investors has emerged since 2000, with Chinese investors supplying inputs such as seeds, fertilizers and pesticides to local farmers. These inputs are, however, smaller than those imported from Thailand. The small share of FVA in agriculture reflects the limited presence of Lao PDR in global value added. Gross exports of the agriculture sector increased from \$26 million in 1990 to \$56 million in 2000 and then skyrocketed to \$494 million in 2017 (table 3). The DVA share in the sector played an important role in value added exports, whereas the FVA share played only a small part in exports. Major agricultural products such as rice, starchy roots, sugarcane and other crops are supplied mainly to the domestic market and some immediate neighbors and are less likely to use foreign inputs in their production.

The food and beverages industry seem to be more engaged in GVCs than is agriculture-based production: its FVA share in gross exports has been about 10 per cent, which is greater than that of the agriculture sector (table 3). This FVA increased from \$0.6 million in 2005 to \$1.7 million in 2017. The largest brewery in Lao PDR produces alcohol and soft drinks and imports raw materials from foreign countries. For example, the main inputs are malt, hops and yeast imported mostly from EU countries and some from Thailand (figure 8; included in ASEAN data). Sugar and sugar confectionery is the second-largest import, mainly from Thailand, as inputs into soft-drinks production. This factory is owned by Thai investors; it produces tons of sugar for the domestic market and also exports back to Thailand. However, that sugar is probably re-imported to Lao PDR as soft-drinks inputs.

Figure 8. Value added exports in agribusiness from Lao PDR, by creator of value added: domestic, ASEAN and next six foreign countries, 1990–2017 (Per cent)



Source: AJC-UNCTAD-Eora database on ASEAN GVCs.
 Note: For ASEAN, Thailand is the main contributor.

Automobiles

The automobile industry in this study consists of motor vehicles and other transport equipment manufacturing, accounting for less than 1 per cent of total value added exports of all products. Its value increased tenfold between 1990 and 2017, from \$1 million to \$10 million (table 4). No plant to produce completely knocked-down or completely-built units exists in Lao PDR yet. In other words, the country has yet to attract any assembly line production. It is a net importer of vehicles.

Since 2013, the number of imported vehicles has increased by 10–12 per cent annually. A small number of factories exist in the Lao special economic zones (SEZs), where their FVA accounts for almost a quarter of gross exports, mainly from Thailand, Japan and China. In 2014, the first car-related plant in Lao PDR was a car part manufacturer: Toyota Boshoku Corporation from Japan. It produces automobile seat covers and has a production capacity of 200,000 units per year. Some are re-exported to Thailand (figure 9; included in ASEAN data), which is a major regional hub for automobile production. Other than this plant, SEZs host only machinery, molding and equipment manufacturing; sales; and services, including motor vehicle parts manufacturing, aero parts manufacturing and assembly of motorcycles. All are owned by foreign investors.

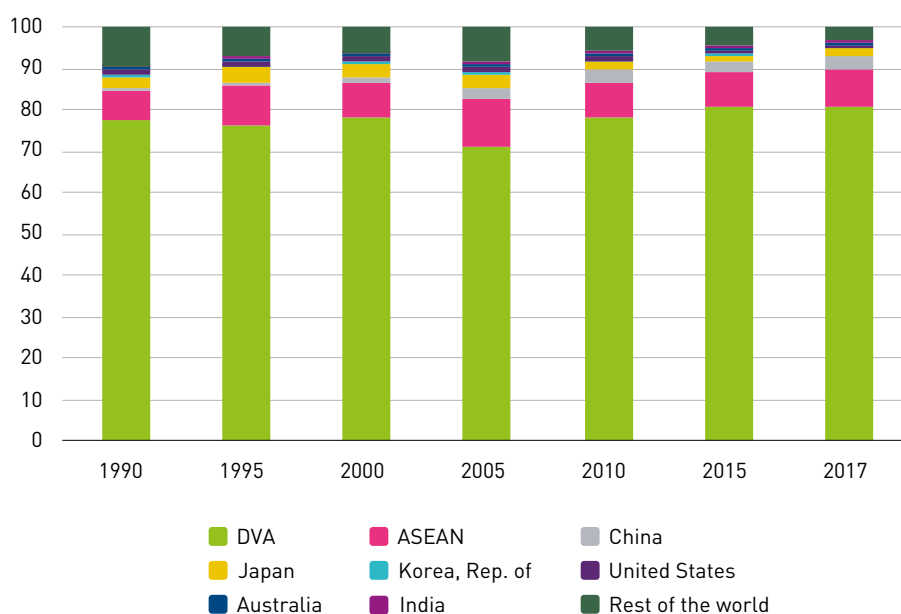
Overall, the industry is limited in terms of both the number of factories and GVC participation. This is because only a small number of skilled labourers specialize in mechanical fields; most of the Lao labour force engages in agriculture and infrastructure-related sectors.

Table 4. Value added exports in automobiles from Lao PDR, 1990–2017 (Millions of dollars)

Year	Total	Foreign value added	Domestic value added
1990	979	227	753
1995	1 032	249	782
2000	2 881	645	2 236
2005	2 686	786	1 900
2010	7 039	1 564	5 475
2015	8 229	1 626	6 602
2017	9 812	1 912	7 900

Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

Figure 9. Value added exports in automobiles from Lao PDR, by creator of value added: domestic, ASEAN and next six foreign countries, 1990–2017 (Per cent)



Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

Electronics

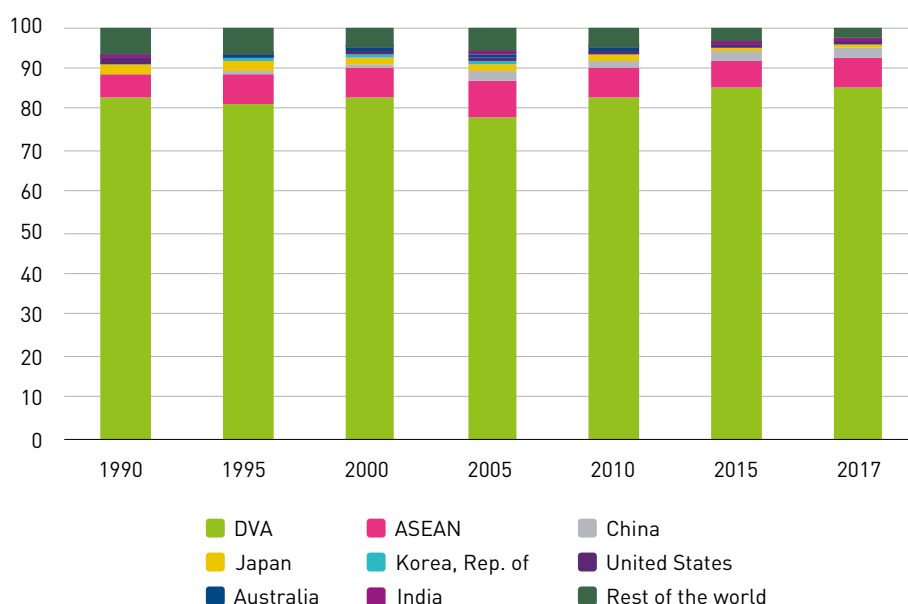
The electronics industry (consisting of electrical and machinery manufacturing) follows a similar pattern as the automobile industry but has been growing faster in terms of value added. Its FVA share accounted for almost 20 per cent of gross exports (table 5), which means that more foreign inputs are engaged in this industry. Its value increased almost tenfold between 1995 and 2017, from \$0.4 million to \$3 million, but the number of plants is limited. Electronics manufactured in Lao PDR consist of intermediate goods: manufacturing of electrical products, printed circuit board assemblies, LED (light-emitting diode) lamps and wire harnesses, and assembly of electronic parts, camera parts, electronic appliances and solar panels. Those manufacturers are owned by Japanese and Chinese investors, which operate in SEZs. Both investors are also important suppliers of inputs (figure 10). For example, Bando Densen Corporation, Ltd., an electronic vehicle company, set up a cable plant in Lao PDR to produce cables and home appliances, aiming to export throughout the region before expanding to Japan. Many foreign companies, including these companies, are considering shifting their labour-intensive assembly processes to Lao PDR.

Table 5. Value added exports in electronics from Lao PDR, 1990–2017 (Millions of dollars)

Year	Total	Foreign value added	Domestic value added
1990	1 101	190	911
1995	2 099	391	1 708
2000	3 105	524	2 581
2005	6 063	1 334	4 729
2010	15 115	2 550	12 565
2015	19 007	2 809	16 199
2017	22 513	3 245	19 268

Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

Figure 10. Value added exports in electronics from Lao PDR, by creator of value added: domestic, ASEAN and next six foreign countries, 1990–2017 (Per cent)



Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

Textiles and clothing

In the past, the apparel industry in Lao PDR engaged only in domestic value chains. The first garment factory was established in 1984, and the second followed in 1990; they supplied textiles and clothes to the domestic market. The wide expansion of the textile industry over the past two decades brought an increasing number of factories that started to engage in both regional and global value chains. In 2012, there were 100 textiles manufacturing factories, but this number had decreased to 78 by 2018. These factories employed more than 20,000 workers, with more than half of them exporting products to foreign countries (ERIIT, 2018; Nolintha and Jajri, 2015).

The textile industry's gross exports increased from \$9 million in 1990 to \$142 million in 2017 according to the AJC-UNCTAD-Eora database on ASEAN GVCs (table 6). The textiles and clothing industry is also associated with handicraft companies that produce traditional wear, home decoration textiles and the like. However, local garment factories in Lao PDR work on a cut, make and trim (CMT) basis or under subcontractors through traders in Thailand, Singapore and Hong Kong. Brand-name clothing is designed by designers in Europe who give orders to factories in Lao PDR for production.

Table 6. Value added exports in textiles from Lao PDR, 1990-2017

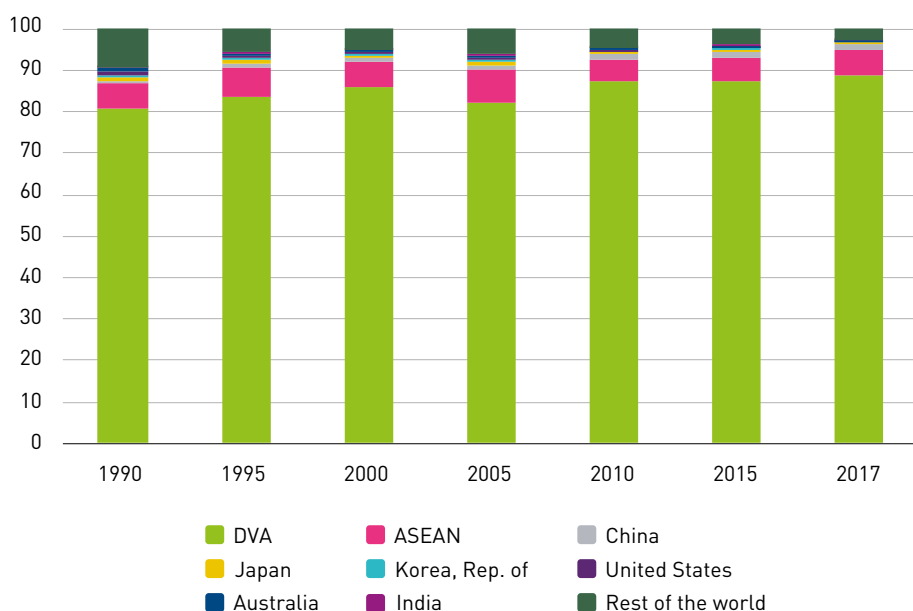
Year	Total	Foreign value added	Domestic value added
1990	9 425	1 817	7 608
1995	22 987	3 820	19 167
2000	25 683	3 605	22 078
2005	44 906	7 942	36 964
2010	118 447	15 026	103 421
2015	135 598	16 997	118 602
2017	141 967	15 597	126 370

Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

There are several challenges to development of the apparel industry. First, the industry depends on imported fiber, yarn and fabric for assembling finished textiles or clothes that are then re-exported. These imported inputs accounted for more than half of total production costs. This is because the country lacks domestic upstream industries. In terms of upstream GVC participation, the FVA share in gross exports accounted for more than 15 per cent between 1990 and 2005, then decreased to 12 per cent between 2010 and 2017 (figure 11). FVA contributors for Lao PDR included countries such as Thailand, Japan and the United States and countries in Europe (figure 11). The textile industry contributes to GVC participation over domestic value chain participation. The share of RVC participation in GVC participation in Lao PDR shows that the textile industry tends to expand globally rather than regionally (figure 7).

The second challenge is that garment exporters do not take full advantage of the 12–14 per cent cost saving on import duties available under trade preferences such as the European Union's Everything But Arms (EBA) and the Generalized System of Preferences (GSP) used by 36 other countries (ERIIT, 2018; Thephavong, Khounachay, and Vilavong, 2005). This is because transport costs for Lao PDR are relatively high compared with those of its neighbors. Taking both trade preferences and transport costs into account, the cost saving is only 3–5 per cent (Thephavong, Khounachay and Vilavong, 2005). Currently, the cost of logistics is still a major challenge to Lao exporters.

Figure 11. Value added exports in textiles from Lao PDR, by creator of value added domestic, ASEAN and next six foreign countries, 1990–2017 (Per cent)



Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

The third challenge is that a labour shortage constrains the industry. Although Lao PDR can attract foreign investment with low wage rates for labour-intensive industries, the monthly dropout rate of the workforce in this industry is relatively high. Since the 2010s, it has been about 3.5 per cent for medium-large factories and 6 per cent for small factories (World Bank, 2012). Therefore, to attract labourers, wage and social welfare incentives should be reconsidered; investing to improve labour productivity through vocational training is also important.

Tourism

Tourism accounts for 8 per cent of total value added exports of all industries, according to the AJC-UNCTAD-Eora database on ASEAN GVCs. The tourism industry comprises different sectors in its value chain such as lodging, logistics, meals, travel services and other entertainment. Due to data limitations, in this study the tourism industry consists only of hotels and restaurants; and transport, storage and communications.² In 2019, Lao PDR had 637 hotels, 2,283 guesthouses and resorts, 2,679 restaurants, and 246 entertainment sites, a decrease of about 3 per cent from the figures for 2018 (MICT, 2019). During the 1990s to early 2000s, the gross exports of the tourism industry were relatively small. Since the 2010s, its gross exports have rapidly risen above \$100 million (table 7). The number of visitors increased by about 14 per cent from 2018 to 2019, from 4.0 million to 4.8 million. The largest number of tourist arrivals were from Thailand, which were mostly one-day visits.

² Including the complete transport, storage and communications subsector overestimates tourism as this subsector includes industries not related to tourism.

Chinese and Korean tourists had longer lengths of stay during their visits; visitors from Japan, the United Kingdom and the Republic of Korea spent the largest amount per person. There were 114,000 jobs created or about 3 per cent of total employment in the country (MICT, 2019). The tourism industry also contributed about 13 per cent to GDP in 2017.

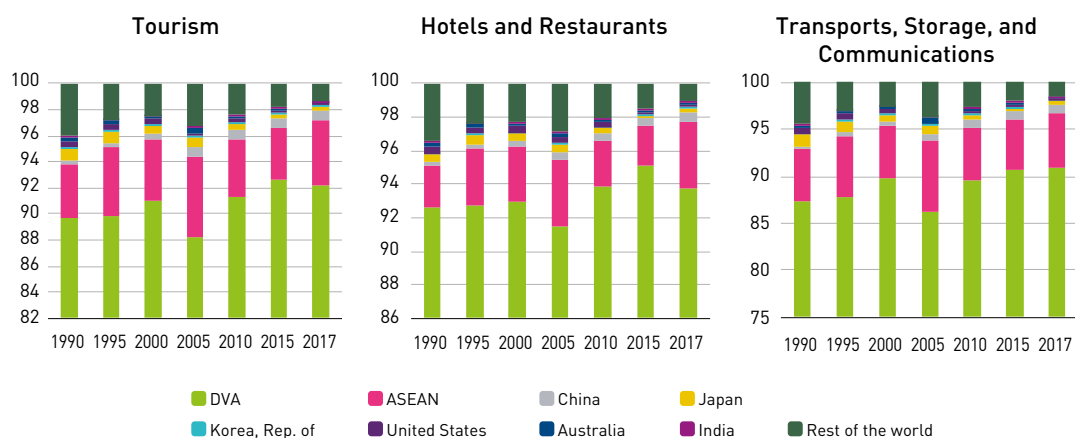
Table 7. Value added exports in tourism from Lao PDR, 1990–2017 (Millions of dollars)

Year	Tourism			Hotels and restaurants			Transport, storage and communications		
	Total	Foreign value added	Domestic value added	Total	Foreign value added	Domestic value added	Total	Foreign value added	Domestic value added
1990	7 657	792	6 866	3 316	245	3 071	4 342	546	3 795
1995	18 326	1 874	16 452	7 542	550	6 992	10 784	1 324	9 460
2000	20 278	1 822	18 456	7 643	537	7 107	12 635	1 286	11 349
2005	38 457	4 512	33 944	15 159	1 299	13 861	23 297	3 214	20 084
2010	104 949	9 075	95 874	42 101	2 578	39 523	62 848	6 497	56 351
2015	126 972	9 401	117 571	52 888	2 588	50 300	74 084	6 813	67 271
2017	141 442	11 128	130 314	59 414	3 713	55 701	82 027	7 415	74 613

Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

FVA in the industry increased from \$1.8 billion in 2000 to \$11.1 billion in 2017 (table 7). Thailand was a dominant FVA contributor to the tourism industry (figure 12). Food and beverages, amenity products and other materials used in hotels and restaurants came mainly from Thailand. For the transport, storage and communications industry, the FVA share in gross exports was greater than for the hotel and restaurant industry because of large fuel imports from Thailand, as well as vehicles and vehicle parts.

Figure 12. Value added exports in tourism from Lao PDR, by creator of value added: domestic, ASEAN and next six foreign countries, 1990–2017 (Per cent)

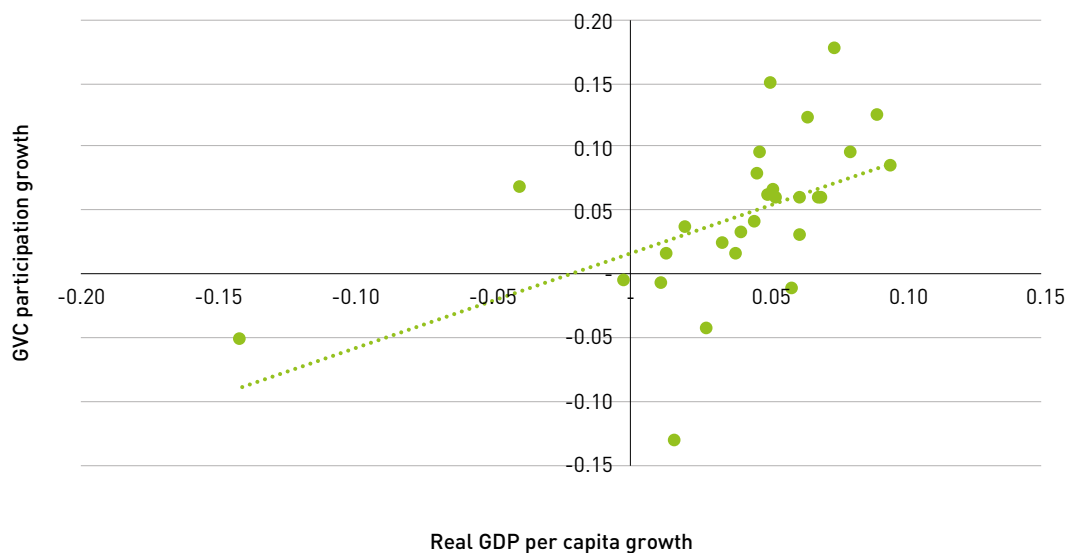


Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

E. IMPACT OF GVCs ON LAO PDR ECONOMY

GVCs are generally expected to contribute to economic growth, income generation and poverty reduction. In terms of economic growth, many developed countries have the advantage of producing high value added commodities with their research knowledge, skilled labour and capital invested in innovative industries. Innovation applied to GVCs could help countries become higher-income economies. Development in human resources and education is fundamental for research and innovation in developed countries, as well as improvement in institutions that facilitate global trade. These provide developed countries with a comparative advantage over developing countries such as Lao PDR, which have limited resources. Furthermore, accessibility to the global market is a key determinant of GVC participation that can in turn foster economic growth. In Lao PDR, a country with limited commodities production, there has been a positive relationship between GVC participation and GDP growth (figure 13). As in other ASEAN countries, GVC participation in Lao PDR relates to national wealth by contributing to national income through trade and investment.

Figure 13. Relationship between GVC participation and economic growth rates in Lao PDR, 1990–2018 (Log scale)



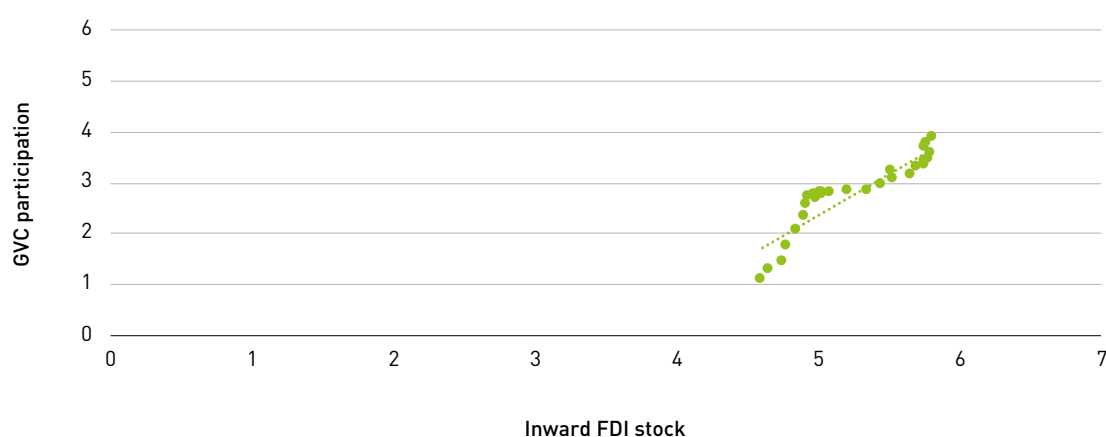
Source: AJC-UNCTAD-Eora database on ASEAN GVCs; GDP data from UNCTAD GlobStat.

Note: 28 observation points. For GVC participation, yearly differences in the log value of the sum of foreign value added (FVA) and domestic value added incorporated in other countries (DVX), both in millions of dollars, are used, while, for GDP per capita, yearly differences in its log in dollars are used.

There is a positive relationship between GVC participation and FDI in Lao PDR (figure 14). FDI inflows to the mining sector had a significant presence during 2007–2008; copper was the major export contributing to Lao economic growth during that period (Onphanhdala and Philavong, 2018; Onphanhdala and Chansomphou, 2019).

Although GVC participation in Lao PDR is beginning, it is still at an early stage in terms of improving value added industry to meet regional or global benchmarks. It is necessary to avoid FDI inflows into the natural resource industries, as the country's natural resources are already almost depleted and technology transfer in these industries is limited. A shift in foreign investment to potential industries such as agriculture, trade and logistics would seem to create a proper environment for sustainable development.

Figure 14. Relationship between GVC participation and FDI presence in Lao PDR, 1990–2018
(Log scale)



Source: AJC-UNCTAD-Eora database on ASEAN GVCs and UNCTAD FDI/TNC database (for FDI stock).

Note: 29 observation points. As data for FDI stock in 2019 are not available, data stop at 2018. For GVC participation, the log of the sum of foreign value added (FVA) and domestic value added incorporated in other countries (DVX), both in millions of dollars, is used, while, for inward FDI stock, its log in millions of dollars is used.

F. GVC POTENTIAL FOR LAO PDR AFTER COVID-19

GVCs become more complex with globalization and liberalization in trade and investment. In 2020, the COVID-19 pandemic interrupted GVCs and caused the global economic slowdown by disrupting both supply of and demand for goods. The lockdown measures in both developed and developing countries froze economic activities in sectors such as tourism, commerce, manufacturing and finance. In Southeast Asia, at the beginning of the pandemic, its economy was expected to grow but is now predicted to shrink. For Lao PDR, the latest forecast of GDP growth is –2.5 per cent, while the inflation rate is surging, at 5.5 per cent (ADB, 2020).

Restrictions on travel and transport and other mandated preventive measures have affected economic activities and GVCs. In Lao PDR, since the first case was reported in March 2020, the government has mandated preventive measures such as city lockdowns, self-quarantines, state quarantines and travel restrictions. More than 5,000 Lao enterprises have been affected by the

pandemic (Onphanhdala, 2020). The Ministry of Industry and Commerce released a study of the impact of COVID-19 on manufacturing in the Vientiane–Nonthong SEZ, which was conducted in June 2020. The study showed that goods orders were canceled due to the decrease in demand overseas (Manolom, 2020). In July 2020, a survey report on the economic impact of COVID-19 carried out by the European Chamber of Commerce and Industry in Lao PDR (2020) revealed similar impacts on businesses in Lao PDR such as decreases in sales, project delays, supply chain disruptions, inadequate human resources and raw material shortages. These affect GVC participation.

The Lao government aspires to monitor the economic impact of the pandemic and help its economy recover. On 2 April 2020, the Prime Minister issued Decision No. 31/PM on treatments and measures to alleviate the impacts of the pandemic on the economy. The decision offers 10 treatments and 9 measures to help employees and entrepreneurs fight against the impacts and sustain their interests. These include income tax exemption for employees with monthly income below K5 million (about \$545),³ taxation suspension, interest rate cuts and increased credit limits for micro, small and medium-sized enterprises. Although people's movement is restricted due to the lockdown, the government allows freight transport to operate normally to support exports and imports. An increase in credit limits for enterprises supports operations for domestic production and increases employment, as Lao value chains are mainly relevant to domestic consumption.

In addition, stronger RVCs will be promoted to re-balance economies in the region, such as Viet Nam and Thailand, and global economies such as China, through the Lao PDR–China railway project at the end of 2021 and the upcoming expressways within the country. The production and supply chains will move closer to retail markets. Skilled workers who were overseas but moved back to the country during the pandemic may be employed by multinational corporations that are relocating factories from China to Southeast Asia. After the pandemic, the potential of developing GVCs in Lao PDR would probably lie more in the services sector, as in online trade or e-commerce; however, this would require capacity in information technology (IT) that the country still lacks.

G. POLICY IMPLICATIONS

All countries that participate in a GVC have potential to create value through global production linkages. FVA (upstream GVC participation) denotes how much other countries contribute to a country's export values by supplying foreign inputs. At the other end, DVX (downstream GVC participation) denotes how this country contributes its exports as inputs to other countries' export values. The GVC participation rate (FVA + DVX as a percentage of gross exports) in Lao PDR is relatively small and by far lower than the average for ASEAN, implying that the engagement of Lao PDR in GVCs is limited. Thailand, China, Viet Nam, the EU and Japan are dominant contributors to Lao FVA. These economies are also major contributors to Lao DVX but to different degrees (in order, Thailand, the EU, China, Viet Nam and Japan). Gross exports from Lao PDR are increasing in value, with the contribution of DVA from resource-based products. However, the share of DVA in GDP is only 11 per cent – lower than the average share for ASEAN of 33 per cent. The Lao FVA share in gross exports accounts for only 6 per cent, while the average share for ASEAN is 36 per cent.

Among the five selected industries (agribusiness, automobiles, electronics, textiles, and tourism), the largest contributor to Lao FVA in terms of value is the textiles and clothing industry, owing to an assembly process that requires foreign inputs because of the lack of production of upstream inputs

³ LAK 9,168 = US\$1 (exchange rate on 22 September 2020).

within the country. The dominant FVA partner in this industry is Thailand. In terms of the proportion of FVA in gross exports, the automobile and electronics industries are the two major players. Despite their contributions, automobile and electronics manufacturing consists of basic assembly production and factories are still limited in number. The agribusiness industry engages primary production in domestic value chains and partly supplies to the Chinese market especially for agricultural production in the northern provinces bordering with China. The tourism industry has by far the most limited GVC participation due to the weak development of the services sector in Lao PDR.

Evidence shows a positive relationship between GVC participation and GDP growth, proving that engagement in GVCs enhances economic growth and income generation. Economic development is associated with economic and industrial upgrading within GVCs, especially in terms of an increase in value of both upstream (FVA) and downstream (DVX) global value added linkages. This requires firms to move up through the chain of production in a particular commodity into higher value added activities. Lao PDR can expand its GVC participation to make employment gains and upgrade its industry by improving four determinants: geographical advantage, institutional reforms, the accessibility of large markets and labour and capital endowment.

First, **geographical advantage**: surrounded by China and the four emerging economies in the Greater Mekong Subregion, namely Cambodia, Myanmar, Thailand and Viet Nam, the country can expand value chain participation regionally and globally. The development of logistics hubs can provide an opportunity for connectivity and increase the degree of GVC participation in Lao PDR. Strong cross-border value chain linkages could upgrade the technology and skills of local industries. An integral logistics hub would facilitate freight transport through Viet Nam, Lao PDR, Thailand and Myanmar (the East–West Economic Corridor); for example, when shipping from Japan to India, land transport could take a week or two instead of the month required for sea transport. Similarly, freight transport from Malaysia and Thailand could be connected through the North–South Economic Corridor up to China via the Kunming–Vientiane railway project, which could reduce transport time significantly. The upcoming Vientiane–Hanoi expressway and Vientiane–Kunming high-speed railway projects, to operate by 2021 under the Laos–China Economic Corridor, should also be fully used. Although using these routes would decrease logistics costs, it is also essential to streamline cross-border procedures and to improve both coordination among government agencies and conformity of cross-border regulations.

In addition, different industries demand different intensities of logistics requirements. For example, to preserve quality, perishables and reliable supplies of agriculture and food products require security, safety, radio frequency identification tagging and cool-port technology. For the automobile industry, production is fragmented between plants in different countries. Commodities in this industry require a good network to move parts around with standardized bills of lading. For the electronics industry, faster and stable modes of transport and clearance are required. The textile and clothing industry requires good IT systems to connect between manufacturers and customers. It also requires intermediate storage facilities and security for high-value items. This will enhance connectivity and cooperation and improve the drivers of GVC participation in Lao PDR. An important issue to consider is that a high fixed cost to establish large distribution warehouses and ports for transshipped stock requires large public funding, which is a big challenge in Lao PDR.

Second, **institutional improvement** includes firm relationships and legislation. Lao PDR is associated with primary and limited manufacturing that produces raw materials for advanced economies. In other words, high value added products do not appear strongly in GVCs that the country is engaged in. A firm that has strong relationships with firms in its related industries and processing technologies can expand its opportunities in trade and produce at a large scale. Lao firms can learn specific tasks and absorb new technology to improve their productivity. The government needs to speed up its trade and investment reforms and improve legislation to secure the benefits of GVCs, and not leave domestic firms and jobs at a disadvantage. Normally, a developing country like Lao PDR, with limited

manufacturing capacity, would require foreign investment and would offer competitive labour costs, an easy business environment, and other business facilitation through fiscal incentives and the like. Policies relevant to business services, investment, trade facilitation, logistics and conformity to international standards can promote the development of entrepreneurs. More importantly, policies that lead to openness and trade facilitation in potential sectors need to be assessed for whether they could provide greater benefits to Lao employment and the economy as a whole.

Third, Lao PDR will benefit from the **accessibility of large markets**. For example, China is emerging as a major market for Lao commodities and can help to expand GVC linkages, specifically in agricultural products. Lao value added exports incorporated in China's exports increased between 2005 and 2019, from \$11 million to \$51 million. This downstream GVC participation from Lao PDR in China is three times greater than FVA – upstream GVC participation – in Lao PDR from China. Similarly, Lao value added exports incorporated in Japan's exports also increased in this period, from \$3 million in 2005 to \$12 million in 2019. This implies that China and Japan are important markets for Lao products, enhancing production and economic linkages. The government is an important player in maximizing this opportunity by strengthening linkages with GVCs.

Finally, **labour and capital** are crucial components supporting GVC participation in Lao PDR. At present, the country attracts foreign investment by promoting the cost savings labour-intensive production deriving from cheap labour costs. By 2030, the population will reach 8 million, with a total dependency ratio of 0.51 and an urban share of 50 per cent. These forecasts show a change in population structure, from a young age to a working age population. Many foreign multinational firms aim to move their plants to Lao PDR, where infrastructure is improving, and the labour force is expanding. During the next few decades, Lao PDR should take advantage of these conditions to learn new knowledge and know-how to improve its production and strengthen its work force. This will contribute to job creation, income generation and economic growth.

The further suggestion is that before Lao PDR reaches a mature level of development, productive labour should be promoted. Skilled labour or highly productive labour will earn higher salaries, which increases their ability to purchase goods and services; in other words, higher salaries will increase demand by local people not only in urban areas but also in rural areas. However, this is a tricky matter for capital-intensive manufacturing because investors are attracted to invest in Lao PDR because of the low cost of its labour compared with that of neighboring countries. Lao PDR could also be trapped in capital-intensive investment, which will generate higher production costs and lower benefits. One possible solution is an adaptation of innovative technology that still requires massive labour engagement, probably in the agricultural sector, although integration in agriculture GVCs will drop slightly because of increased participation in GVCs in the natural resource sector. This will require the government to get involved and to reform the labour market through education. Lao labour productivity and skills can be improved by promoting vocational training in a potential industry that will raise the bar for productivity and minimum wage.

As mentioned earlier, Lao PDR is a limited manufacturing economy in terms of FVA or an upstream global value added linkage of Lao PDR, which is measured by the portion of imports embodied in manufacturing exports as a share in gross exports. Lao PDR is a natural resource-rich country and has depended on natural resource exploitation to foster its economic growth. There are both positive and negative sides of GVC participation in Lao PDR. On the one hand, production networks integrated through trade will boost economic growth, expand investment, create jobs and increase income. On the other hand, too much dependence on natural resources production may cause excessive pollution and waste. Moreover, the income gap would probably accelerate income inequality. The involvement of the Lao government is essential to improving coordination among its relevant agencies as well as private sector engagement to justify benefits to all, specifically poor people and small entrepreneurs.

REFERENCES

- ADB (2020). Economic Indicators for the Lao PDR. Manila. <https://www.adb.org/countries/lao-pdr/economy>.
- ASEANStats (2020). ASEAN International Merchandise Trade Statistics (IMTS). <https://data.aseanstats.org/trade>. Jakarta: ASEAN Secretariat.
- Asian Development Bank (2016). Key Indicators for Lao PDR. Manila: ADB.
- Bourdet, Y. (2000). *The Economics of Transition in Laos: From Socialism to ASEAN Integration*. Cheltenham: Edward Elgar.
- CBI (2016). Export Value Chain Analysis: Home Decoration and Personal Accessories, Laos.
- De Backer, K., and Miroudot, S. (2013). "Mapping Global Value Chains", OECD Trade Policy Papers, No. 159, OECD Publishing, Paris. <http://dx.doi.org/10.1787/5k3v1trgnbr4-en>.
- ECCIL (European Chamber of Commerce and Industry in Laos) (2020). The Economic Impact of the COVID-19 Outbreak: Survey Report. July.
- ERITT (Economic Research Institute for Industry and Trade) (2018). Lancang-Mekong Cooperation and the Development of Regional Textile & Apparel Value Chains: A Case Study of Lao PDR. Ministry of Industry and Commerce, Lao PDR.
- Faße, A., Grote, U., and Winter, E. (2009). Value Chain Analysis Methodologies in the Context of Environment and Trade Research. Hannover Economic Papers No. 429, Leibniz University.
- IPD (2020). Approved Foreign and Domestic Investment Projects by Sector. http://investlaos.gov.la/images/Statistics/rpt_Invest_Summary_Sector1A_2011-2015.pdf.
- Keola, S. (2019). Chapter 3: Geographical Simulation Analysis of the Lao-Chinese High-Speed Railway. Daisuke Hiratsuka, "EEC Development and Transport Facilitation Measures in Thailand, and the Development Strategies by the Neighboring Countries," BRC Research Report, Bangkok Research Center, JETRO Bangkok/IDE-JETRO, 2019. https://www.ide.go.jp/library/English/Publish/Download/Brc/pdf/24_03.pdf.
- LSB (2018), Lao Statistics Bureau: 2017 Statistical Yearbook. <https://www.lsb.gov.la/wp-content/uploads/2018/10/Yearbook-2017.pdf>.
- Manolom, T. (2020). A Study on the Impact of COVID-19 on Manufacturing in the VITA SEZ. ERIIT, MOIC. [Lao language].
- MICT (2019). Statistical Report on Tourism in Laos 2019. Ministry of Information, Culture and Tourism, Lao PDR.
- Nolintha, V., and Jajri, I. (2015). *The Garment Industry in Laos: Technological Capabilities, Global Production Chains and Competitiveness*. ERIA Discussion Paper Series. Jakarta: ERIA.
- Onphanhdala, P., and Philavong, V. (2018). Chapter 10: Services Liberalization in Lao PDR – FDI in Logistics Sector of a Land-linked Country. Services Liberalization in ASEAN: Foreign Direct Investment in Logistics, ISEAS Yusof Ishak Institute.
- Onphanhdala, P., and Chansomphou, V. (2019). Chapter 3: Hydropower Development in Lao PDR – Macroeconomic and Environmental Implications. Resource Governance, Agriculture and Sustainable Livelihoods in the Lower Mekong Basin, Lower Mekong Public Policy Initiative.
- Onphanhdala, P. (2020). COVID-19 Pandemic and its Economic Impacts upon Enterprises Operated in the Lao PDR. Lao Economic Integration, Target Magazine, June.

- Oraboune, S. (2006). Garment Industry in Lao PDR. *Occasional Paper: Southeast Asia Europe Dialogue Cooperation*. ISSN: 0219-4376.
- Porter, M. (1985). *Competitive Advantage*, London: Macmillan.
- Rastogi, V. (2020). Minimum Wages in ASEAN: How Are They Calculated? ASEAN Briefing, January 14. <https://www.aseanbriefing.com/news/minimum-wages-in-asean-how-are-they-calculated/>.
- Reichl, C., Schatz, M., and Zsak, G. (2013). *World-Mining-Data*. Vol. 28, Minerals Production, International Organizing Committee for the World Mining Congresses, Vienna. <https://www.world-mining-data.info/wmd/downloads/PDF/WMD2013.pdf>.
- Reichl, C., and Schatz, M. (2020). *World Mining Data 2020: Iron and Ferro-Alloy Metals, Non-Ferrous Metals, Precious Metals, Industrial Minerals, & Mineral Fuels*. Vol. 35, International Organizing Committee for the World Mining Congresses, Vienna. <https://www.world-mining-data.info/wmd/downloads/PDF/WMD2020.pdf>.
- Thephavong, B., Khounachay, L., and Vilavong, B. (2005). Laos: The Textile and Garment Industry in the Post-ATC Era. *Managing the Challenges of WTO Participation: Case Study 22*. https://www.wto.org/english/res_e/booksp_e/casestudies_e/case22_e.htm
- Trade Map (2016). *Lao People's Democratic Republic's Exports to World*. Geneva: International Trade Centre.
- UNCTAD (2013). *World Investment Report 2013: Global Value Chains: Investment and Trade for Development*. Geneva and New York: United Nations.
- World Mining Data (2020). Data Section - 6.5. Share of World Mineral Production 2018, by Countries. https://www.world-mining-data.info/?World_Mining_Data__Data_Section.
- World Bank (2012). "Lao PDR Labour Standards and Productivity in the Garments Export Sector: A Survey of Managers and Workers". Report No. 70809-LA. <http://documents1.worldbank.org/curated/en/695111468045568160/pdf/708090REVISED00Garment0Report0FINAL.pdf>.
- World Bank (2020a). Employment in Agriculture (per cent of total employment) (modeled ILO estimate) – Lao PDR. <https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?locations=LA>.
- World Bank (2020b). Employment in industry (per cent of total employment) (modeled ILO estimate) – Lao PDR. <https://data.worldbank.org/indicator/SL.IND.EMPL.ZS?locations=LA>.
- World Bank (2020c). *From Landlocked to Land-Linked: Unlocking the Potential of Lao-China Rail Connectivity*. <http://documents1.worldbank.org/curated/en/648271591174002567/pdf/Main-Report.pdf>.
- World Bank (2020d). *World Development Report 2020: Trading for Development in the Age of Global Value Chains*. Washington, D.C.

ANNEX TABLES

Annex table 1. Value added exports of goods and services from Lao PDR, by value added creator, 1990–2019 (Thousands of dollars)

Value added creator	Exports from Lao PDR						
	1990	1995	2000	2005	2010	2015	2019
World	11 615	23 489	25 489	54 954	104 306	115 867	124 598
Developed countries	4 439	7 963	7 902	16 336	28 875	28 204	18 219
Europe	2 263	3 876	3 943	8 692	15 472	15 390	8 821
European Union	2 078	3 520	3 623	7 933	13 805	13 648	7 793
Czechia	40	60	67	179	381	403	387
France	192	440	438	969	1 570	1 446	668
Germany	305	639	635	1 443	2 594	2 044	2 359
Italy	132	230	225	534	920	897	484
United Kingdom	374	583	683	1 329	2 192	2 345	1 099
Other developed Europe	185	356	320	759	1 667	1 741	1 027
Switzerland	64	181	120	388	927	1 066	628
North America	753	1 466	1 461	2 675	4 583	4 532	2 429
Canada	57	101	132	287	490	502	339
United States	696	1 366	1 329	2 387	4 093	4 030	2 090
Other developed countries	1 424	2 621	2 498	4 970	8 820	8 282	6 969
Australia	382	520	500	1 158	2 345	2 528	907
Japan	828	1 831	1 691	3 226	5 296	4 489	5 541
New Zealand	121	162	168	367	734	796	379
Developing countries	6 583	15 004	17 002	37 177	71 658	83 974	104 291
Africa	697	849	937	1 992	4 731	4 685	7 550
Chad	12	13	16	87	167	157	472
Kenya	28	35	36	71	148	142	373
Latin America and the Caribbean	911	1 162	1 421	2 355	4 890	4 513	2 238
Panama	11	15	16	30	67	67	605
Asia	4 913	12 903	14 548	32 663	61 616	74 444	94 276
West Asia	343	420	509	1 251	2 234	2 509	1 661
South, East and South-East Asia	4 570	12 483	14 039	31 412	59 382	71 935	92 614
East Asia	978	1 777	2 181	5 070	11 342	14 669	17 153
China	270	801	1 070	3 217	7 926	10 991	13 317
Korea, Republic of	121	241	322	735	1 542	1 792	2 130
Taiwan Province of China	478	523	546	695	1 160	998	1 166
South Asia	307	463	554	1 404	3 304	3 742	4 348
Bangladesh	15	17	24	42	91	103	591
India	112	212	284	777	2 026	2 246	2 982
Iran	106	145	139	407	784	1 001	383
ASEAN	3 285	10 243	11 303	24 938	44 736	53 524	71 113
Brunei Darussalam	15	24	28	72	123	136	126
Cambodia	13	25	36	83	187	190	2 598
Indonesia	125	488	349	737	1 513	1 760	2 049
Malaysia	193	192	294	615	1 185	1 283	1 295
Myanmar	19	34	93	120	276	342	982
Philippines	55	117	87	197	473	527	603
Singapore	153	357	410	880	2 117	2 164	647
Thailand	2 520	8 574	9 332	21 026	37 401	45 263	51 743
Viet Nam	191	432	676	1 208	1 461	1 859	11 071
Oceania	63	90	96	167	421	332	227
Transition economies	592	522	585	1 440	3 773	3 689	2 088
Russian Federation	88	113	119	379	1 034	1 059	509
Ukraine	67	84	81	225	419	377	420
Domestic value added (DVA)	91 627	204 877	223 140	416 166	1 181 576	1 510 161	1 927 157
Gross exports	103 242	228 365	248 629	471 120	1 285 882	1 626 028	2 051 755

Source: AJC-UNCTAD-Eora database on ASEAN GVCs. Data for 2016–2018 are projected by UNCTAD and Eora.

Note: All values are estimated. Regions and countries refer to where the value added is attributed. For GVC terminology, see box 1.

Annex table 2.1. Value added exports of goods and services from Lao PDR, by value added creator, sector and industry, 1990

Value added creator	Exports from Lao PDR						
	Primary		Manufacturing				
	Total	Agriculture, hunting, forestry and fishing	Total	Food, beverages and tobacco	Textiles, clothing and leather	Wood and wood products	Petroleum, chemical and non-metallic mineral products
World	896	750	6 436	103	1 817	3 121	170
Developed countries	374	317	2 370	37	633	1 131	50
Europe	197	167	1 208	19	328	577	27
European Union	180	152	1 114	17	301	533	25
France	13	11	113	2	29	55	3
Germany	22	18	182	2	44	88	5
Italy	11	9	74	1	22	34	2
United Kingdom	35	30	192	3	53	92	4
Other developed Europe	17	15	94	2	26	44	2
Switzerland	5	4	35	1	9	17	1
North America	63	54	400	6	109	198	7
Canada	5	4	31	0	9	16	1
United States	58	49	370	6	100	182	7
Other developed countries	114	96	762	12	197	355	15
Australia	35	30	193	3	55	89	3
Japan	57	47	468	6	112	220	10
New Zealand	12	11	57	1	17	26	1
Developing countries	462	382	3 784	61	1 100	1 861	115
Africa	72	62	328	6	98	151	5
Latin America and the Caribbean	93	80	429	7	129	198	6
Asia	290	234	2 997	48	864	1 498	103
West Asia	33	28	167	3	50	78	3
South, East and South-East Asia	257	206	2 830	45	814	1 420	100
East Asia	64	54	580	8	192	264	11
China	18	16	157	3	43	78	4
Korea, Republic of	8	7	73	1	29	28	1
Taiwan Province of China	30	25	283	3	97	127	5
South Asia	29	25	154	2	47	69	3
India	9	8	62	1	18	26	1
Iran	11	9	50	1	15	23	1
ASEAN	164	128	2 096	35	575	1 087	86
Brunei Darussalam	1	1	7	0	2	4	0
Cambodia	1	1	6	0	2	3	0
Indonesia	8	7	80	1	15	51	1
Malaysia	19	16	97	2	27	45	2
Myanmar	2	1	10	0	2	6	0
Philippines	5	5	27	0	8	12	0
Singapore	11	9	83	2	19	44	2
Thailand	106	78	1 689	27	476	867	79
Viet Nam	10	9	97	3	23	55	2
Oceania	7	6	30	1	9	14	0
Transition economies	60	51	282	5	84	130	5
Russian Federation	8	7	47	1	13	22	1
Domestic value added (DVA)	26 419	25 689	40 607	957	7 608	27 549	821
Gross exports	27 315	26 439	47 043	1 059	9 425	30 670	991

Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

Note: All values are estimated. Regions and countries refer to where the value added is attributed. For GVC terminology, see box 1.

(Thousands of dollars)

Exports from Lao PDR

Services

Electrical and general machinery	Motor vehicles and other transport equipment	Services						
		Total	Trade	Hotels and restaurants	Transport, storage and communications	Public administration and defence	Education, health and other Services	Community, social and personal service activities
190	227	3 123	379	245	546	151	186	1 114
86	103	1 176	108	89	184	54	66	477
42	49	585	50	45	84	25	33	247
39	46	537	46	42	77	23	31	225
5	7	52	6	5	11	3	4	15
10	11	76	7	6	13	5	6	26
3	3	33	3	3	5	1	2	13
6	7	98	8	7	13	4	5	44
3	3	49	4	4	7	2	3	22
1	2	17	1	1	3	1	1	6
12	15	198	19	15	30	8	10	83
1	1	14	1	1	2	1	1	6
11	14	184	17	14	28	8	10	77
32	40	392	39	29	71	21	22	148
6	7	101	8	8	13	4	5	46
25	30	234	26	16	52	15	15	73
1	1	32	2	3	3	1	1	16
100	116	1 790	259	145	345	93	114	558
5	8	185	14	13	19	5	7	95
6	10	242	18	17	25	6	9	125
88	98	1 346	226	113	300	81	97	330
3	4	94	7	7	14	4	4	43
85	94	1 252	219	107	286	78	93	287
17	20	239	26	18	39	12	15	89
6	6	73	9	6	14	4	6	22
2	3	29	3	2	5	2	2	10
8	9	112	11	8	16	5	6	47
4	5	81	7	6	10	3	4	38
3	3	29	3	2	4	1	2	11
1	1	28	2	2	3	1	1	14
63	69	933	187	83	236	63	74	161
0	0	4	0	0	1	0	0	2
0	0	4	0	0	0	0	0	2
1	2	26	2	2	4	1	1	10
3	3	51	4	4	6	2	2	24
0	0	5	0	0	1	0	0	2
1	1	15	1	1	2	0	1	7
3	4	46	6	4	10	3	3	13
52	56	707	147	65	196	53	62	86
2	2	75	25	5	17	4	4	14
0	1	16	1	2	2	0	1	8
5	7	158	12	11	17	4	7	79
2	2	23	2	2	3	1	1	9
911	753	24 599	5 785	3 071	3 795	1 503	2 889	3 383
1 101	979	27 722	6 163	3 316	4 342	1 654	3 075	4 497

Annex table 2.2. Value added exports of goods and services from Lao PDR, by value added creator, sector and industry, 1995

Value added creator	Exports from Lao PDR						
	Primary		Manufacturing				
	Total	Agriculture, hunting, forestry and fishing	Total	Food, beverages and tobacco	Textiles, clothing and leather	Wood and wood products	Petroleum, chemical and non-metallic mineral products
World	2 402	2 281	14 614	166	3 820	8 876	301
Developed countries	886	840	4 803	52	1 192	2 883	85
Europe	444	420	2 354	25	600	1 405	45
European Union	402	381	2 141	23	546	1 282	41
France	45	43	279	3	68	170	6
Germany	66	63	420	4	95	257	9
Italy	25	24	146	2	41	83	3
United Kingdom	69	65	345	4	91	206	6
Other developed Europe	42	39	213	2	54	123	4
Switzerland	19	18	117	1	26	68	2
North America	163	155	884	9	218	547	13
Canada	11	10	64	1	15	41	1
United States	152	145	820	9	203	506	12
Other developed countries	279	265	1 565	18	373	932	27
Australia	62	59	302	4	79	173	4
Japan	181	171	1 122	12	253	678	21
New Zealand	22	21	85	1	25	49	1
Developing countries	1 444	1 373	9 539	111	2 546	5 840	212
Africa	117	110	439	5	133	245	5
Latin America and the Caribbean	160	152	598	7	184	334	7
Asia	1 154	1 098	8 456	97	2 214	5 236	199
West Asia	52	49	231	3	66	135	4
South, East and South-East Asia	1 102	1 049	8 225	95	2 148	5 101	195
East Asia	167	159	1 175	12	371	655	19
China	78	74	521	7	146	305	10
Korea, Republic of	21	20	165	1	58	84	3
Taiwan Province of China	50	47	341	3	116	184	5
South Asia	57	54	262	3	81	143	4
India	23	22	133	1	40	71	3
Iran	20	18	74	1	22	42	1
ASEAN	878	836	6 788	80	1 696	4 303	171
Brunei Darussalam	3	3	13	0	4	7	0
Cambodia	4	4	12	1	3	8	0
Indonesia	39	37	355	3	55	252	4
Malaysia	22	21	118	2	28	70	2
Myanmar	4	3	20	0	4	14	0
Philippines	15	15	62	1	18	35	1
Singapore	37	35	217	3	46	142	4
Thailand	712	677	5 758	66	1 482	3 623	155
Viet Nam	42	41	233	4	56	152	5
Oceania	13	12	46	1	15	25	0
Transition economies	72	68	272	3	82	152	4
Russian Federation	14	13	68	1	18	39	2
Domestic value added (DVA)	57 631	56 791	97 952	1 248	19 167	70 806	1 589
Gross exports	60 032	59 072	112 565	1 414	22 987	79 681	1 890

Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

Note: All values are estimated. Regions and countries refer to where the value added is attributed. For GVC terminology, see box 1.

(Thousands of dollars)

Exports from Lao PDR

Services

Electrical and general machinery	Motor vehicles and other transport equipment	Services						
		Total	Trade	Hotels and restaurants	Transport, storage and communications	Public administration and defence	Education, health and other Services	Community, social and personal service activities
391	249	5 221	1 131	550	1 324	197	475	1 059
165	106	1 678	259	179	396	63	156	445
77	48	773	101	87	172	28	76	221
69	43	702	92	79	157	26	69	199
10	7	99	16	13	28	4	11	17
20	11	124	17	14	31	6	15	26
5	3	44	6	5	10	2	5	12
10	6	117	15	13	25	4	11	36
8	5	72	9	8	16	3	7	21
6	3	36	5	4	10	2	4	8
25	16	298	43	32	67	11	26	87
1	1	19	2	2	4	1	2	5
23	15	279	41	30	63	10	24	82
64	42	607	115	60	156	25	54	138
11	7	107	14	13	22	4	9	34
52	33	444	96	40	125	20	41	81
1	1	34	4	5	5	1	2	14
221	140	3 437	860	360	912	132	312	570
6	5	171	18	18	26	3	10	75
8	6	235	25	24	35	5	14	104
207	128	3 013	815	315	849	123	286	384
4	3	94	11	9	26	4	7	29
203	126	2 918	805	306	823	120	280	355
35	22	351	67	39	86	14	36	73
17	10	174	39	21	43	7	19	29
6	4	47	8	5	14	2	5	8
8	5	94	15	10	20	3	8	27
7	4	95	12	10	20	3	8	32
6	3	42	6	4	10	2	5	10
1	1	31	3	3	6	1	2	12
160	99	2 473	725	257	717	102	236	250
0	0	6	1	1	2	0	0	2
0	0	7	1	1	2	0	0	2
10	6	74	11	10	17	3	7	17
5	3	40	6	5	10	2	4	9
0	0	7	1	1	2	0	0	2
1	1	24	3	3	4	1	2	10
7	5	92	17	12	26	4	10	14
132	82	2 077	625	213	618	88	202	179
4	2	146	61	12	36	5	9	16
0	0	18	2	3	2	0	1	8
5	3	106	12	11	17	2	7	44
2	1	23	3	2	5	1	2	6
1 708	782	49 291	13 373	6 992	9 460	1 782	7 258	5 607
2 099	1 032	54 512	14 504	7 542	10 784	1 979	7 733	6 666

Annex table 2.3. Value added exports of goods and services from Lao PDR, by value added creator, sector and industry, 2000

Value added creator	Exports from Lao PDR						
	Primary		Manufacturing				
	Total	Agriculture, hunting, forestry and fishing	Total	Food, beverages and tobacco	Textiles, clothing and leather	Wood and wood products	Petroleum, chemical and non-metallic mineral products
World	4 290	4 031	14 819	265	3 605	8 457	351
Developed countries	1 391	1 303	4 520	77	1 043	2 505	84
Europe	713	667	2 240	38	538	1 241	44
European Union	651	610	2 067	35	494	1 149	41
France	73	69	255	5	57	144	5
Germany	106	100	392	6	81	220	9
Italy	39	37	134	2	35	70	3
United Kingdom	125	117	381	6	94	211	7
Other developed Europe	61	57	173	3	44	92	3
Switzerland	21	20	70	1	16	38	2
North America	250	235	848	14	191	488	15
Canada	22	20	81	1	17	49	1
United States	229	214	768	13	174	440	13
Other developed countries	429	402	1 432	25	314	776	26
Australia	94	88	273	6	68	144	4
Japan	273	256	1 004	16	203	549	19
New Zealand	34	31	85	2	23	47	1
Developing countries	2 778	2 616	10 009	183	2 478	5 802	262
Africa	193	180	461	8	136	237	6
Latin America and the Caribbean	294	274	695	13	207	359	9
Asia	2 270	2 143	8 806	160	2 120	5 183	246
West Asia	98	92	264	5	73	143	6
South, East and South-East Asia	2 172	2 051	8 542	156	2 047	5 040	240
East Asia	326	307	1 402	20	422	716	27
China	164	155	683	11	202	347	15
Korea, Republic of	50	48	200	3	61	97	4
Taiwan Province of China	78	74	359	5	103	190	6
South Asia	104	97	302	5	90	150	6
India	50	47	168	3	47	82	4
Iran	28	26	68	1	20	36	1
ASEAN	1 742	1 646	6 837	130	1 536	4 174	208
Brunei Darussalam	6	5	14	0	4	8	0
Cambodia	8	8	17	1	4	9	0
Indonesia	44	42	242	3	42	170	2
Malaysia	53	50	169	3	37	95	3
Myanmar	15	14	54	1	11	34	2
Philippines	17	16	45	1	12	23	1
Singapore	70	66	227	6	45	136	4
Thailand	1 414	1 335	5 749	104	1 304	3 505	188
Viet Nam	116	111	321	11	76	193	7
Oceania	21	20	47	1	14	24	1
Transition economies	121	112	291	5	84	150	5
Russian Federation	23	22	67	1	16	35	2
Domestic value added (DVA)	53 548	51 512	107 977	2 131	22 078	73 179	2 142
Gross exports	57 838	55 543	122 796	2 396	25 683	81 636	2 493

Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

Note: All values are estimated. Regions and countries refer to where the value added is attributed. For GVC terminology, see box 1.

(Thousands of dollars)

Exports from Lao PDR

		Services						
Electrical and general machinery	Motor vehicles and other transport equipment	Total	Trade	Hotels and restaurants	Transport, storage and communications	Public administration and defence	Education, health and other Services	Community, social and personal service activities
524	645	5 316	1 494	537	1 286	154	440	888
202	257	1 516	317	162	339	44	133	347
90	112	731	139	81	158	20	65	182
84	104	672	129	75	146	19	60	165
12	16	96	22	12	26	3	10	14
24	28	115	23	13	28	4	13	20
6	7	40	8	5	9	1	4	9
14	17	127	24	14	26	3	11	34
7	8	60	11	6	12	1	5	17
4	4	23	4	2	6	1	2	5
34	44	275	57	29	62	8	24	63
3	4	23	4	3	5	1	2	5
31	41	252	53	27	57	7	22	58
78	101	509	121	52	119	16	44	101
12	15	95	18	11	19	3	8	26
63	82	356	93	34	90	12	33	55
1	2	31	5	4	5	1	2	11
316	379	3 692	1 159	363	930	108	300	501
8	12	172	27	18	26	3	10	67
11	17	260	41	27	39	4	15	103
296	349	3 243	1 088	315	862	101	274	326
6	8	106	18	10	30	3	7	27
291	342	3 137	1 071	305	832	98	267	298
63	77	396	104	41	96	13	41	58
33	41	201	57	21	49	7	22	25
9	13	63	16	6	17	2	6	9
16	18	91	22	10	20	3	9	16
12	13	104	19	11	22	3	8	29
10	10	53	11	5	13	2	6	10
1	2	27	4	3	5	1	2	9
216	251	2 638	947	253	714	82	218	211
0	0	6	1	1	2	0	0	2
0	0	9	2	2	2	0	1	1
5	6	49	10	7	10	1	4	10
9	10	58	12	7	15	2	5	11
1	1	21	4	2	9	1	2	3
2	2	17	3	2	3	0	1	5
10	13	102	27	12	28	3	10	13
180	209	2 148	771	205	599	69	183	147
8	9	228	117	17	47	5	12	19
1	1	18	3	3	3	0	1	7
6	9	108	18	11	17	2	7	40
3	3	22	5	2	5	1	2	5
2 581	2 236	61 613	19 623	7 107	11 349	1 722	8 881	5 857
3 105	2 881	66 929	21 117	7 643	12 635	1 876	9 321	6 745

Annex table 2.4. Value added exports of goods and services from Lao PDR, by value added creator, sector and industry, 2005

Value added creator	Exports from Lao PDR						
	Primary		Manufacturing				
	Total	Agriculture, hunting, forestry and fishing	Total	Food, beverages and tobacco	Textiles, clothing and leather	Wood and wood products	Petroleum, chemical and non-metallic mineral products
World	7 585	6 970	32 303	552	7 942	19 186	838
Developed countries	2 412	2 206	9 366	158	2 258	5 426	192
Europe	1 319	1 204	5 020	83	1 244	2 905	108
European Union	1 194	1 091	4 607	76	1 134	2 674	100
France	135	125	571	11	133	336	13
Germany	201	185	893	13	194	522	21
Italy	78	71	322	5	86	178	7
United Kingdom	204	186	758	12	193	438	15
Other developed Europe	124	113	413	7	111	230	8
Switzerland	62	56	214	4	56	120	4
North America	390	357	1 542	25	367	920	29
Canada	39	36	178	3	38	111	3
United States	351	321	1 364	23	328	809	26
Other developed countries	703	645	2 805	49	647	1 601	55
Australia	181	165	644	13	162	360	11
Japan	421	388	1 859	29	399	1 071	39
New Zealand	63	58	189	5	54	107	3
Developing countries	4 923	4 538	22 192	380	5 468	13 353	633
Africa	348	315	1 013	18	302	554	15
Latin America and the Caribbean	414	374	1 191	22	359	651	17
Asia	4 131	3 821	19 904	337	4 780	12 103	600
West Asia	198	180	672	11	183	387	18
South, East and South-East Asia	3 933	3 641	19 232	326	4 597	11 716	582
East Asia	656	607	3 187	48	925	1 718	70
China	414	384	2 043	32	577	1 108	49
Korea, Republic of	95	88	455	6	133	238	10
Taiwan Province of China	98	90	412	6	122	223	8
South Asia	221	202	783	13	230	413	16
India	113	104	468	7	131	243	12
Iran	71	64	202	4	60	111	3
ASEAN	3 055	2 832	15 262	266	3 441	9 586	495
Brunei Darussalam	11	10	38	1	10	22	1
Cambodia	16	15	40	3	10	23	1
Indonesia	79	73	515	7	87	370	6
Malaysia	87	80	370	7	78	221	9
Myanmar	16	15	71	1	15	46	2
Philippines	32	29	105	2	28	58	2
Singapore	122	114	494	12	102	309	10
Thailand	2 533	2 345	13 057	217	2 974	8 182	451
Viet Nam	160	151	571	17	137	355	13
Oceania	31	28	83	3	26	45	1
Transition economies	250	227	746	13	217	407	13
Russian Federation	61	56	219	4	55	122	6
Domestic value added (DVA)	119 623	115 625	185 266	3 264	36 964	130 254	3 575
Gross exports	127 208	122 596	217 569	3 815	44 906	149 440	4 413

Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

Note: All values are estimated. Regions and countries refer to where the value added is attributed. For GVC terminology, see box 1.

(Thousands of dollars)

Exports from Lao PDR

		Services						
Electrical and general machinery	Motor vehicles and other transport equipment	Total	Trade	Hotels and restaurants	Transport, storage and communications	Public administration and defence	Education, health and other Services	Community, social and personal service activities
1 334	786	13 095	3 819	1 299	3 214	415	1 341	2 163
465	287	3 664	850	385	817	113	381	845
232	140	1 839	357	205	404	56	202	470
216	130	1 676	328	188	371	52	186	419
30	20	236	55	28	64	9	29	35
61	34	301	61	33	74	12	40	55
16	10	108	21	13	24	4	13	25
33	19	282	55	30	60	8	30	76
17	10	162	29	17	32	4	15	51
10	6	84	16	9	18	2	8	24
66	42	592	133	62	135	18	60	140
8	5	57	11	7	13	2	6	13
59	38	535	122	55	121	16	54	128
167	105	1 234	360	118	279	39	119	235
32	19	254	49	30	53	7	25	69
128	81	853	289	71	204	29	84	121
4	3	79	13	11	13	2	6	28
848	485	9 125	2 916	881	2 345	296	934	1 206
22	16	420	69	45	67	8	31	165
23	17	496	81	53	78	9	36	198
801	451	8 174	2 759	777	2 195	279	865	829
18	11	299	52	28	91	11	26	72
783	439	7 875	2 708	749	2 104	268	838	757
173	102	1 098	294	112	272	40	136	166
119	69	705	199	73	176	26	92	89
27	17	164	40	16	44	6	19	26
18	10	149	37	15	32	4	16	34
37	20	302	59	31	64	9	31	84
31	15	167	36	17	41	6	21	32
4	3	90	15	9	16	2	7	34
572	318	6 475	2 355	606	1 767	219	672	507
1	1	18	3	2	6	1	2	4
1	0	24	6	5	6	1	2	4
14	8	121	26	17	27	4	13	24
24	13	139	29	16	38	6	17	23
2	1	29	5	2	12	1	3	4
4	3	45	9	5	10	1	4	13
25	15	245	67	30	67	9	28	30
483	268	5 396	1 965	498	1 510	187	575	367
17	8	458	245	32	91	10	27	38
1	1	35	6	6	5	1	2	13
21	14	306	53	33	52	6	26	111
12	6	80	16	8	18	3	10	18
4 729	1 900	111 274	39 943	13 861	20 084	3 042	16 977	10 334
6 063	2 686	124 369	43 762	15 159	23 297	3 457	18 318	12 497

Annex table 2.5. Value added exports of goods and services from Lao PDR, by value added creator, sector and industry, 2010

Value added creator	Exports from Lao PDR						
	Primary		Manufacturing				
	Total	Agriculture, hunting, forestry and fishing	Total	Food, beverages and tobacco	Textiles, clothing and leather	Wood and wood products	Petroleum, chemical and non-metallic mineral products
World	12 636	11 503	59 445	1 035	15 026	34 428	1 527
Developed countries	3 732	3 385	15 908	278	3 956	8 990	321
Europe	2 061	1 865	8 624	148	2 196	4 859	182
European Union	1 822	1 651	7 754	132	1 956	4 385	166
France	189	174	913	18	218	521	21
Germany	318	290	1 559	24	345	891	37
Italy	117	107	539	9	148	291	12
United Kingdom	296	268	1 197	20	313	674	23
Other developed Europe	238	215	870	16	240	474	16
Switzerland	129	117	488	9	132	267	10
North America	586	532	2 559	44	621	1 498	49
Canada	59	53	293	5	65	180	6
United States	527	478	2 266	39	556	1 318	43
Other developed countries	1 086	988	4 725	87	1 139	2 633	90
Australia	321	290	1 255	26	323	686	21
Japan	589	538	2 889	48	645	1 632	60
New Zealand	111	100	361	9	108	195	5
Developing countries	8 333	7 605	41 655	722	10 515	24 431	1 174
Africa	717	643	2 309	44	707	1 231	33
Latin America and the Caribbean	740	664	2 385	46	728	1 275	35
Asia	6 808	6 236	36 758	626	9 017	21 819	1 104
West Asia	310	279	1 151	20	321	645	30
South, East and South-East Asia	6 498	5 957	35 607	605	8 696	21 174	1 074
East Asia	1 286	1 177	6 922	103	1 950	3 684	155
China	887	814	4 910	74	1 357	2 619	118
Korea, Republic of	177	161	928	13	249	492	19
Taiwan Province of China	144	130	646	10	200	339	11
South Asia	449	406	1 813	29	522	932	39
Bangladesh	13	12	47	1	17	23	1
India	257	235	1 195	18	326	608	30
Iran	117	105	372	7	112	199	6
ASEAN	4 763	4 374	26 873	473	6 224	16 558	880
Brunei Darussalam	17	15	63	1	17	36	2
Cambodia	31	30	87	6	22	50	1
Indonesia	148	136	1 015	16	188	707	13
Malaysia	147	134	693	13	149	403	16
Myanmar	32	29	158	2	34	102	6
Philippines	65	59	244	5	66	131	4
Singapore	258	239	1 157	29	243	708	23
Thailand	3 905	3 583	22 771	384	5 335	14 013	797
Viet Nam	160	150	684	18	169	408	17
Oceania	68	62	202	7	63	106	3
Transition economies	570	512	1 883	35	554	1 007	32
Russian Federation	145	132	573	10	146	315	14
Domestic value added (DVA)	364 887	352 091	485 348	9 089	103 421	329 345	9 258
Gross exports	377 523	363 594	544 793	10 124	118 447	363 773	10 785

Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

Note: All values are estimated. Regions and countries refer to where the value added is attributed. For GVC terminology, see box 1.

(Thousands of dollars)

Exports from Lao PDR

		Services						
Electrical and general machinery	Motor vehicles and other transport equipment	Total	Trade	Hotels and restaurants	Transport, storage and communications	Public administration and defence	Education, health and other Services	Community, social and personal service activities
2 550	1 564	27 530	7 319	2 578	6 497	965	3 140	5 404
792	513	7 316	1 627	705	1 525	242	812	1 941
411	257	3 677	654	377	755	122	433	1 086
376	235	3 275	587	338	681	111	392	942
52	35	414	89	47	109	17	54	72
109	65	611	116	62	144	26	89	129
28	17	211	38	23	45	8	27	55
54	31	528	94	52	105	17	60	164
35	22	403	66	40	74	11	41	144
21	13	227	38	22	44	7	24	77
110	75	1 135	236	112	246	38	126	306
13	8	111	20	12	26	4	14	28
97	67	1 024	215	100	220	33	113	278
271	182	2 503	737	216	524	82	252	549
65	40	579	103	64	113	18	63	180
192	131	1 634	587	119	365	57	164	254
7	7	180	28	23	28	4	15	72
1 705	1 014	19 314	5 551	1 785	4 831	703	2 248	3 091
48	36	1 124	168	110	165	22	89	499
50	38	1 164	176	115	173	24	92	513
1 603	937	16 925	5 192	1 545	4 480	655	2 059	2 037
32	21	592	95	52	162	21	57	171
1 570	916	16 333	5 097	1 493	4 318	634	2 003	1 866
419	253	2 771	676	262	667	114	383	484
321	192	1 962	502	186	489	85	286	283
57	37	373	84	35	88	15	48	77
26	16	277	58	26	54	9	31	82
103	54	798	144	75	164	27	95	236
1	1	21	3	2	3	0	2	9
90	44	489	97	46	115	21	71	102
8	6	195	30	18	32	4	15	83
1 049	609	12 765	4 277	1 156	3 487	493	1 525	1 147
2	1	34	5	3	11	1	3	8
2	1	59	13	11	16	2	5	11
29	18	291	58	38	63	10	35	67
48	26	305	61	33	81	13	42	55
4	2	78	12	6	32	4	9	11
11	9	121	22	11	25	4	12	40
62	38	648	166	78	171	25	84	92
868	501	10 640	3 642	938	2 969	417	1 294	807
23	12	588	298	38	120	15	41	57
3	3	100	14	15	14	2	8	42
54	37	900	141	88	141	20	80	371
29	18	246	45	24	51	8	31	70
12 565	5 475	323 618	110 432	39 523	56 351	9 123	49 313	38 660
15 115	7 039	351 149	117 750	42 101	62 848	10 087	52 453	44 064

Annex table 2.6. Value added exports of goods and services from Lao PDR, by value added creator, sector and industry, 2015

Value added creator	Exports from Lao PDR						
	Primary		Manufacturing				
	Total	Agriculture, hunting, forestry and fishing	Total	Food, beverages and tobacco	Textiles, clothing and leather	Wood and wood products	Petroleum, chemical and non-metallic mineral products
World	12 787	11 608	69 301	1 057	16 997	41 627	1 682
Developed countries	3 403	3 075	16 004	250	3 903	9 343	299
Europe	1 918	1 729	8 795	134	2 203	5 114	172
European Union	1 681	1 517	7 867	119	1 952	4 591	156
France	155	142	881	15	204	520	18
Germany	221	201	1 266	17	275	744	28
Italy	107	97	542	8	146	303	11
United Kingdom	294	265	1 328	20	337	774	24
Other developed Europe	237	213	928	15	251	522	16
Switzerland	142	128	571	9	153	322	11
North America	530	480	2 607	40	616	1 574	46
Canada	55	50	313	4	66	199	6
United States	475	430	2 294	35	549	1 375	40
Other developed countries	955	866	4 602	76	1 084	2 656	81
Australia	323	292	1 399	25	348	793	22
Japan	451	411	2 565	38	552	1 506	50
New Zealand	115	104	399	10	117	222	5
Developing countries	8 852	8 055	51 410	776	12 551	31 243	1 351
Africa	684	611	2 315	39	694	1 273	31
Latin America and the Caribbean	650	582	2 244	38	668	1 239	31
Asia	7 466	6 815	46 688	694	11 139	28 642	1 287
West Asia	324	292	1 340	21	362	779	33
South, East and South-East Asia	7 142	6 524	45 348	673	10 777	27 863	1 254
East Asia	1 499	1 368	9 396	122	2 608	5 186	201
China	1 107	1 013	7 126	94	1 956	3 941	162
Korea, Republic of	190	172	1 124	14	297	616	21
Taiwan Province of China	116	105	570	8	172	310	9
South Asia	481	434	2 111	31	598	1 124	43
India	267	243	1 377	18	369	727	33
Iran	144	128	482	8	143	266	7
ASEAN	5 161	4 721	33 841	520	7 571	21 553	1 010
Brunei Darussalam	17	15	73	1	19	43	2
Cambodia	31	30	92	6	22	54	1
Indonesia	155	142	1 229	16	216	883	14
Malaysia	147	134	784	13	163	471	18
Myanmar	36	33	205	3	43	136	7
Philippines	69	62	280	5	74	156	4
Singapore	240	222	1 250	27	249	794	24
Thailand	4 277	3 908	28 993	428	6 558	18 447	919
Viet Nam	188	175	935	22	227	568	21
Oceania	51	46	163	5	50	89	2
Transition economies	532	478	1 888	31	543	1 041	32
Russian Federation	141	128	614	9	154	347	16
Domestic value added (DVA)	491 758	476 929	605 527	10 522	118 602	425 552	11 203
Gross exports	504 545	488 537	674 828	11 579	135 598	467 179	12 885

Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

Note: All values are estimated. Regions and countries refer to where the value added is attributed. For GVC terminology, see box 1.

(Thousands of dollars)

Exports from Lao PDR

		Services						
Electrical and general machinery	Motor vehicles and other transport equipment	Total	Trade	Hotels and restaurants	Transport, storage and communications	Public administration and defence	Education, health and other Services	Community, social and personal service activities
2 809	1 626	28 355	7 727	2 588	6 813	912	3 361	5 428
742	458	6 574	1 411	627	1 347	193	743	1 869
387	231	3 371	580	340	674	98	402	1 068
352	211	2 980	517	302	604	89	362	921
49	32	351	74	39	92	14	48	63
84	49	445	81	44	104	17	66	101
26	15	188	33	20	39	6	25	52
58	32	518	90	51	101	15	61	168
35	20	391	63	38	71	10	40	147
23	13	242	40	23	46	6	26	87
106	69	1 032	202	100	222	31	118	298
13	8	104	19	11	24	3	13	27
93	61	928	184	89	199	27	105	271
250	159	2 171	629	188	450	64	223	504
72	41	579	102	63	113	17	65	184
164	106	1 302	482	91	291	41	133	200
8	7	183	28	24	28	3	15	75
2 012	1 134	20 963	6 189	1 883	5 338	702	2 542	3 216
45	32	1 040	152	100	149	18	82	479
45	33	1 001	148	96	147	18	80	454
1 919	1 067	18 848	5 879	1 676	5 032	665	2 374	2 250
36	22	626	101	52	180	21	62	178
1 883	1 044	18 222	5 778	1 624	4 853	644	2 312	2 072
530	304	3 267	773	306	808	125	481	571
422	240	2 471	603	233	628	98	381	375
66	41	397	88	36	95	14	53	84
22	12	222	46	20	43	6	25	68
113	55	836	149	77	171	25	102	259
99	45	498	99	46	118	19	75	106
10	7	231	34	21	37	4	18	103
1 240	685	14 118	4 855	1 240	3 874	494	1 729	1 242
2	1	36	6	3	12	1	4	9
2	1	57	13	11	14	2	5	10
33	19	304	60	40	66	10	37	71
53	27	305	60	33	83	12	43	55
5	3	90	15	7	38	4	10	12
12	10	126	23	12	26	3	12	43
66	38	619	158	74	167	22	84	84
1 035	570	11 887	4 167	1 017	3 326	422	1 484	891
32	16	696	354	45	143	16	49	67
3	2	73	10	10	10	1	6	32
54	34	819	127	78	128	17	76	343
32	17	231	42	22	48	7	32	64
16 199	6 602	412 726	149 355	50 300	67 271	10 910	68 089	42 420
19 007	8 229	441 081	157 082	52 888	74 084	11 821	71 450	47 848

Annex table 2.7. Value added exports of goods and services from Lao PDR, by value added creator, sector and industry, 2017

Value added creator	Exports from Lao PDR						
	Primary		Manufacturing				
	Total	Agriculture, hunting, forestry and fishing	Total	Food, beverages and tobacco	Textiles, clothing and leather	Wood and wood products	Petroleum, chemical and non-metallic mineral products
World	8 648	7 960	66 418	1 674	15 597	38 134	2 022
Developed countries	1 301	1 197	10 289	219	2 199	5 797	253
Europe	648	594	5 112	92	1 098	2 898	132
European Union	566	520	4 573	82	965	2 603	119
France	48	44	407	8	86	231	12
Germany	170	156	1 446	24	278	820	39
Italy	34	31	304	6	68	169	8
United Kingdom	79	72	621	10	142	353	15
Other developed Europe	82	74	539	10	133	295	13
Switzerland	46	42	334	6	80	182	9
North America	161	149	1 465	30	289	882	37
Canada	22	20	216	4	38	140	5
United States	140	129	1 249	26	251	742	32
Other developed countries	491	453	3 712	98	812	2 018	84
Australia	62	57	510	12	114	279	11
Japan	388	359	2 949	79	629	1 601	68
New Zealand	31	28	182	6	51	98	3
Developing countries	7 150	6 586	55 124	1 434	13 122	31 805	1 750
Africa	705	634	3 368	63	1 002	1 779	50
Latin America and the Caribbean	190	172	1 103	21	303	595	21
Panama	52	47	258	5	80	134	4
Asia	6 232	5 759	50 549	1 346	11 786	29 376	1 678
West Asia	125	113	877	16	215	496	31
South, East and South-East Asia	6 108	5 646	49 672	1 330	11 571	28 880	1 647
East Asia	1 099	1 013	9 414	179	2 447	4 947	241
China	831	767	7 313	133	1 873	3 867	197
Korea, Republic of	136	126	1 191	29	314	600	26
Taiwan Province of China	93	85	611	12	178	318	12
South Asia	311	283	2 163	35	580	1 096	52
India	186	171	1 529	23	386	766	41
Iran	35	31	204	4	58	108	4
ASEAN	4 698	4 351	38 095	1 115	8 544	22 837	1 353
Brunei Darussalam	10	9	63	1	16	36	2
Cambodia	366	350	1 195	70	307	700	16
Indonesia	121	112	1 242	27	220	859	18
Malaysia	97	90	699	17	145	392	19
Myanmar	85	76	433	8	114	246	11
Philippines	53	48	279	6	73	147	5
Singapore	46	43	359	14	77	200	10
Thailand	3 005	2 746	29 225	513	6 384	18 006	1 140
Viet Nam	915	877	4 601	459	1 209	2 251	132
Oceania	23	21	104	4	30	55	1
Transition economies	196	178	1 005	21	277	532	19
Russian Federation	42	39	288	7	66	155	8
Domestic value added (DVA)	505 095	486 257	670 507	14 115	126 370	466 854	14 632
Gross exports	513 742	494 217	736 926	15 789	141 967	504 989	16 654

Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

Note: All values are estimated. Regions and countries refer to where the value added is attributed. For GVC terminology, see box 1.

(Thousands of dollars)

Exports from Lao PDR

		Services						
Electrical and general machinery	Motor vehicles and other transport equipment	Total	Trade	Hotels and restaurants	Transport, storage and communications	Public administration and defence	Education, health and other Services	Community, social and personal service activities
3 245	1 912	31 715	9 386	3 713	7 415	1 230	3 570	4 643
697	429	4 596	1 232	513	1 008	188	555	802
351	204	1 999	395	222	461	89	278	405
323	187	1 762	351	198	410	80	250	339
29	17	155	32	19	39	7	23	22
128	72	548	112	59	134	28	84	88
23	13	111	23	13	27	5	17	17
37	21	255	51	26	57	10	33	58
29	17	237	44	25	51	9	28	65
20	12	147	28	15	34	6	18	37
88	52	544	118	69	138	26	75	80
11	6	72	14	10	19	4	10	10
77	46	472	103	59	119	22	65	70
258	173	2 053	719	221	409	73	202	318
35	21	209	42	27	48	9	26	41
215	146	1 727	656	177	340	61	164	239
5	4	87	15	13	15	2	8	28
2 512	1 459	26 653	8 072	3 150	6 329	1 030	2 972	3 673
71	55	1 660	273	165	248	36	129	705
37	25	509	90	53	91	14	47	180
5	4	129	22	13	19	3	10	56
2 402	1 378	24 434	7 702	2 923	5 983	978	2 792	2 769
36	21	448	81	40	152	22	49	80
2 366	1 357	23 986	7 621	2 883	5 831	956	2 744	2 689
665	390	3 860	989	419	903	174	528	590
544	313	2 974	789	308	720	140	423	396
79	52	500	116	67	108	20	62	93
27	17	269	60	29	52	9	29	72
150	73	966	198	90	210	38	117	244
135	62	655	145	59	159	31	92	121
6	4	104	18	10	21	3	9	36
1 551	894	19 160	6 434	2 374	4 718	743	2 098	1 855
2	1	34	6	3	11	2	3	7
15	11	460	74	94	65	10	40	152
37	22	357	73	60	71	13	41	73
54	28	306	62	39	79	15	41	50
10	7	228	37	20	58	8	20	71
13	11	137	26	15	27	4	13	43
22	13	163	39	29	35	6	20	23
1 256	709	14 271	5 153	1 177	3 952	612	1 647	1 011
142	92	3 203	965	936	419	72	272	424
2	2	50	8	8	7	1	4	19
36	24	465	82	51	78	13	43	168
19	11	115	23	15	25	5	15	25
19 268	7 900	459 741	164 108	55 701	74 613	14 330	70 393	49 401
22 513	9 812	491 456	173 493	59 414	82 027	15 560	73 963	54 044

Annex table 3. Value added exports of goods and services from Lao PDR, by value added creating sector and industry, 1990–2017 (Thousands of dollars)

Sector/industry	Exports from Lao PDR						
	1990	1995	2000	2005	2010	2015	2017
Total	119 887	261 340	306 268	588 551	1 582 739	1 957 340	2 179 684
Primary	53 459	83 074	53 379	168 298	506 499	672 991	738 802
Agriculture, hunting, forestry and fishing	52 148	79 994	47 509	155 803	469 504	631 889	676 943
Mining, quarrying and petroleum	1 310	3 080	5 870	12 495	36 994	41 102	61 859
Secondary	15 699	56 508	82 063	132 696	336 102	318 718	418 237
Food, beverages and tobacco	366	1 852	4 522	6 539	15 525	13 527	17 933
Textiles, clothing and leather	2 060	7 233	9 675	15 331	49 162	37 599	56 348
Wood and wood products	7 051	27 830	35 728	61 353	145 980	135 647	188 302
Petroleum, chemical and non-metallic mineral products	2 587	9 656	15 645	24 324	56 159	63 337	72 920
Metal and metal products	1 184	3 026	4 660	7 209	18 631	19 099	24 062
Electrical and general machinery	1 513	4 494	7 437	11 836	28 272	32 390	36 786
Motor vehicles and other transport equipment	427	865	1 977	2 344	6 409	6 567	8 229
Recycling	29	60	145	153	5 335	631	824
Other manufacturing	482	1 493	2 275	3 606	10 629	9 923	12 833
Tertiary	50 729	121 757	170 825	287 556	728 867	965 624	1 007 653
Electricity, gas and water	2 662	7 237	9 645	20 136	60 770	105 834	144 447
Construction	3 480	6 179	6 097	10 950	27 845	32 779	35 897
Trade	12 626	30 226	37 436	75 121	197 703	273 504	274 668
Hotels and restaurants	2 639	6 035	5 971	12 976	37 556	47 308	53 226
Financial intermediation and business activities	16 938	41 343	68 271	95 779	204 777	271 505	243 975
Transport, storage and communications	4 067	12 521	17 998	30 215	80 720	91 459	95 141
Public administration and defence	1 217	1 634	2 017	3 322	7 616	9 301	11 581
Education, health and other services	2 554	6 259	9 333	15 230	37 083	53 247	55 296
Community, social and personal service activities	4 138	9 606	12 838	22 486	69 625	77 326	89 575
Other services	409	716	1 220	1 340	5 172	3 362	3 847

Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

Note: All values are estimated. The value includes values created both outside Lao PDR (FVA) and within Lao PDR (DVA). The industry is the industry to which the value is attributed, not the industry from which exports originated.

Annex table 4. Value added exports from Lao PDR incorporated in other countries' exports, by region or country, 1990–2019 (Thousands of dollars)

Region/country	DVX from Lao PDR						
	1990	1995	2000	2005	2010	2015	2019
World	28 260	57 166	83 128	172 385	401 164	447 179	618 840
Developed countries	8 332	16 393	23 411	44 492	109 164	115 602	209 408
Europe	6 721	13 734	19 260	36 698	92 717	97 315	181 116
European Union	6 385	13 040	18 333	34 917	87 906	92 441	171 525
France	625	1 381	2 069	3 546	7 823	8 612	16 210
Germany	1 193	2 593	3 828	7 914	21 869	22 250	37 824
Italy	394	972	1 329	2 544	6 465	6 910	13 515
United Kingdom	630	1 096	1 482	2 484	6 447	5 967	11 218
Other developed Europe	336	694	927	1 782	4 811	4 873	9 591
Switzerland	124	322	480	1 140	2 921	3 013	4 968
North America	519	1 018	1 744	2 881	5 984	6 397	11 590
Canada	161	376	697	1 212	2 567	2 678	6 854
United States	358	643	1 048	1 668	3 417	3 718	4 736
Other developed countries	1 092	1 640	2 407	4 913	10 462	11 891	16 702
Australia	226	308	380	597	1 495	1 594	2 442
Japan	640	1 061	1 607	3 675	7 350	8 733	11 822
New Zealand	78	89	125	188	540	523	1 051
Developing countries	18 759	38 270	56 741	119 714	265 225	308 015	363 028
Africa	733	1 076	1 202	2 050	5 890	5 835	12 473
Latin America and the Caribbean	601	871	1 409	2 438	6 395	6 720	11 719
Asia	17 320	36 201	53 975	115 007	252 306	294 841	337 613
West Asia	269	412	529	954	2 807	3 139	5 763
South, East and South-East Asia	17 051	35 790	53 446	114 053	249 499	291 703	331 850
East Asia	6 937	8 150	9 876	19 285	54 767	59 208	66 907
China	307	1 868	3 266	11 323	39 518	43 129	51 098
Korea, Republic of	187	-	530	1 471	4 589	5 173	4 460
Taiwan Province of China	5 889	5 631	5 251	5 015	7 138	7 084	7 125
South Asia	180	251	368	833	2 426	2 804	3 308
India	42	71	138	406	1 203	1 402	1 448
Iran	35	41	58	121	308	393	321
ASEAN	9 935	27 389	43 202	93 935	192 306	229 691	261 635
Brunei Darussalam	26	29	28	48	165	172	307
Cambodia	6	17	35	73	178	194	181
Indonesia	81	170	311	482	1 034	1 127	1 712
Malaysia	211	540	747	1 624	3 590	3 754	4 826
Myanmar	36	22	25	12	16	21	17
Philippines	140	214	285	510	1 096	1 085	1 539
Singapore	335	592	831	1 787	4 736	5 335	9 767
Thailand	8 218	23 440	36 249	80 960	166 684	202 506	208 598
Viet Nam	882	2 366	4 692	8 440	14 808	15 495	34 689
Oceania	105	122	154	219	634	619	1 223
Transition economies	1 169	2 503	2 977	8 179	26 775	23 561	46 404
Russian Federation	328	573	889	1 905	6 080	5 980	19 524

Source: AJC-UNCTAD-Eora database on ASEAN GVCs. Data for 2016–2018 are projected by UNCTAD and Eora.

Note: All values are estimated. The value refers to that incorporated in exports from the countries listed. For GVC terminology, see box 1.

ASEAN- Japan Centre

ISBN 978-4-910293-23-3



ASEAN Promotion Centre on Trade, Investment and Tourism
www.asean.or.jp/en

