

Global Value Chains in ASEAN

Brunei Darussalam

PAPER 2
FEBRUARY
2018



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 (Planning & Coordination)
+81-3-5402-8004/8005 (Trade)
+81-3-5402-8006/8007 (Investment)
+81-3-5402-8008/8009 (Tourism & Exchange)
+81-3-5402-8118/8003 (PR)
e-mail address: toiawase_ga@asean.or.jp
<http://www.asean.or.jp>

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NOTES

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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 second of a 16-paper series on ASEAN global value chains. Paper 1 and Paper 8 have already been published. The other 12 papers will be produced subsequently.

Paper 1. A regional perspective (September 2017)

Paper 2. Brunei Darussalam

Paper 3. Cambodia

Paper 4. Indonesia

Paper 5. Lao People’s Democratic Republic

Paper 6. Malaysia

Paper 7. Myanmar

Paper 8. Philippines (July 2017)

Paper 9. Singapore

Paper 10. Thailand

Paper 11. Viet Nam

Paper 12. Automobiles

Paper 13. Electronics

Paper 14. Textiles and clothing

Paper 15. Agribusiness

Paper 16. Tourism

Prepared by Masataka Fujita (ASEAN-Japan Centre). The author wishes to thank the staff members of AJC and Lizanne Martinez for their research and statistical assistance, and Noor Maya Salleh and Saiful Islam (both for Universiti Teknologi Brunei) for their comments. The manuscript was edited by Lise Lingo and typeset by Laurence Duchemin. Errors and omissions are only those of the author and should not be attributed to his organization.

KEY MESSAGES

- More diversification of the economy would be possible if the economy and global value chains (GVCs) were more interrelated. The main industry of the country – oil and gas – is the least involved in GVCs.
- Mining and quarrying are the dominant industries, with other industries being far less important. Thus, the economy has less inter-dependence among industries and small linkage effects.
- GVCs are weak, reflecting the country's industrial characteristics and small amount of foreign direct investment (FDI), and the fact that it requires less foreign inputs for its exports.
- Lower GVC participation deprives countries of the opportunity to grow independently and in tandem with other countries.
- GVCs show variances by sectors: the agribusiness sector has the potential to develop chains both within and outside the country; transport services, with yet to be developed production chains, need to be integrated into the overall production networks; and information and communication technology (ICT) and life sciences, listed by the Government as future industries, would both provide the country with opportunities to enter value chains, but difficulties abound.
- The minimal level of trade in parts and components is another indication of lower participation in GVCs, but the country has the capacity to engage in high-tech manufacturing.
- FDI that promotes GVC participation is a viable option but requires FDI facilitation to target specific sectors and even specific companies.
- Although there are signs of a relationship between the country's GVC participation and the presence of FDI, unlike in other countries, GVC participation has not yet led to economic growth. Infrastructure is a prerequisite.

More diversification of the economy would be possible, ...

Since gaining its independence from the United Kingdom in 1984, Brunei Darussalam has poured its industrial efforts into diversifying its economy away from oil dependency. The shares of crude oil and natural gas production in total GDP and exports had declined to 52 per cent and 88 per cent, respectively, by 2016 (Brunei Government 2017). Although there are a number of economic and industrial policies as well as studies conceived by and provided for the country, the fact that the fruits of these diversification efforts have not materialized implies that a new approach to economic planning is required. This approach, which is based on input-output (IO) and global value chain (GVC) analysis for the country, shows how various industries are interlinked in the economy (in the input and output analysis) and what determines the international competitiveness (in the GVC analysis) of Brunei Darussalam today. The objective of this paper is to provide some hints for the Government on what to do to strengthen the economy and thus diversify into various industries.

Brunei Darussalam has already identified the sectors into which the country should diversify or put more efforts. *Wawasan Brunei 2035*¹ envisages expanding the economy as well as the source of employment both in downstream industries and in economic clusters beyond the oil and gas industry. So far, the related industries and derivatives of oil and gas exploration such as oil refineries and gas chemicals and methanol production have experienced some success. The current diversification strategies of the Government address life sciences, agribusiness, ICT and services. In this paper, some of these prioritized industries are examined to see whether they are already integrated into value chains and, if so, to what extent. GVCs provide the country with opportunities not only to grow economically but also to develop these sectors, as there is general evidence² of a relationship between participation in GVCs and economic growth (UNCTAD 2013) as well as specific evidence for ASEAN (Paper 1 of this series).

This paper uses terminology such as value added and gross domestic product, with data estimated on the basis of IO tables. Brunei Darussalam produced the IO table for 2005 and 2010 (Brunei Government 2014a). The table used here, however, is from the Organization for Economic Co-operation and Development (OECD), which has produced more recent data, though only up to 2011. The IO tables constitute the basis for estimating data on value added trade related to GVCs. The ASEAN-Japan Centre collaborates with the Eora group³ and jointly develops the data on ASEAN GVCs with assistance from the United Nations Conference on Trade and Development (UNCTAD). The latter organization validated the data estimated by Eora (UNCTAD 2013). Nevertheless, OECD data on IO tables as well as its trade in value added (TiVA) database also provide useful information on Brunei Darussalam. Therefore, this paper attempts to use both sets of data. However, all the data, including those on GVCs, emanating from the IO tables are only estimates and thus require careful assessment and interpretation.

¹ *Wawasan Brunei 2035* or *Brunei Vision 2035* aims to turn Brunei Darussalam into a nation widely recognized for

- the accomplishments of its well-educated and highly skilled people as measured by the highest international standards,
- a national quality of life that is among the top 10 in the world, and
- a dynamic and sustainable economy with income per capita comparable with those of the top countries in the world.

² For example, see UNCTAD, *World Investment Report 2013: Global Value Chains, Trade and Investment for Sustainable Development*, Geneva and New York, 2013.

³ The Eora project, originally funded by the Australian Research Council, based at the University of Sydney and comprising an international team of researchers, developed the so-called "world multi-region input-output database (MRIO)". This is the basis for the generation of the value added trade estimates in the ASEAN GVC Database used in this paper series. For details, see <http://www.worldmrio.com>.

... if the economy were more inter-dependent.

According to the OECD's IO tables, gross output (gross input), defined to include intermediate demand, final demand and net exports (exports less imports), was estimated at \$24 billion in 2011 (table 1). The gross value added of the economy is some \$17 billion, about one quarter of gross output. GDP in current prices in that year was reported as \$18 billion (source: IMF).

The OECD's IO table shows the dominance of mining and quarrying in output and value added, accounting for more than 67 per cent of the former and 60 per cent of the latter's total in 2011 (table 1), followed at a distance by public administration and defence (not in the table), wholesale and retail trade (not in the table), financial intermediation, research and development (R&D) and other business activities, and transport and storage. Other than the petroleum and gas industry, these industries generate certain levels of value added and indeed play an important role in the economy. However, not all of these sectors are considered strategic or the sectors to which the Government is driving diversification. One of the criteria the Government should consider is whether the sectors to be included in diversification efforts should be the ones that also stimulate other sectors and produce more impacts on the economy as a whole.

Table 1. Estimated input-output table of Brunei Darussalam, for selected industries, 2011 (Millions of dollars)

Selected industries		Intermediate demand							
		Agriculture, hunting, forestry and fishing	Mining and quarrying	Food products, beverages and tobacco	Coke, refined petroleum products and nuclear fuel	Chemicals and chemical products	Rubber and plastics products	Other non-metallic mineral products	
Intermediate inputs	Agriculture, hunting, forestry and fishing	150.5	47.4	0.7	0	0	0	0	
	Mining and quarrying	28	2442	0.8	34.7	0	0	0.5	
	Food products, beverages and tobacco	0	0	0	0	0	0	0	
	Coke, refined petroleum products and nuclear fuel	0	16.6	0	0	0	0	0	
	Chemicals and chemical products	0	0	0	0	0	0	0	
	Rubber and plastics products	0	0	0	0	0	0	0	
	Other non-metallic mineral products	0	1.7	0	0	0	0	0.4	
	Basic metals	0.1	0.1	0.1	0.1	0	0	0.1	
	Fabricated metal products	0	0.1	0	0.1	0	0	0	
	Hotels and restaurants	0	0.4	0	0	0	0	0	
	Transport and storage	0.9	1.6	0	0	0	0	0	
	Post and telecommunication	0.6	7.4	0.1	0	0.1	0	0.3	
	Financial intermediation	0.6	77.1	0	0	0	0	1.4	
	Computer and related activities	0	0	0	0	0	0	0	
	R&D and other business activities	0.7	46.4	0	0	0	0	0.2	
	Imports	52.9	279.5	4.4	0.8	0.4	0.5	5	
Gross value added	104.8	11 400.1	4.2	52.5	1	1	2		
Gross inputs	397.2	14 400.1	12	89.1	2	2	15.9		

Source: OECD, Input-Output table (<http://www.oecd.org/trade/input-outputtables.htm>).

	Intermediate demand								Final demand	Exports	Gross outputs
	Basic metals	Fabricated metal products	Hotels and restaurants	Transport and storage	Post and telecommunication	Financial intermedia-tion	Computer and related activities	R&D and other business activities			
	0	0	20.4	0	0	0	0	46	124.1	0.8	514
	0.9	0	4.6	62.9	6.9	2.1	0.7	2.9	-76.9	11 433.1	13 866.3
	0	0	0	0	0	0	0	0	2.7	9	14.4
	0	0	0.4	11.3	0.1	0	0	0	49.8	0	128
	0	0	0	0	0	0	0	0	-0.2	2.1	1.7
	0	0	0	0	0	0	0	0	0	1.4	1.4
	0	0	0.1	0	0	0	0	0	4.1	0.3	10.7
	0.1	0.1	0.1	0.1	0	0.1	0	0.1	-0.3	2.8	3.3
	0	0	0	0.1	0	0	0.1	0	-0.2	5.8	5.8
	0	0	0	0	0	0	0	0.6	144.3	0	289.6
	0	0	0.2	0.7	0	0.1	0	0.4	22.1	453.9	502
	0.1	0.2	1.2	1	9.2	11	0.2	11.3	36.4	15	130.5
	0	0	1.4	1.8	1	17.8	0.2	9.6	36.2	15.3	198.6
	0	0	0	0	0	0	0	0	6.3	11.1	23.7
	0.1	0.1	0.3	4.5	0.8	5.5	0.4	34	340.6	88.6	862.8
	1	3.9	38.5	41.9	15	23.2	1.6	65.5			
	1	1.6	63.5	345.3	149.3	454.6	13.7	447.8			13 042.4
	4.3	6.9	146.9	482.1	186.2	519.4	18.7	645.6			16 928.4

In this respect the IO tables show interdependencies between different industries of a national economy or different regional economies. The output of any industry (e.g. petroleum) is needed as an input in other industries or even for that industry itself. Thus the correct level of any output (e.g. petroleum product) will depend on the input requirements of all the industries. When the Government selects strategic industries and prioritizes industries for promotion, this kind of table provides some hints on which industries will be most affected, and thus which industries should be promoted in order to derive the maximum impact of additional spending. Figure 1 shows the extent to which the overall output could increase with one unit of additional spending or one unit of increase in final demand in each of 34 industries available in OECD's IO tables. This reflects so-called diffusion, backward or linkage effects.

Less interdependency among industries means smaller linkage effects.

The linkage or diffusion effects among industries in Brunei Darussalam are generally small, smaller than in other ASEAN countries.⁴ Whereas the linkage indicator for Brunei Darussalam is 1.37, the indicators for Malaysia, Singapore and Thailand, for instance, are 1.81, 1.59 and 1.61, respectively. Among 34 industries there are 10 in which one unit increase in final demand leads to a more than doubling of outputs in the economy as a whole (figure 1). Agribusiness (in the figure, referring to agriculture, hunting, forestry and fishing, and food products, beverages and tobacco), which has linkage effects greater than 2, seems to be one of the largest industries that also affect production in other sectors.⁵

The typical characteristic of a commodity-dependent economy such as that of Brunei Darussalam is that whereas the main commodity (in this case, oil and gas, and related activities) accounts for the bulk of the economy, the commodity is shallowly related to all other industries. Relatively small linkage effects are seen in mining and quarrying, and coke, and in refined petroleum products and nuclear fuel, both of which include or relate to Brunei's main activity (oil and gas). According to OECD data, the output multiplier of the mining and quarrying industry for 2011 was 1.238.⁶ Services industries such as financial intermediation, post and telecommunication, computer and related activities, transport and storage, and research and development (R&D) and other business activities also all have relatively small linkage effects. Both the mining and services sectors require fewer backward links with industries for inputs as their activities emanate within their own industries. These products are instead used as inputs to other industries (the forward path).

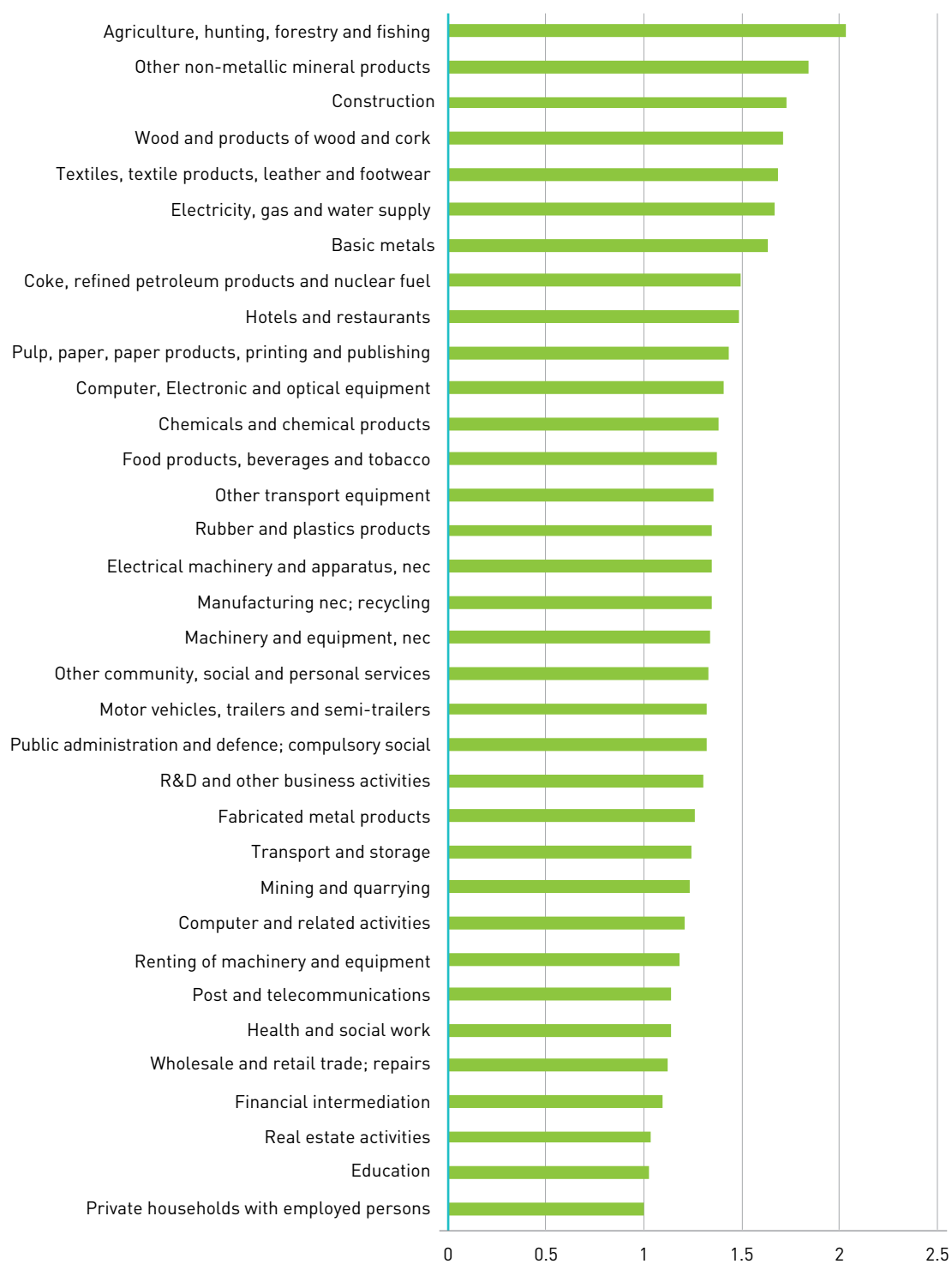
Smaller linkages with other industries also indicate that these industries are not closely inter-related with other industries, which exposes the weak value chains among different industries. The current position of the country in GVCs clearly shows this weakness.

⁴ The inverse matrix of the IO tables is used to calculate the diffusion (linkage, or backward) effects. Data from the OECD's IO database.

⁵ In contrast, the linkage indicator of agriculture, hunting, forestry and fishery for the Philippines is only 1.3 (see Paper 6 of this series).

⁶ OECD, IO table (<http://www.oecd.org/trade/input-outputtables.htm>). The Government data for 2010 show an indicator of 1.298 for mining (Brunei Government 2014a).

Figure 1. Linkage effects: which industry had the largest expansion effects in the whole economy due to one unit increase in outputs in 2011?



GVCs are weak, reflecting the country's main industry characteristics ...

The country-of-origin concept used in trade statistics today is based on the physical movement of goods and services once they cross a customs boundary, regardless of their owner and their value creator. As the world economy becomes more integrated, like the regional economy, these statistics may become less relevant, giving an incorrect impression and thus leading to the wrong trade policies. Therefore, this paper as well as other ASEAN papers in this series use statistics on trade in value added. One way to assess these statistics is to use international IO tables, which enable the identification of the origin and use of intermediate goods and services in each country and each industry. The concept of value added trade reallocates the value added produced at the different stages of the production process to each of the participating countries and industries. These statistics better reflect the state of the production networks established in ASEAN. The ASEAN-Japan Centre (AJC) uses IO table analysis, which is a methodology commonly used to estimate the import-content ratio in exportable products and value added trade.

For Brunei Darussalam at least two series of statistics on value added trade are available, one from the OECD's TiVA database (www.oecd.org/sti/ind) and the other from the AJC's statistics, based on the UNCTAD and Eora database on GVCs (box 1). For this country as well as other countries, data are not free of estimation problems because all GVC and TiVA data are estimated on the basis of IO tables that are themselves also often estimated. Therefore the data must be used with the utmost care.

Box 1. Shortcomings of data on GVCs

The AJC uses both the OECD and the AJC-Eora-UNCTAD data sets on GVCs, in which estimates differ from the OECD's, on the following fronts:

- The OECD data have been available continuously since 1990, thus covering a time span of nearly 30 years in the analysis.
- The data are available for 187 economies, including all 10 ASEAN member states, and cover more than 15,000 industries and sectors (with each economy having 25–500 industries and sectors), thus offering unsurpassed detail at both country and industry levels.
- Data become available just one to three years in arrears, thus significantly improving their timeliness.

Because of these fronts, ASEAN GVCs can be examined and placed in the global context and more important, in the inter-industry context, both over the long run and including recent years. The data come with standard deviations in order to enable users to better understand the reliability of the data. However, these advantages can turn out to be shortcomings. Because of a multiplication of estimates for many countries' IO tables and value added trade, margins of errors are augmented.

For the OECD's TiVA, estimates are based on a narrower country and industry coverage – 51 countries and 34 harmonized industry breakdowns – but are supposed to have smaller levels of margin errors. As of November 2017, data are available for 1995 and for 2000–2011. Among ASEAN countries, data are not available for the Lao People's Democratic Republic or Myanmar.

The timeliness, the continuity of the time series, the detailed breakdown by country and industry, and the global coverage make the analytical tool based on the AJC-UNCTAD-Eora data set more relevant to policy questions. These advantages give this dataset a degree of strength similar to or even higher than other similar efforts to estimate value added trade. The data are available on the AJC's website.

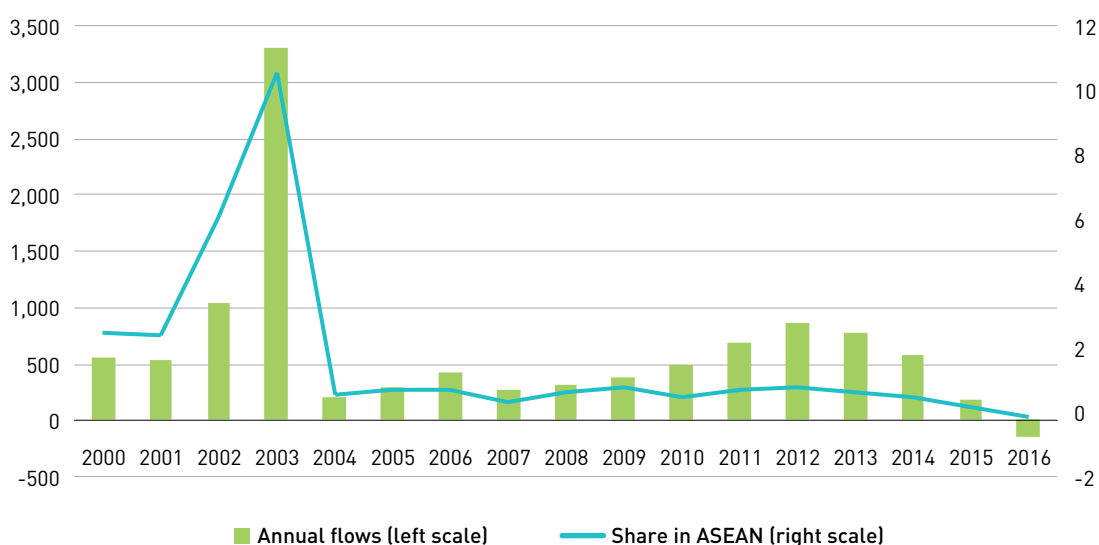
... and small FDI, ...

Unlike other countries in ASEAN, which have become major and competitive global or regional production centres for a wider range of products and services – from semiconductors and consumer electronics to garments and automobiles – and increasingly, for high-end services markets including medical and offshoring services, there are almost no such industries in Brunei Darussalam. The absence of these industries means the absence of significantly developed GVCs as well as regional value chains (RVCs), which also manifest a small level of FDI as well as a negligible share in FDI to ASEAN (figure 2). In recent years, FDI inflows have not exceeded \$1 billion, except in 2003. The country’s FDI stock as a share of GDP is lower than the ASEAN average (51 per cent versus 73 per cent in 2016, according to UNCTAD).

Similarly, FDI outflows from the country have been small, less than 1 per cent of total FDI outflows from ASEAN, except in 2010 and 2012 (figure 3). Outward FDI is related to the creation of GVCs outside the country, and both its small value and its share indicate the almost complete lack of existence of efforts to establish production networks.

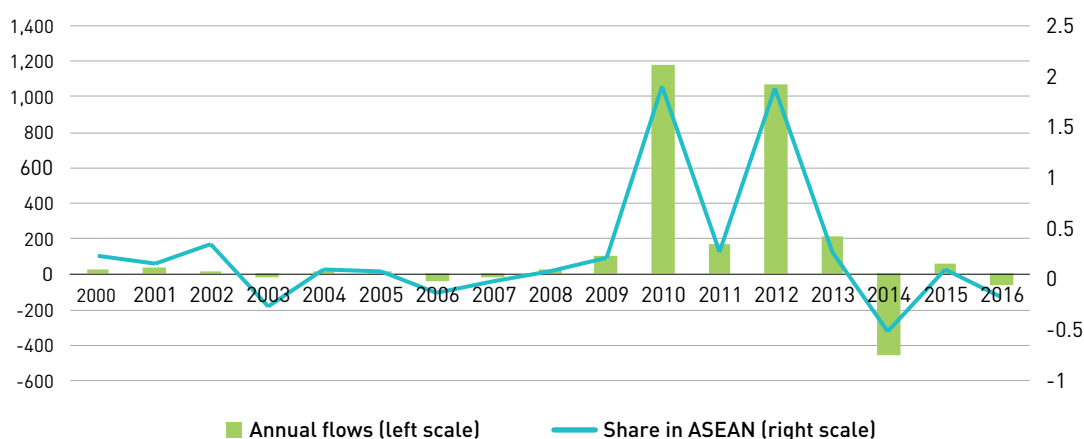
The weak presence of GVCs and RVCs in Brunei Darussalam reflects the current characteristics of the economy, which does not necessarily require the existence of value chains. Neither transnational corporations (TNCs) nor local firms are in a position to create such links – or interested in doing so. There are some large TNCs in the oil and gas industry, but they are present to secure exports to their home countries. Recently Chinese, Japanese, Malaysian and German companies have started to establish refineries for ethanol and ammonia production, but such production is essentially for export to their home countries and does not provide opportunities for forging value chains in the region or globally. The country imports a variety of products, but they are for final consumption and not for inputs to other industries.

Figure 2. Annual FDI inflows to Brunei Darussalam and its share in ASEAN, 2000–2016
(Millions of dollars and per cent)



Source: UNCTAD. World Investment Report 2017.

Figure 3. Annual FDI outflows from Brunei Darussalam and its share in ASEAN, 2000–2016
(Millions of dollars and per cent)



Source: UNCTAD. World Investment Report 2017.

Although the formation of GVCs and RVCs differs by industry and even by product, generally speaking, Brunei Darussalam imports few intermediate inputs (figure 9) and exports primarily a basic commodity (oil), which is integrated into various industries only in the forward part of production chains. Thus it is to be expected that the country has short value chains on the backward path, but relatively long chains on the forward path. For the former, the value of imports integrated into the country's own exports is called foreign value added; for the latter, it is the domestic value added that is incorporated in other countries' exports (for GVC terminology, see box 2). In total, however, the value chains of the country are relatively sparse and short.

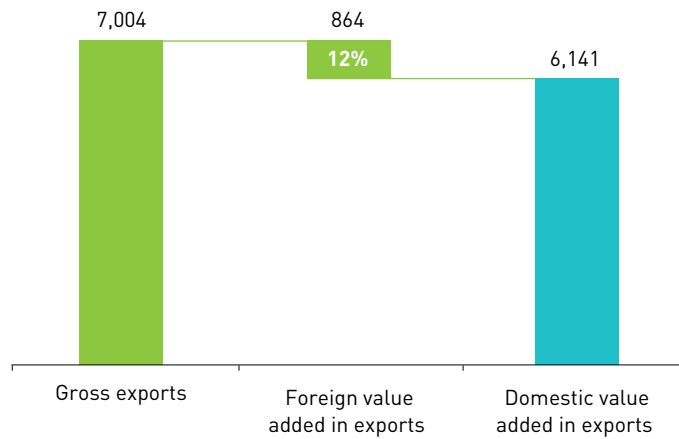
... which requires less foreign inputs to its exports, or less international production networks.

In ASEAN as a whole, two fifths of exports are value added created by foreign countries (foreign value added); in other words, some 40 per cent of exports from ASEAN are foreign inputs. In comparison, the figure in Brunei Darussalam is only 12 per cent (figure 4). Out of \$7 billion in gross exports, foreign value added amounted to less than \$900 million. Over the past two to three decades, this share had declined – to less than 10 per cent in the 2000s – but has risen somewhat recently (figure 5). Because of the heavy reliance of exports on the oil and gas industry, the foreign value added share is determined almost entirely by the mining industry.

The decline or rise of such share means increases or decreases in the share of value added created by domestic entities. While this domestic value added part of exports belongs to the country's GDP, the small and declining share implies that the country has been less integrated into the global economy, or delinked from already small global value chains. This means that the sectors less linked with industries in the backward path, such as petroleum and services, have continued to be dominant. Only one tenth of total exports from the country are inputs imported from abroad.⁷

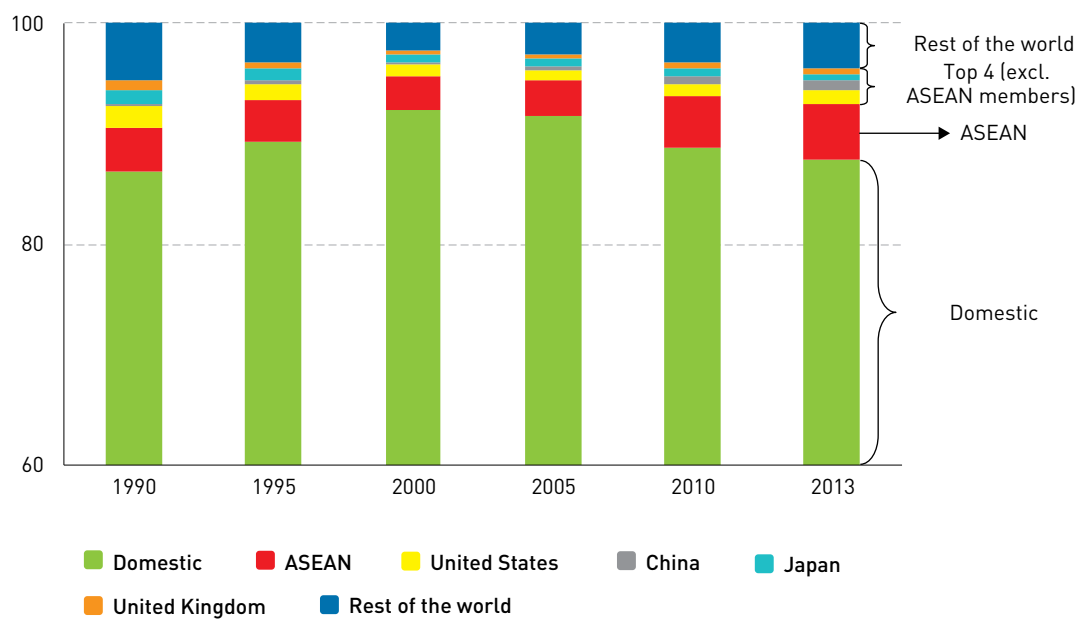
⁷ The OECD TiVA database shows just 5 per cent in 2011.

Figure 4. Value added exports from Brunei Darussalam, 2013 (Millions of dollars)



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

Figure 5. Value added exports from Brunei Darussalam, by domestic, ASEAN and top four foreign value added creators, selected years (Per cent)



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

Box 2. 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 exported goods and services. Furthermore, exports can either go to a foreign market 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:** Foreign value added indicates what part of a country's gross exports consists of inputs that have been produced in other countries. The foreign value added share is the share of the country's exports that do not add to its GDP.
2. **Domestic value added:** Domestic value added 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. Domestic value added 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:** This figure 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 foreign value added are the same.
4. **GVC participation** indicates the share of a country's exports that is part of a multistage trade process, by adding to the foreign value added used in a country's own exports also the value added supplied to other countries' exports. 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 domestic value added contribution of trade, the participation rate is a useful indicator of the extent to which a country's exports are integrated in international production networks.

The GVC participation rate corrects the limitation of the indicators for both foreign and domestic value added, in which countries at the beginning of the value chain (e.g. exporters of raw materials) by definition have low shares of foreign value added content in 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. 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.

Among the foreign inputs used for Brunei exports, however small they are, ASEAN has been the most important source region, followed by the European Union (figure 3). The share of inputs from ASEAN used in Brunei exports has been fluctuating over the past two decades, but it is the largest share and has been increasing recently. This shows that regional value chains, rather than global ones, have been growing over the years. Inputs from other economies, including the European Union, the United States and Japan, have been small. Although the total foreign input ratio remains almost the same, the increasing importance of ASEAN comes at the cost of non-ASEAN countries. Unlike other ASEAN countries, Brunei has seen no rise of China in providing inputs to its exports.

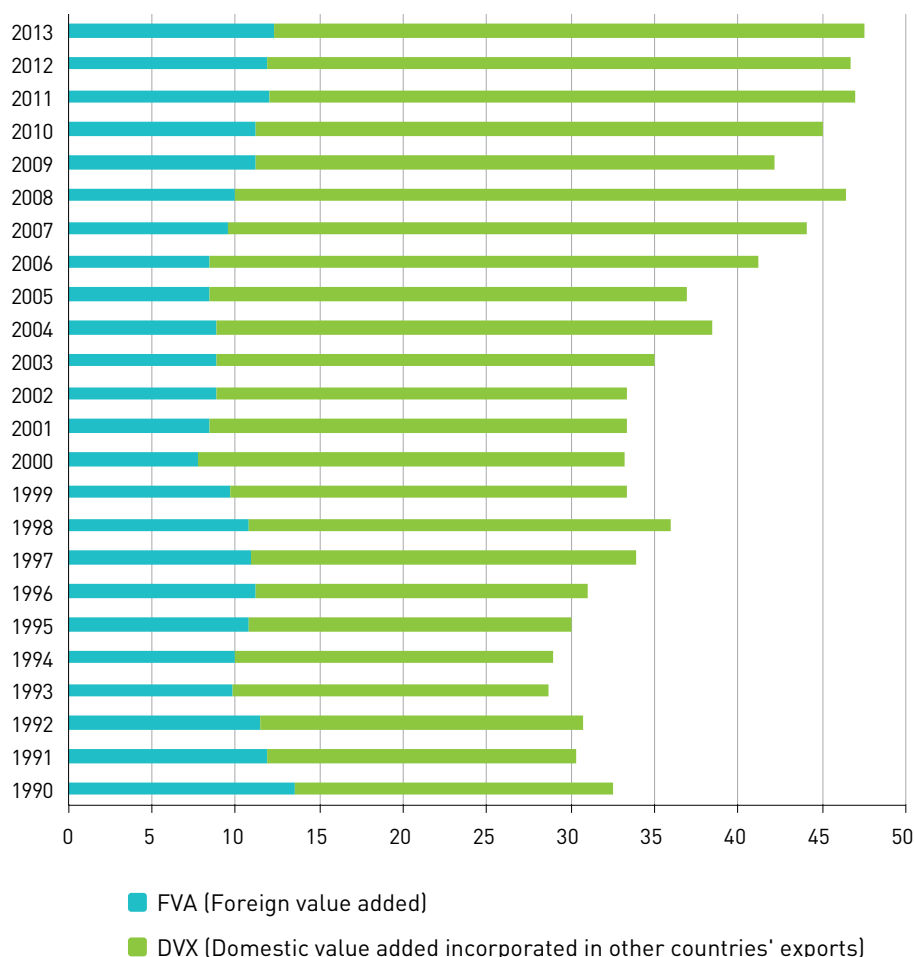
Lower GVC participation hinders opportunities to grow independently and in tandem with other countries ...

Because of the nature of the country's primary products (petroleum), Brunei Darussalam is more involved in the forward part of chains than the backward part (foreign value added) (figure 5). The country's participation in GVCs should take both backward and forward paths.

The positive relationship between the GVC participation rate (backward path plus forward path) and the GDP growth rate is statistically proven (UNCTAD 2013). Thus, the longer the chains are, the more opportunities to grow the country has. Over the past two decades, however, the participation rate has grown because of the rising involvement of Brunei's commodity (petroleum) exports in other countries' exports (figure 6). The longer forward path indicates that Brunei's exports are desired by other countries that use them in exports, as the competitiveness of exports also depends on inputs. Brunei Darussalam should also pay attention to its products after exporting them – a point governments typically overlook. Quality exports become more important in the age of GVCs. The more the materials are used in GVCs of other countries, the more are there opportunities to export. After-sales care in exports can be considered in the commodity area.

The GVC participation rate of Brunei Darussalam as estimated here is much lower than that of other countries, 48 per cent as compared with 64 per cent in 2013 for the ASEAN average (see Paper 1 of this series). This is another challenge the country faces in moving towards a GVC-oriented economy.

Figure 6. GVC participation in Brunei Darussalam, 1990–2013 (Per cent)



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

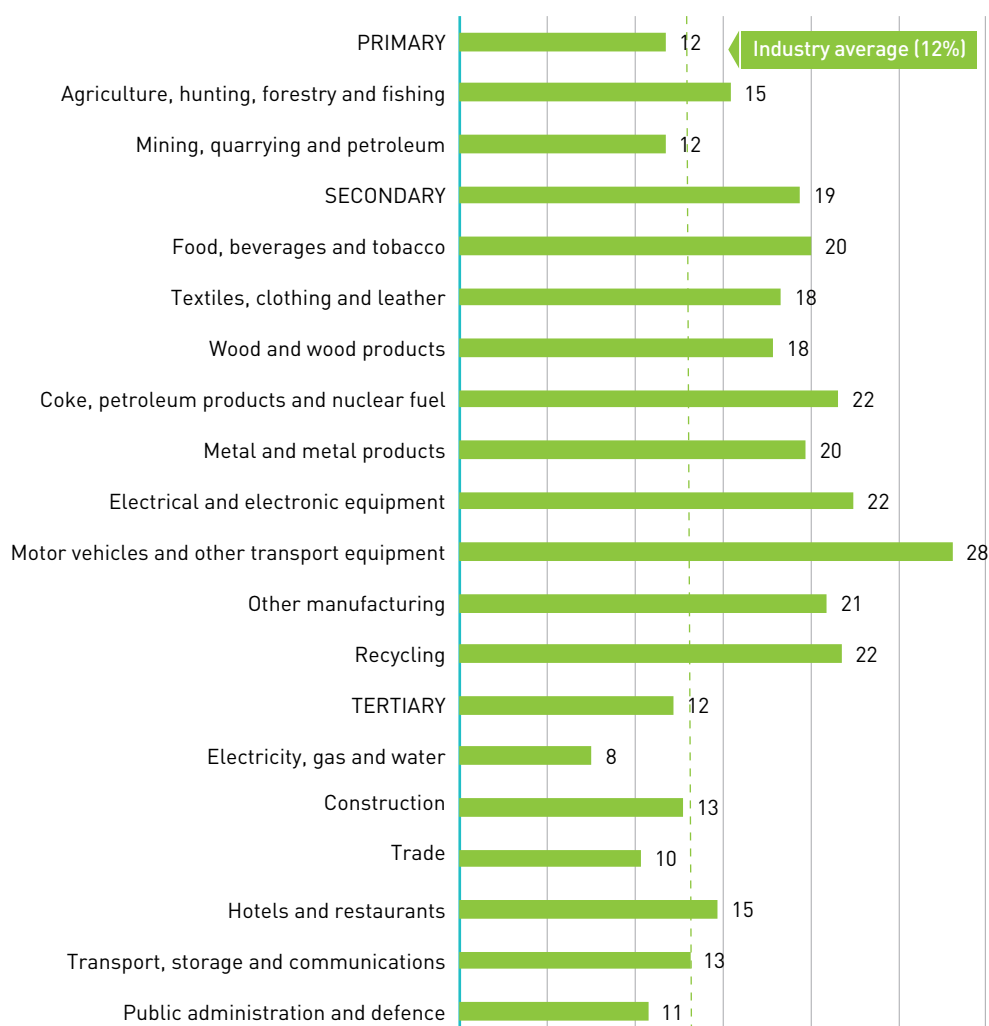
GVCs show variance by sectors: agribusiness has the potential to develop chains both within and outside the country; ...

Most industries – across all three sectors – show small foreign inputs in their exports (figure 7), and their foreign value added shares have remained small over the past two to three decades (figure 8). The average share of foreign value added in Brunei Darussalam is only one third that of the average in ASEAN. Yet all industries that the Government considers strategically important – such as agribusiness and marine transport services – show higher shares of foreign value added than the average (figure 7).

Agribusiness is vital for all countries, as it is central to the provision of food, thereby reducing and eradicating hunger and poverty. It includes agriculture, aquaculture and food processing, as well as manufacturing and distribution.⁸ Although it is essential for the people of the country, from the

⁸ Halal-related businesses should be included, but data for this specific category are not separately available.

Figure 7. Brunei Darussalam: Share of foreign value added in exports, by industry, 2013 (Per cent)



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

Government’s point of view what is more important is that it may represent a future growth sector, as the country has abundant water resources, more than enough to grow crops to feed the whole nation. Agriculture is also the source of mass and rural employment, though arable land accounts for only 2 per cent of the total.

Agribusiness has not yet developed into a sizeable export industry. Its value added exports are negligible (\$16 million in 2013, compared with \$4.7 billion for mining, quarrying and petroleum). In Brunei exports, foreign value added (or foreign inputs to the exports) accounted for about 18 per cent of total export value. Among ASEAN member states, Singapore’s contribution to exports from Brunei Darussalam, ranging from wholesale and retail trade to (plant) nursery products, is the largest. But all foreign inputs are very tiny, as the country’s exports are still very small. In contrast to foreign value added, domestic value added in trade accounted for more than four fifths of exports, contributed by agriculture-related industries as well as some financial and wholesale trade industries.

Figure 8. Which industries in Brunei Darussalam have been more involved in GVCs between 1990 and 2013? (Share of foreign value added in Brunei exports)

Sector and industry		1990	↑ → ↓	2013
Primary	Primary total	11.9	↓	1.7
	Agriculture, hunting, forestry and fishing	22.7	↓	15.4
	Mining, quarrying and petroleum	11.9	↓	11.7
Manufacturing	Manufacturing total	23.3	↓	19.4
	Food, beverages and tobacco	25.1	↓	20
	Textiles, clothing and leather	25.9	↓	18.3
	Wood and wood products	20.7	↓	17.9
	Coke, petroleum products and nuclear fuel	21.3	↑	21.6
	Metal and metal products	21.8	↓	19.7
	Electrical and electronic equipment	26	↓	22.4
Motor vehicles and other transport equipment	32.5	↓	28.1	
Services	Services total	15	↓	12.2
	Electricity, gas and water	7	↑	7.5
	Construction	14	↓	12.7
	Trade	12.6	↓	10.4
	Hotels and restaurants	18.8	↓	14.7
	Transport, storage and communications	15.2	↓	13.1
	Public administration and defence	12.8	↓	10.7

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

Note: Based on ISIC two- and three-digit levels.

As agribusiness products are widely used not only for consumption at hotels and restaurants, but also as inputs to other industries (e.g. palm oil, rubber), they constitute one of the basic elements of other industries' exports from the country. The forward path of such value chains is longer than the backward path.

Within the country, the two foods-related industries – the agriculture, hunting, forestry and fishing industry, and the food products, beverages and tobacco industry – both rank high on the linkage effect table. Their additional demand influences the economy most at the third and seventh place, respectively, among 34 industries (figure 1).

The expansion of agribusiness products needs capital, technology and labour. FDI is a viable option for increasing production and enhancing the competitiveness of products, provided that there is availability of labour. As of today only a few investment cases are recorded in this sector (table 2). All of the investors are small and not engaged extensively in production networks. Therefore FDI plays no visible role in creating value chains in the sector.

Table 2. Foreign investment in agribusiness in Brunei Darussalam

Investor name	Investor country	Investment amount (\$ million)	Industry	Year
TT Resources	Malaysia	43.6	Food services	2003
Chicken Rice Shop	Malaysia	43.6	Food services	2007
Yiew Kwang Pui ^a	Malaysia	0	Flowers, nursery stock, and florist supplies	2008
Reliv International	United States	13.6	All other food	2009
Guangxi Wangwangda Farmers Company	China	8	Crop production	2009
Raoping Jinhang Deep Sea Cage Development	China	1.45	Animal production	2009
GCH Retail (Malaysia)	Hong Kong	43.6	Food and beverage stores (Food and tobacco)	2010
Beston Global	Australia	13.6	Food and tobacco, All other food	2015
Kim Teck Cheong	Malaysia	0.37	Food and tobacco, All other food	2015

Source: AJC, based on UNCTAD data.

^a Acquired Equator International Corp, an ornamental plants wholesaler, from Equator Life Science Bhd, for a nominal consideration of B\$1,407.

...transport services have not yet developed production chains, and need to be integrated into overall production networks;...

Logistical services such as procurement and transport are considered important functions of production chains and strategically located in a country where costs can be minimized. The Government has identified logistical services as a priority sector and made efforts to expand, particularly in marine transport. These efforts have not paid off yet in terms of export value or GVC context.

With only \$0.8 billion in gross value added exports,⁹ the foreign contribution in 2013 was 13 per cent, the rest being accounted for by domestic industries. ASEAN as a whole contributed 40 per cent of foreign value added, followed by China and Japan. Transport, and financial intermediation and business activities accounted for the bulk of domestic value added created in exports of transport services.

One foreign acquisition was recorded in 2014: Sears Marine SA of Singapore acquired a 50 per cent interest in Maritam Indah Sdn Bhd, a deep sea foreign freight transportation company, for B\$0.063 million (\$0.049 million). In air transport, two investments are registered: DHL (Germany) and Garuda International (Indonesia) established a logistics, distribution and transportation facility for \$61 million in 2007 and a sales, marketing and support company for \$70 million in 2012, respectively. Even though Deutsche Post, a parent company of DHL, operates a worldwide transport network, foreign investments are not enough to create value chains in the industry in this country.

⁹ This includes transport, storage and communications services.

... and the government also identifies ICT and life sciences for future industries, both of which would provide the country with opportunities to enter the value chains, but difficulties abound.

Singapore and Malaysia provided inputs such as business and technical services to the ICT exports from Brunei Darussalam. With R&D and knowledge-based services being promoted, life sciences are another area that would pave the way for GVCs. As for ICT, Malaysia and Singapore are the main foreign input providers to Brunei's exports in this area, though contributing value seems to be limited and only in pharmaceutical and petroleum and gas sectors.

Production of life sciences products ranging from pharmaceuticals and chemicals to daily-use products such as cosmetics and other oil derivatives can be built upon Brunei's existing resources. However, TNCs tend to locate their design, R&D, and intellectual activity facilities, all of which are essential elements of life science value chains, either in their home countries or in very specific locations where they can exercise intellectual property rights, utilize intellectual resources and enjoy synergies from agglomeration of firms or clustering of industry and academia. There is no record of foreign investments in such intellectual facilities in Brunei Darussalam. Difficulties abound in establishing infrastructure and putting in place intellectual assets as there is little investment in this area. The country should make efforts to attract a traditional foreign investment to serve as a model for investment in ICT or life sciences, so that this may attract associated investment from abroad later on.

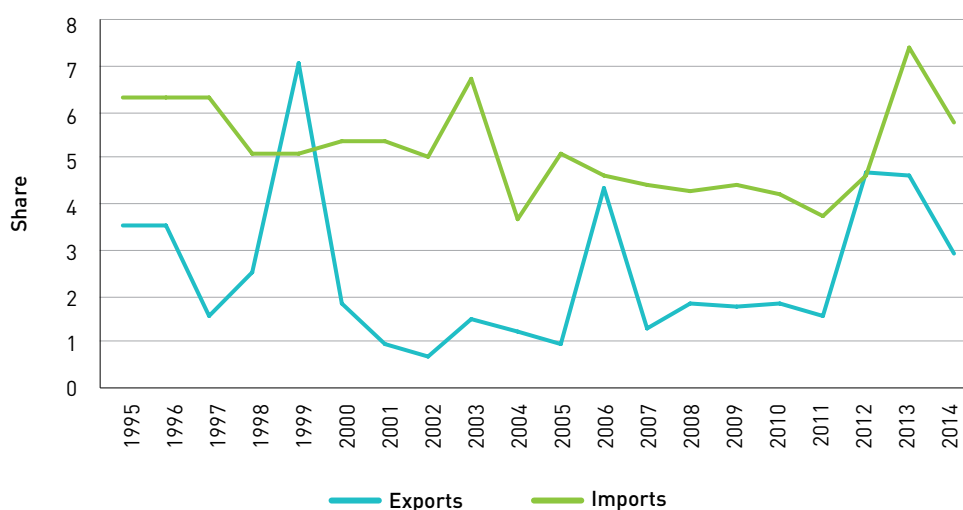
The minimal level of parts and components trade is another indication of lower participation in GVCs, although the country has the capacity to engage in high-technology manufacturing.

Brunei Darussalam should pursue a GVC strategy both to increase their participation in value chains and to maintain the high share of domestic value added creation. That high share is a result of the smaller contribution by foreign inputs to the country's exports, not a rise in the productivity of local production. The export structure, which is heavily dependent on commodities (oil and gas), has not changed over the years. Only 5 per cent of merchandise exports are manufactured products; the rest are commodities. The majority of both exporting and importing businesses deal in final products, or products that are finished in, or originate from, the trading partner countries. In the manufacturing sector, trade in parts and components is a very small share, just 2–3 per cent of merchandise exports and 5 per cent of merchandise imports (figure 9).

The small share of parts and components or intermediate products in trade does not mean that the country's export structure in manufactured products is geared to lower-technology products. In fact, nearly four fifths of exports of manufactured products, which amounted to only \$466 million in 2014, are related to high-skill and technology-intensive manufactures (table 3; mainly non-electronic machinery and transport equipment products). This large share implies that the country has the capacity to engage in high-technology and knowledge-based industries; yet, because of limited opportunities to operate in global production networks, Brunei Darussalam does not enjoy the benefits emanating from participation in GVCs and RVCs. The capability to join, and move up higher path of, value chains as well as upgrade the manufacturing industry through technological development is paramount in creating more domestic value added.

Such capacity can be also used to engage in processing raw materials not just exporting raw commodities. The country could jump into higher-value chains by using skills in engineering and ICT-related knowledge-based services. Finally, to participate in GVCs, the country needs to put in place enabling policies; an important one relates to FDI.

Figure 9. Shares of parts and components in Brunei's manufactured trade, 1995–2014 (Per cent)



Source: UNCTAD's GlobStat database.

Table 3. Brunei's export manufactured goods by technology intensity, 1995–2014 (Per cent)

Manufactured goods	1995	2000	2005	2010	2011	2012	2013	2014
Labour-intensive and resource-intensive manufactures	28.5	55.2	75.9	45.1	44.1	2.7	5.8	3.1
Low-skill and technology-intensive manufactures	34.3	27.1	5.9	10.9	9.1	5.5	14.1	4.9
Medium-skill and technology-intensive manufactures	12.7	9.3	6.8	22	23.1	13.4	20.5	14.8
Medium-skill: Electronics (excluding parts and components) ^a	0.1	0	0	0	0	0.1	0.1	0.1
Medium-skill: Parts and components for electrical and electronic goods ^b	0.4	0.2	0.1	0.3	0.2	0.9	2.3	0.6
Medium-skill: Other, excluding electronics	12.2	9.1	6.7	21.7	22.8	12.4	18.2	14.2
High-skill and technology-intensive manufactures	24.5	8.5	11.3	22	23.7	78.4	59.5	77.2
High-skill: Electronics (excluding parts and components) ^c	1.3	0.8	0.7	0.9	0.7	0.9	0.9	0.4
High-skill: Parts and components for electrical and electronic goods ^d	3.1	1.6	0.8	1.6	1.3	3.8	2.4	2.3
High-skill: Other, excluding electronics	20	6.1	9.8	19.6	21.6	73.8	56.3	74.4
Total manufactured goods	100	100	100	100	100	100	100	100
Value of total export manufactured goods (\$ million)	196	405	435	162	214	435	232	466

Source: UNCTAD, GlobStat database.

Note: Does not include primary commodities, which account for 95 per cent of total merchandise exports from Brunei Darussalam.

^a SITC 775.

^b SITC 772.

^c SITC 751 + 752 + 761 + 762 + 763.

^d SITC 759 + 764 + 776.

FDI to promote GVC participation is a viable option for the country, ...

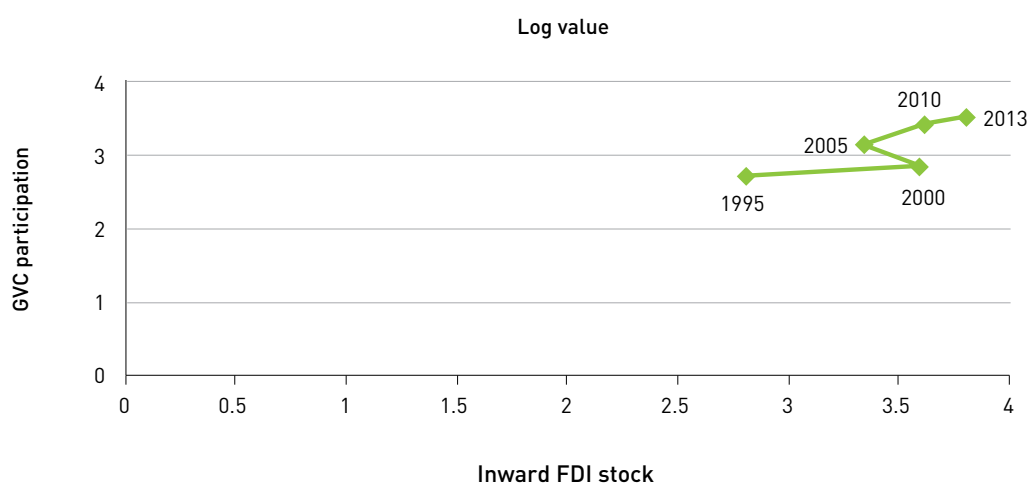
FDI into Brunei Darussalam is small (figure 2). In a country with such a small economy (\$15 billion in GDP in 2014), just one big investment with its associated investments can change the structure of an entire industry (as did the well-known example of Intel's investment in Costa Rica in 1996) and provide the country with opportunities to participate in production chains that have developed regionally (ASEAN) or globally. Although the country has only small participation in GVCs today, there is some relationship between GVC participation and the level of FDI (figure 10).

... but the impact of GVC participation on economic growth has not yet been substantiated.

Unlike in many other countries in ASEAN (see Papers 3–11 of this series), in Brunei Darussalam, there is a weak relationship between GVC participation and economic growth. The relationship is not established in part because the low degree of GVC participation, in particular in the upstream part, does not affect the competitiveness of exports or the economy. Figure 11 illustrates this weak relationship. The country needs, first and foremost, to mainstream GVCs in its economic strategy, and explicitly advocate participation in GVCs.

Integration into GVCs can start with the petroleum industry. The Government believes that the creation of downstream activities in the industry can increase value added in the economy. In an energy white paper, the Government identified the refining and production of basic and specialty chemicals and fertilizers as an opportunity in its downstream activities (Brunei Government 2014b). The strategic plan of the Department of Economic Planning and Development for 2014–2023 points in a similar direction (Brunei Government 2015). The Government is making efforts to create, attract

Figure 10. Relationship between GVC participation and FDI presence in Brunei Darussalam, selected years



Source: AJC-UNCTAD-Eora database on ASEAN GVCs (for GVC participation) and UNCTAD FDI/TNC database (for FDI stock).
 Note: For GVC participation, the log of the sum of foreign value added (FVA) and domestic value added incorporated in other countries (DVX), both of which are in millions of dollars, is used, while, for inward FDI stock, its log in millions of dollars is used.

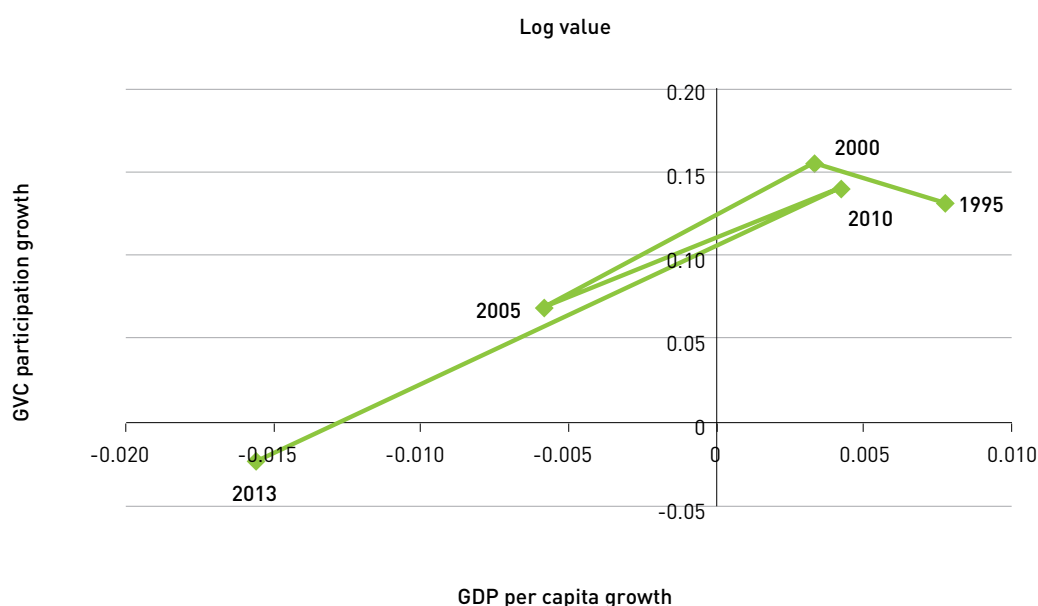
and participate in GVCs. The question is whether the Government should understand better what GVCs mean for the economy and how the economy is integrated into regional or international production networks beyond the petroleum industry.

In this respect, although the upstream part of GVC participation has been small, it is interesting to note that contributions from other ASEAN member states to Brunei exports have been rising. In 2013, the foreign value added share was 12 per cent, but more than two fifths of this share was contributed by other ASEAN member states (see the first three columns of table 4). This implies that in forming GVCs in the country, ASEAN has been more and more important. Creating RVCs, rather than GVCs, is the first step in forming linkages with foreign countries.

An economy that is too dependent on a few products is always vulnerable to dangers emanating from outside factors. Brunei Darussalam is such a country, and oil and gas are typically such products. Given that the bulk of the country’s GVC participation is in the downstream segment of the value chains, the higher value added incorporated in other countries’ exports represents a vulnerability to shocks (e.g. the advent of shale gas and alternative energies, climate change concerns, looming global protectionism)

An environment that is conducive for investment requires an overall policy environment that addresses investment, tax, competition, labour market regulation, intellectual property rights and a range of other issues. In particular, attracting greater FDI from fellow ASEAN member states will require coordination and cooperation among member states as well as pushing the integration process forward through various mechanisms to facilitate the ASEAN Economic Community.

Figure 11. Relationship between GVC participation and economic growth rates in Brunei Darussalam, selected years



Source: AJC-UNCTAD-Eora database on ASEAN GVCs and UNCTAD FDI/TNC database (for FDI stock).
 Note: 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 of which are in millions of dollars, are used, while, for GDP per capita, yearly differences in its log in dollars are used.

Table 4. GVC and RVC participation in Brunei Darussalam, 1990–2013 (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	13.5	9.4	4.1	19	16.1	2.9	32.5	7
1995	10.8	7	3.8	19.3	15.1	4.2	30.1	8
2000	7.8	4.8	2.9	25.4	20	5.4	33.2	8.3
2005	8.3	5.2	3.2	28.6	22	6.5	36.9	9.7
2010	11.2	6.7	4.5	33.9	26.6	7.3	45.1	11.8
2013	12.3	7.2	5.1	35.2	27.7	7.5	47.6	12.6

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

FDI facilitation measures to target specific industries and even specific companies are required. Infrastructure is a prerequisite.

In all prioritized industries GVCs are weak. As has been demonstrated in many Asian countries, FDI could create, expand and improve GVCs. Sound GVCs require sound infrastructure and healthy domestic partners, particularly local small and medium-size enterprises. More attention should be given to other ASEAN member states, as they have also become important global and regional investors. As a member of ASEAN, Brunei Darussalam can take advantage of rising opportunities to harness GVCs and RVCs for sustainable development.

Today many ASEAN firms are becoming global, and some of them are even being “born global” (ASEAN and UNCTAD 2016). In addition to foreign firms already operating in ASEAN, they are another group of firms for Brunei Darussalam to partner with. The foreign firms, mostly Japanese ones, are already expanding their networks within ASEAN in response to changing demographic factors, changing competitive advantages of ASEAN countries, and evolving ASEAN markets, which have made the region a more dynamic consumption and production centre.

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Annex table 1. Value added exports of goods and services from Brunei Darussalam, by value added creator, 1990-2013 (Thousands of dollars)

	Value added creator	Exports from Brunei Darussalam					
		1990	1995	2000	2005	2010	2013
Foreign value added (FVA)	World	165 275	181 262	166 483	310 348	632 761	863 827
	Developed countries	83 082	90 213	77 045	136 244	246 887	325 289
	Europe	36 901	38 447	32 871	63 100	113 303	153 832
	European Union	34 893	35 995	30 801	59 045	104 566	142 227
	United Kingdom	10 485	9 632	9 428	16 674	28 270	37 798
	Germany	8 220	8 925	6 920	13 216	24 692	33 743
	Italy	3 571	3 421	2 926	5 665	9 703	13 332
	France	3 178	3 489	2 794	5 641	9 516	12 970
	Netherlands	1 806	2 175	1 750	3 257	5 829	7 800
	Sweden	1 573	1 278	841	1 664	2 944	4 099
	Belgium	1 178	1 358	1 033	2 252	3 974	5 472
	Spain	938	1 263	1 014	2 200	3 721	5 186
	Other developed Europe	2 009	2 453	2 070	4 055	8 738	11 606
	Norway	535	629	606	1 089	2 232	2 694
	Switzerland	1 223	1 602	1 280	2 635	5 880	8 022
	North America	23 991	26 279	23 997	37 596	65 948	87 511
	Canada	885	988	1 256	2 224	4 233	5 683
	United States	23 034	25 242	22 705	35 319	61 630	81 714
	Other developed countries	22 190	25 486	20 176	35 548	67 636	83 946
	Australia	5 143	5 476	4 757	9 669	23 273	31 852
	Japan	15 790	18 533	14 083	23 475	39 658	45 615
	New Zealand	906	1 111	926	1 716	3 262	4 498
	Developing countries	80 094	89 420	87 846	170 155	376 733	524 870
	Africa	3 460	2 889	2 791	5 796	12 266	16 236
	Latin America and the Caribbean	2 997	3 113	3 031	5 594	12 654	16 922
	Asia	73 386	83 169	81 822	158 412	351 085	490 721
	West Asia	1 935	1 799	1 875	4 135	8 712	12 671
	South, East and South-east Asia	71 451	81 371	79 947	154 277	342 373	478 049
	East Asia	19 395	14 097	14 328	29 234	68 075	96 287
	China	2 896	4 344	5 295	14 931	42 141	62 066
	Hong Kong, China	1 931	2 324	2 151	3 316	5 331	6 794
	Korea, Republic of	2 117	2 991	2 667	5 310	11 551	15 636
Taiwan Province of China	12 285	4 323	4 103	5 458	8 559	11 020	
South Asia	1 773	2 967	2 936	7 303	17 655	25 086	
India	1 182	2 181	2 219	5 709	14 054	19 631	
Iran, Islamic Republic of	271	431	391	1 015	2 295	3 575	
ASEAN	50 283	64 306	62 683	117 740	256 643	356 676	
Cambodia	29	52	45	102	222	315	
Indonesia	3 409	6 556	6 159	10 359	25 369	34 945	
Lao People's Democratic Republic	29	34	34	58	159	224	
Malaysia	15 325	15 352	17 654	33 452	70 946	93 203	
Myanmar	96	82	103	104	283	432	
Philippines	900	1 468	1 054	2 171	5 814	8 354	
Singapore	26 206	34 789	32 494	61 455	135 705	192 607	
Thailand	4 018	5 584	4 695	9 384	17 217	25 390	
VietNam	270	390	444	655	927	1 206	
Oceania	251	249	202	352	727	992	
Transition economies	2 100	1 629	1 592	3 948	9 140	13 668	
	Domestic value added (DVA)	1 058 450	1 498 588	1 975 646	3 407 378	5 018 412	6 140 541
	Gross exports	1 223 725	1 679 850	2 142 128	3 717 726	5 651 172	7 004 369

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

Note: All values are estimated. The region/country refers to that to which the value added attributes. See box 2 for the GVC terminology.

Annex table 2.1. Value added exports of goods and services from Brunei Darussalam, by value added creator, and by

		Exports from Brunei Darussalam by sector/industry						
		Primary			Manufacturing			
Value added creator	Total	Agriculture, hunting, forestry and fishing	Mining and quarrying	Total	Food, beverages and tobacco	Textiles, clothing and leather	Wood and wood products	Coke, petroleum products and nuclear fuel
World	98 419	554	97 865	17 196	307	3 934	265	8 524
Developed countries	50 846	226	50 619	8 037	116	1 530	116	4 022
Europe	23 084	109	22 975	3 741	46	756	54	1 824
European Union	21 811	101	21 710	3 534	43	712	51	1 730
United Kingdom	6 486	23	6 463	936	10	184	14	434
Germany	5 258	17	5 242	870	9	142	11	471
Italy	2 194	8	2 187	362	4	91	5	161
France	1 990	8	1 982	355	5	74	5	179
Netherlands	1 111	5	1 106	197	4	38	3	101
Sweden	1 004	5	1 000	159	2	29	4	73
Belgium	747	3	744	133	2	30	2	64
Spain	586	4	582	113	1	23	1	64
Other developed Europe	1 273	9	1 265	206	3	44	3	94
Norway	330	2	328	57	1	12	1	28
Switzerland	790	3	787	126	2	24	2	59
North America	14 097	54	14 043	2 064	30	361	32	1 083
Canada	528	3	525	94	2	20	2	48
United States	13 525	50	13 475	1 963	29	338	30	1 033
Other developed countries	13 665	63	13 602	2 232	39	413	29	1 116
Australia	2 916	19	2 896	578	18	121	8	319
Japan	10 012	35	9 977	1 512	18	262	19	718
New Zealand	524	6	518	107	3	20	1	65
Developing countries	46 280	305	45 975	8 953	188	2 342	146	4 428
Africa	2 084	43	2 042	325	6	113	5	105
Latin America and the Caribbean	1 781	33	1 747	294	5	95	5	105
Asia	42 263	225	42 037	8 311	177	2 125	135	4 211
West Asia	1 123	14	1 109	205	3	57	3	95
South, East and South-East Asia	41 140	212	40 929	8 106	174	2 068	133	4 117
East Asia	11 605	90	11 514	2 231	28	771	34	873
China	1 748	9	1 739	373	5	96	5	197
Hong Kong, China	1 101	3	1 098	247	2	109	4	80
Korea, Republic of	1 264	5	1 258	266	3	104	3	98
Taiwan Province of China	7 393	71	7 322	1 330	18	456	22	493
South Asia	1 045	11	1 033	233	4	85	3	94
India	704	4	700	166	3	57	3	72
Iran, Islamic Republic of	154	3	152	30	0	10	0	11
ASEAN	28 491	110	28 381	5 642	141	1 211	95	3 149
Cambodia	16	0	16	3	0	1	0	1
Indonesia	1 992	8	1 984	403	7	101	10	211
Lao People's Democratic Republic	17	0	17	3	0	1	0	1
Malaysia	7 673	41	7 632	1 699	75	376	28	948
Myanmar	46	1	45	10	1	4	0	3
Philippines	514	4	510	93	3	21	2	47
Singapore	15 934	43	15 892	2 867	45	521	49	1 647
Thailand	2 154	11	2 143	540	10	178	5	283
VietNam	144	2	142	26	1	9	0	10
Domestic value added (DVA)	726 331	1 889	724 442	56 470	918	11 273	1 012	31 585
Gross exports	824 750	2 443	822 307	73 666	1 225	15 207	1 277	40 109

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

Note: All values are estimated. The region/country refers to that to which the value added attributes. See box 2 for the GVC terminology.

sector/industry, 1990 (Thousands of dollars)

Exports from Brunei Darussalam by sector/industry

Metal and metal products	Electrical and electronic equipment	Motor vehicles and other transport equipment	Services						
			Total	Trade	Hotels and restaurants	Transport, storage and communications	Financial intermediation and business activities, unsp.	Public administration and defence	Education, health and other services, unsp.
400	1 535	889	47 991	5 029	16 855	21 016	63	286	2 960
202	918	531	23 522	2 677	6 709	11 558	34	157	1 480
92	437	241	9 729	1 007	2 793	4 760	15	67	669
87	412	228	9 230	955	2 627	4 538	14	63	636
25	127	69	2 995	336	711	1 597	5	21	206
21	103	58	2 051	201	569	1 017	3	14	150
8	44	25	994	105	246	531	1	7	64
8	40	21	813	71	274	367	1	5	57
4	21	11	486	41	182	206	1	3	33
4	21	11	396	36	135	174	1	3	27
3	14	8	287	26	96	127	0	2	21
2	8	5	222	23	72	100	0	1	15
5	25	13	498	51	165	222	1	3	34
1	6	3	140	13	48	62	0	1	9
3	18	9	299	28	94	138	0	2	21
47	235	131	7 682	1 085	1 879	3 962	11	50	445
2	8	5	254	22	91	113	0	2	15
45	226	126	7 411	1 060	1 782	3 843	10	49	429
63	247	159	6 111	585	2 037	2 835	8	40	366
12	40	23	1 602	113	796	545	2	8	89
49	200	132	4 168	439	1 079	2 174	6	30	260
2	4	3	254	22	131	80	0	1	13
191	603	349	23 967	2 283	9 964	9 261	29	126	1 451
7	15	11	869	128	325	337	1	4	46
7	16	11	778	107	285	313	1	4	42
176	571	326	22 258	2 039	9 330	8 588	27	118	1 359
5	12	7	552	58	181	260	1	3	31
171	559	319	21 706	1 981	9 149	8 328	26	115	1 329
52	160	102	5 245	587	1 686	2 371	7	32	344
8	23	13	750	69	264	328	1	5	51
4	19	12	578	61	136	320	1	4	34
7	22	12	572	65	160	284	1	4	36
33	95	63	3 304	384	1 111	1 424	4	19	221
5	12	7	454	45	191	168	1	2	28
4	9	5	300	24	134	107	0	2	19
1	1	1	75	10	26	32	0	0	4
114	388	210	16 007	1 349	7 271	5 789	19	80	957
0	0	0	8	1	3	3	0	0	0
9	22	13	998	117	371	399	1	5	61
0	0	0	7	1	3	3	0	0	0
27	94	52	5 924	355	3 769	1 349	5	21	282
0	0	0	37	3	23	8	0	0	2
2	6	3	284	32	114	110	0	1	16
67	244	129	7 361	687	2 413	3 375	11	46	521
7	19	12	1 299	141	540	507	1	6	70
0	1	1	90	13	36	34	0	0	4
1 436	4 372	1 848	271 410	34 816	72 987	117 704	1 030	1 949	31 462
1 836	5 907	2 737	319 402	39 845	89 842	138 720	1 093	2 234	34 422

Annex table 2.2. Value added exports of goods and services from Brunei Darussalam, by value added creator, and by

Value added creator	Exports from Brunei Darussalam by sector/industry							
	Primary			Manufacturing				
	Total	Agriculture, hunting, forestry and fishing	Mining and quarrying	Total	Food, beverages and tobacco	Textiles, clothing and leather	Wood and wood products	Coke, petroleum products and nuclear fuel
World	110 359	329	110 030	24 897	206	8 916	186	10 803
Developed countries	55 993	149	55 844	11 314	86	3 616	82	4 985
Europe	24 268	71	24 197	5 132	33	1 722	37	2 203
European Union	22 697	65	22 631	4 807	31	1 609	34	2 076
United Kingdom	6 013	14	5 999	1 138	7	391	9	444
Germany	5 758	11	5 747	1 201	7	345	8	576
Italy	2 098	5	2 093	458	3	186	3	166
France	2 180	5	2 174	498	4	175	3	212
Netherlands	1 332	4	1 329	307	3	105	3	135
Sweden	820	2	818	165	1	54	2	64
Belgium	854	2	852	200	1	74	2	82
Spain	813	3	810	204	1	59	1	113
Other developed Europe	1 572	6	1 565	325	2	113	2	127
Norway	389	2	388	89	1	30	1	39
Switzerland	1 045	2	1 043	208	1	66	1	82
North America	15 780	36	15 744	2 970	24	900	24	1 379
Canada	596	2	594	135	1	45	1	61
United States	15 153	34	15 120	2 828	22	851	23	1 317
Other developed countries	15 944	42	15 903	3 212	29	994	21	1 403
Australia	3 135	13	3 123	796	13	281	6	374
Japan	11 908	23	11 885	2 196	14	645	14	911
New Zealand	674	4	670	171	2	47	1	102
Developing countries	53 342	167	53 175	13 370	118	5 200	103	5 757
Africa	1 755	23	1 732	386	3	196	3	106
Latin America and the Caribbean	1 873	23	1 850	417	4	203	3	124
Asia	49 562	118	49 444	12 535	111	4 783	96	5 520
West Asia	1 059	7	1 052	254	2	103	2	104
South, East and South-East Asia	48 503	111	48 392	12 281	109	4 680	95	5 416
East Asia	8 438	23	8 415	2 360	13	1 169	16	752
China	2 611	7	2 604	755	5	340	5	291
Hong Kong, China	1 307	2	1 305	429	2	257	3	99
Korea, Republic of	1 792	4	1 788	467	3	226	3	147
Taiwan Province of China	2 658	8	2 650	693	4	338	6	213
South Asia	1 775	9	1 766	563	4	258	3	230
India	1 322	4	1 318	435	3	188	2	192
Iran, Islamic Republic of	252	3	250	63	0	27	0	25
ASEAN	38 290	79	38 210	9 359	92	3 253	76	4 434
Cambodia	26	0	25	12	0	9	0	2
Indonesia	3 956	8	3 948	1 038	9	351	12	526
Lao People's Democratic Republic	21	0	20	4	0	3	0	1
Malaysia	8 832	19	8 812	2 233	30	728	17	1 121
Myanmar	38	1	38	13	0	8	0	3
Philippines	873	4	869	203	3	69	2	94
Singapore	21 321	36	21 285	4 734	41	1 526	40	2 241
Thailand	2 994	9	2 985	1 056	8	535	4	414
VietNam	230	2	228	65	1	25	0	33
Domestic value added (DVA)	1 001 249	1 939	999 310	106 807	937	40 792	973	46 297
Gross exports	1 111 608	2 267	1 109 341	131 705	1 143	49 709	1 159	57 100

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

Note: All values are estimated. The region/country refers to that to which the value added attributes. See box 2 for the GVC terminology.

sector/industry, 1995 (Thousands of dollars)

Exports from Brunei Darussalam by sector/industry

Metal and metal products	Electrical and electronic equipment	Motor vehicles and other transport equipment	Services						
			Total	Trade	Hotels and restaurants	Transport, storage and communications	Financial intermediation and business activities, unsp.	Public administration and defence	Education, health and other services, unsp.
289	1 908	996	45 099	4 333	15 538	20 954	47	170	3 266
143	1 087	569	22 486	2 352	6 780	11 221	25	90	1 623
63	480	247	8 831	789	2 725	4 396	10	37	701
59	446	229	8 296	743	2 539	4 148	10	34	659
15	126	65	2 440	243	624	1 325	3	10	191
15	117	61	1 940	166	572	987	2	8	163
5	44	23	854	81	227	462	1	4	64
6	45	23	797	61	285	366	1	3	65
3	26	13	527	38	212	224	1	2	41
2	18	9	287	23	105	128	0	1	23
3	17	8	296	23	109	132	0	1	24
2	11	6	236	20	80	111	0	1	19
4	34	18	535	46	186	247	1	2	42
1	7	3	146	11	55	65	0	1	11
3	27	14	343	28	112	165	0	2	28
34	278	143	7 436	924	1 947	3 924	8	29	493
2	10	6	251	19	93	116	0	1	18
33	268	137	7 175	904	1 850	3 804	8	28	475
45	328	179	6 219	638	2 108	2 901	6	25	430
8	47	23	1 515	90	805	498	1	4	95
35	274	150	4 370	522	1 141	2 284	5	19	315
1	5	4	253	17	133	84	0	1	15
143	810	421	22 273	1 941	8 628	9 595	22	78	1 620
4	16	10	651	76	263	260	0	2	40
5	19	11	727	82	280	305	1	2	45
134	773	399	20 841	1 776	8 063	9 009	21	74	1 532
3	13	8	460	38	157	225	0	2	30
131	760	391	20 381	1 738	7 905	8 784	21	72	1 502
27	155	82	3 236	296	1 022	1 597	3	13	241
9	41	21	960	85	351	425	1	4	75
3	26	15	583	55	150	326	1	3	39
6	38	19	722	63	220	372	1	3	51
9	50	26	946	90	292	464	1	4	75
5	20	11	598	46	257	236	1	2	45
4	16	9	416	27	186	159	0	1	33
1	3	1	105	10	37	48	0	0	7
99	585	298	16 547	1 396	6 627	6 951	17	57	1 215
0	0	0	13	1	7	4	0	0	1
10	45	24	1 547	146	614	640	1	5	110
0	0	0	7	1	3	3	0	0	0
21	128	65	4 270	306	2 158	1 444	4	12	282
0	0	0	29	2	19	6	0	0	1
3	12	6	383	35	170	145	0	1	25
58	367	185	8 696	732	3 015	4 049	10	33	695
7	30	17	1 514	164	604	625	1	5	95
0	2	1	89	10	38	35	0	0	5
1 374	6 809	2 668	386 130	47 859	109 150	169 707	1 093	1 658	49 493
1 663	8 717	3 664	431 229	52 192	124 688	190 661	1 140	1 828	52 759

Annex table 2.3. Value added exports of goods and services from Brunei Darussalam, by value added creator, and by

Value added creator	Exports from Brunei Darussalam by sector/industry							
	Primary			Manufacturing				
	Total	Agriculture, hunting, forestry and fishing	Mining and quarrying	Total	Food, beverages and tobacco	Textiles, clothing and leather	Wood and wood products	Coke, petroleum products and nuclear fuel
World	106 076	321	105 756	26 124	178	10 161	145	9 448
Developed countries	49 877	139	49 738	11 269	71	4 017	61	3 990
Europe	21 353	67	21 286	4 957	27	1 854	27	1 692
European Union	19 992	61	19 930	4 640	25	1 734	25	1 593
United Kingdom	6 076	16	6 060	1 310	7	498	7	399
Germany	4 584	9	4 575	1 039	5	339	5	396
Italy	1 853	4	1 849	436	2	186	2	128
France	1 802	5	1 797	447	3	172	2	153
Netherlands	1 119	3	1 116	279	2	106	2	100
Sweden	555	2	553	125	1	46	1	38
Belgium	671	2	669	169	1	68	1	56
Spain	668	3	666	177	1	61	1	81
Other developed Europe	1 361	6	1 355	316	2	120	2	99
Norway	390	2	388	98	1	37	1	36
Switzerland	856	2	854	191	1	66	1	59
North America	15 397	35	15 362	3 303	20	1 121	19	1 237
Canada	809	2	806	199	1	72	1	75
United States	14 566	32	14 534	3 099	19	1 046	18	1 161
Other developed countries	13 128	38	13 090	3 010	23	1 042	16	1 061
Australia	2 900	12	2 888	781	11	302	4	312
Japan	9 384	20	9 364	2 009	11	656	10	654
New Zealand	583	3	580	157	2	54	1	78
Developing countries	55 175	169	55 007	14 615	106	6 022	83	5 403
Africa	1 761	21	1 740	429	3	224	3	102
Latin America and the Caribbean	1 890	23	1 867	473	3	243	3	121
Asia	51 398	123	51 276	13 683	99	5 538	78	5 175
West Asia	1 162	8	1 154	300	2	132	1	104
South, East and South-East Asia	50 236	115	50 121	13 383	97	5 406	76	5 071
East Asia	8 991	21	8 970	2 647	13	1 281	13	757
China	3 373	8	3 366	1 015	5	457	4	345
Hong Kong, China	1 249	2	1 246	434	2	263	2	81
Korea, Republic of	1 653	4	1 649	445	3	209	2	124
Taiwan Province of China	2 645	6	2 639	737	3	342	4	205
South Asia	1 810	9	1 801	612	4	308	3	205
India	1 380	4	1 376	481	3	234	2	172
Iran, Islamic Republic of	239	2	237	65	0	31	0	22
ASEAN	39 435	84	39 351	10 123	80	3 817	61	4 109
Cambodia	24	0	24	11	0	8	0	1
Indonesia	3 914	8	3 906	1 140	7	448	7	490
Lao People's Democratic Republic	21	0	21	5	0	3	0	1
Malaysia	11 154	22	11 132	2 797	23	941	17	1 306
Myanmar	57	1	57	18	0	10	0	5
Philippines	664	3	661	152	2	56	1	49
Singapore	20 573	41	20 532	5 006	41	1 876	32	1 871
Thailand	2 757	8	2 749	913	6	436	3	353
VietNam	270	2	269	82	1	38	0	33
Domestic value added (DVA)	1 298 972	2 734	1 296 238	174 886	1 384	80 033	1 182	59 425
Gross exports	1 405 048	3 054	1 401 994	201 010	1 562	90 194	1 327	68 873

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

Note: All values are estimated. The region/country refers to that to which the value added attributes. See box 2 for the GVC terminology.

sector/industry, 2000 (Thousands of dollars)

Exports from Brunei Darussalam by sector/industry

Metal and metal products	Electrical and electronic equipment	Motor vehicles and other transport equipment	Services						
			Total	Trade	Hotels and restaurants	Transport, storage and communications	Financial intermediation and business activities, unsp.	Public administration and defence	Education, health and other services, unsp.
349	1 938	2 340	33 532	3 100	10 370	15 760	788	102	2 865
161	1 025	1 246	15 564	1 530	4 345	7 665	386	50	1 334
69	439	531	6 383	587	1 764	3 167	163	21	571
65	409	494	6 007	554	1 647	2 993	154	20	538
19	133	159	2 004	199	477	1 059	55	7	177
15	98	120	1 279	113	334	648	35	4	120
6	40	48	626	61	153	330	17	2	54
6	39	45	534	43	171	247	13	2	49
4	22	26	345	26	120	152	8	1	31
2	13	15	157	13	52	70	4	1	14
2	14	16	187	15	61	85	5	1	17
2	10	12	161	14	49	76	4	0	15
4	30	37	375	33	117	174	9	1	34
1	7	8	114	9	38	52	2	0	10
3	23	27	228	19	66	110	6	1	21
45	307	358	5 228	589	1 302	2 677	130	17	435
3	15	18	244	18	80	114	5	1	21
42	292	340	4 978	570	1 220	2 561	125	16	413
47	278	357	3 953	354	1 279	1 821	93	12	328
10	46	54	1 054	67	506	366	20	2	78
35	223	290	2 649	266	666	1 360	69	9	232
1	5	8	174	13	82	61	3	0	12
183	900	1 077	17 689	1 537	5 928	7 979	397	52	1 510
6	21	28	518	60	188	213	9	1	38
6	22	30	580	66	206	245	10	1	43
171	856	1 017	16 554	1 406	5 520	7 506	376	49	1 426
4	16	21	387	33	115	194	7	1	30
167	840	996	16 167	1 373	5 405	7 312	369	48	1 396
34	179	221	2 646	230	776	1 287	62	9	234
13	62	74	892	73	296	399	21	3	83
4	25	33	464	45	111	254	10	2	36
6	34	42	560	48	162	283	12	2	44
10	57	71	708	61	200	342	19	2	69
7	23	30	487	39	185	200	9	1	43
5	19	24	350	25	137	141	7	1	32
1	3	3	77	8	25	36	1	0	6
127	639	745	13 035	1 103	4 444	5 825	298	38	1 119
0	0	0	8	1	4	3	0	0	1
13	54	64	1 094	93	384	475	22	3	96
0	0	0	6	1	2	2	0	0	0
32	158	175	3 687	296	1 289	1 641	82	10	311
0	1	1	27	2	12	10	0	0	2
2	15	16	233	22	91	93	5	1	18
70	379	447	6 885	581	2 267	3 126	170	21	610
8	29	39	1 010	98	363	440	17	3	75
1	2	3	84	9	31	35	1	0	6
2 470	10 602	9 725	497 982	62 635	129 062	205 793	26 662	1 535	65 186
2 818	12 540	12 066	531 514	65 735	139 432	221 554	27 450	1 637	68 050

Annex table 2.4. Value added exports of goods and services from Brunei Darussalam, by value added creator, and by

Value added creator	Exports from Brunei Darussalam by sector/industry							
	Primary			Manufacturing				
	Total	Agriculture, hunting, forestry and fishing	Mining and quarrying	Total	Food, beverages and tobacco	Textiles, clothing and leather	Wood and wood products	Coke, petroleum products and nuclear fuel
World	207 588	410	207 178	29 246	341	19 017	212	2 046
Developed countries	91 864	172	91 692	11 665	130	7 159	83	814
Europe	43 130	88	43 042	5 756	54	3 569	40	376
European Union	40 360	79	40 281	5 364	50	3 323	38	354
United Kingdom	11 239	18	11 220	1 416	12	862	10	83
Germany	9 248	13	9 235	1 114	10	649	8	85
Italy	3 777	6	3 771	559	4	370	3	30
France	3 856	7	3 849	545	6	343	4	36
Netherlands	2 204	4	2 200	311	4	197	3	22
Sweden	1 156	2	1 154	152	2	88	2	9
Belgium	1 549	3	1 546	227	2	145	2	14
Spain	1 531	4	1 527	217	2	140	1	17
Other developed Europe	2 770	9	2 761	392	4	246	3	22
Norway	741	2	739	105	1	67	1	8
Switzerland	1 821	5	1 816	247	2	149	2	14
North America	24 695	39	24 656	2 849	33	1 754	22	222
Canada	1 507	3	1 504	203	3	126	2	15
United States	23 155	36	23 120	2 640	30	1 624	20	207
Other developed countries	24 039	45	23 994	3 059	44	1 835	21	216
Australia	6 236	16	6 220	919	22	603	7	72
Japan	16 219	22	16 196	1 911	18	1 079	13	124
New Zealand	1 130	5	1 125	158	3	106	1	16
Developing countries	113 098	221	112 877	17 160	207	11 576	126	1 216
Africa	3 765	26	3 739	633	6	440	4	25
Latin America and the Caribbean	3 577	25	3 552	614	6	430	4	26
Asia	105 535	168	105 367	15 872	194	10 676	118	1 163
West Asia	2 675	10	2 665	412	4	283	3	27
South, East and South-East Asia	102 859	158	102 701	15 460	189	10 393	115	1 136
East Asia	19 575	31	19 543	3 515	26	2 483	20	185
China	10 149	15	10 134	1 799	15	1 265	10	111
Hong Kong, China	2 030	3	2 027	501	2	391	3	15
Korea, Republic of	3 569	5	3 564	571	4	384	3	29
Taiwan Province of China	3 687	8	3 680	618	4	425	4	30
South Asia	4 907	14	4 894	944	9	700	5	68
India	3 921	7	3 914	731	7	538	4	59
Iran, Islamic Republic of	645	4	642	112	1	81	1	7
ASEAN	78 378	113	78 265	11 002	154	7 210	91	882
Cambodia	55	0	55	23	0	20	0	0
Indonesia	6 852	10	6 842	1 162	13	814	10	81
Lao People's Democratic Republic	36	0	36	7	0	5	0	0
Malaysia	22 685	29	22 656	2 868	43	1 811	25	291
Myanmar	58	0	58	13	0	10	0	1
Philippines	1 422	3	1 419	187	4	113	2	12
Singapore	40 988	56	40 931	5 552	78	3 537	48	416
Thailand	5 875	11	5 864	1 111	13	840	5	78
VietNam	406	2	404	80	1	60	0	5
Domestic value added (DVA)	2 344 336	3 293	2 341 043	190 834	2 277	133 766	1 563	11 809
Gross exports	2 551 924	3 703	2 548 221	220 079	2 618	152 783	1 775	13 855

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

Note: All values are estimated. The region/country refers to that to which the value added attributes. See box 2 for the GVC terminology.

sector/industry, 2005 (Thousands of dollars)

Exports from Brunei Darussalam by sector/industry

Metal and metal products	Electrical and electronic equipment	Motor vehicles and other transport equipment	Services						
			Total	Trade	Hotels and restaurants	Transport, storage and communications	Financial intermediation and business activities, unsp.	Public administration and defence	Education, health and other services, unsp.
682	2 719	1 123	71 777	7 204	22 457	34 043	47	257	6 416
292	1 332	557	31 949	3 555	9 015	15 820	22	119	2 825
138	657	271	13 772	1 334	3 878	6 914	10	54	1 301
129	614	253	12 934	1 252	3 610	6 525	9	51	1 223
34	182	75	3 939	412	946	2 116	3	16	373
30	147	61	2 809	264	750	1 445	2	11	276
12	61	25	1 305	130	326	700	1	5	118
13	61	24	1 216	103	391	572	1	5	118
7	32	13	727	58	255	327	0	3	69
4	19	8	346	30	112	161	0	1	33
6	23	9	463	40	150	215	0	2	46
5	19	8	429	40	132	204	0	2	41
9	43	18	838	82	268	389	1	3	77
2	10	4	233	19	79	107	0	1	22
6	32	13	539	53	164	257	0	2	51
69	315	130	9 914	1 318	2 443	5 107	7	36	844
5	21	9	502	42	165	238	0	2	45
63	294	121	9 401	1 274	2 274	4 865	7	34	798
85	360	157	8 263	903	2 694	3 799	5	30	681
21	74	30	2 456	168	1 166	885	1	7	190
60	273	122	5 263	688	1 281	2 714	4	21	449
3	7	3	399	30	199	135	0	1	28
378	1 360	554	39 055	3 554	13 175	17 892	25	135	3 529
12	37	16	1 205	144	432	507	1	4	96
12	33	15	1 216	144	429	522	1	4	95
353	1 288	522	36 562	3 256	12 286	16 835	23	128	3 334
9	27	12	985	89	292	504	1	4	80
344	1 262	510	35 577	3 168	11 994	16 331	23	124	3 253
75	284	117	6 026	560	1 785	2 964	4	24	560
40	139	56	2 934	256	961	1 353	2	11	284
6	31	14	779	77	186	435	0	3	63
14	58	23	1 152	106	313	599	1	5	104
14	56	23	1 117	115	309	557	1	4	106
17	44	19	1 379	113	520	587	1	4	126
14	36	16	1 032	74	400	433	1	3	97
2	5	2	229	24	74	108	0	1	19
253	934	373	28 172	2 495	9 690	12 780	18	96	2 568
0	0	0	21	2	9	8	0	0	2
25	77	32	2 322	206	842	1 005	1	8	212
0	0	0	12	2	4	4	0	0	1
66	246	92	7 863	658	2 762	3 558	5	26	710
0	0	0	30	2	15	11	0	0	2
5	22	8	550	55	207	231	0	2	45
138	533	217	14 853	1 314	4 940	6 854	10	52	1 399
18	51	23	2 363	238	851	1 046	1	8	185
1	3	1	157	18	61	63	0	0	12
4 433	14 365	4 400	864 604	110 589	227 204	377 145	1 426	3 396	129 519
5 116	17 084	5 523	936 381	117 792	249 661	411 187	1 473	3 653	135 935

Annex table 2.5. Value added exports of goods and services from Brunei Darussalam, by value added creator, and by

Value added creator	Exports from Brunei Darussalam by sector/industry							
	Primary			Manufacturing				
	Total	Agriculture, hunting, forestry and fishing	Mining and quarrying	Total	Food, beverages and tobacco	Textiles, clothing and leather	Wood and wood products	Coke, petroleum products and nuclear fuel
World	417 890	859	417 031	55 647	969	36 663	357	1 960
Developed countries	163 501	326	163 175	19 778	338	12 350	123	690
Europe	76 394	158	76 236	9 646	131	6 024	59	313
European Union	70 498	141	70 357	8 855	120	5 530	55	290
United Kingdom	18 705	32	18 674	2 202	26	1 345	14	65
Germany	17 042	26	17 016	1 928	26	1 136	12	73
Italy	6 368	10	6 358	915	10	614	5	24
France	6 438	12	6 426	870	13	554	5	28
Netherlands	3 909	8	3 901	519	10	330	4	18
Sweden	2 022	4	2 018	251	4	146	2	7
Belgium	2 709	5	2 704	377	5	243	3	12
Spain	2 563	6	2 557	343	4	224	2	14
Other developed Europe	5 896	17	5 879	791	12	494	4	23
Norway	1 498	4	1 494	201	3	129	1	7
Switzerland	4 014	10	4 004	518	7	312	3	14
North America	42 555	74	42 481	4 605	80	2 907	31	187
Canada	2 830	6	2 824	361	7	228	3	14
United States	39 673	67	39 606	4 234	73	2 672	29	173
Other developed countries	44 552	94	44 458	5 527	127	3 419	33	191
Australia	14 810	42	14 768	2 105	73	1 401	13	78
Japan	26 749	40	26 709	2 992	42	1 728	17	97
New Zealand	2 052	9	2 043	291	10	200	2	12
Developing countries	248 403	499	247 904	34 942	618	23 702	229	1 251
Africa	7 811	48	7 764	1 281	19	881	7	25
Latin America and the Caribbean	7 985	47	7 939	1 306	20	900	7	29
Asia	232 158	401	231 757	32 274	579	21 864	215	1 197
West Asia	5 571	19	5 552	800	13	547	5	26
South, East and South-East Asia	226 587	382	226 205	31 474	566	21 317	210	1 170
East Asia	45 663	75	45 588	7 454	82	5 225	38	207
China	28 561	43	28 518	4 716	52	3 344	23	145
Hong Kong, China	3 232	4	3 228	725	5	561	3	11
Korea, Republic of	7 911	12	7 899	1 031	14	631	6	29
Taiwan Province of China	5 654	13	5 641	927	9	649	5	21
South Asia	11 867	31	11 836	2 000	31	1 467	10	76
India	9 672	19	9 654	1 540	26	1 115	8	66
Iran, Islamic Republic of	1 444	8	1 436	233	3	165	1	7
ASEAN	169 056	276	168 780	22 020	453	14 626	163	888
Cambodia	116	1	115	51	0	45	0	0
Indonesia	16 433	28	16 405	2 736	46	1 954	20	84
Lao People's Democratic Republic	98	1	98	18	0	13	0	0
Malaysia	47 724	71	47 653	5 595	125	3 624	44	287
Myanmar	154	1	153	34	1	27	0	1
Philippines	3 830	8	3 822	456	12	265	3	14
Singapore	89 560	142	89 418	11 152	231	7 186	87	436
Thailand	10 544	22	10 523	1 877	36	1 437	8	62
VietNam	597	2	594	99	1	74	0	4
Domestic value added (DVA)	3 480 646	5 352	3 475 294	258 920	4 370	182 769	1 836	7 944
Gross exports	3 898 536	6 210	3 892 325	314 567	5 339	219 432	2 193	9 904

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

Note: All values are estimated. The region/country refers to that to which the value added attributes. See box 2 for the GVC terminology.

sector and industry, 2010 (Thousands of dollars)

Exports from Brunei Darussalam by sector/industry

			Services						
Metal and metal products	Electrical and electronic equipment	Motor vehicles and other transport equipment	Total	Trade	Hotels and restaurants	Transport, storage and communications	Financial intermediation and business activities, unsp.	Public administration and defence	Education, health and other services, unsp.
1 614	5 599	1 824	154 988	15 447	44 773	74 971	61	791	14 011
606	2 405	799	61 872	6 952	16 293	30 909	25	326	5 463
284	1 206	395	26 279	2 532	6 691	13 526	11	147	2 474
262	1 110	364	24 358	2 345	6 133	12 606	10	136	2 297
64	312	101	7 198	746	1 534	3 969	3	42	679
64	282	94	5 616	521	1 353	2 954	3	32	552
24	107	35	2 370	232	532	1 305	1	14	212
25	108	34	2 157	179	637	1 042	1	12	209
15	60	19	1 369	108	438	636	1	7	130
8	34	11	647	56	188	311	0	4	61
11	43	14	860	74	251	411	0	5	85
10	34	11	769	72	214	376	0	4	74
22	96	31	1 921	187	558	920	1	10	178
6	21	7	512	42	161	240	0	3	49
15	73	24	1 278	124	351	628	1	7	120
139	534	173	18 488	2 421	4 247	9 614	8	95	1 607
12	39	13	1 018	83	309	493	0	5	93
127	495	160	17 452	2 335	3 931	9 114	8	89	1 513
183	665	231	17 105	2 000	5 355	7 769	6	84	1 382
56	193	61	6 189	433	2 746	2 323	2	26	495
117	445	161	9 747	1 462	2 107	5 008	4	54	799
6	15	5	849	68	408	289	0	3	60
977	3 129	1 002	91 228	8 257	27 891	43 229	35	457	8 394
29	75	27	2 685	336	883	1 161	1	11	213
32	76	28	2 897	348	922	1 297	1	13	232
914	2 975	947	85 489	7 550	26 029	40 709	34	433	7 939
22	59	20	2 191	200	583	1 152	1	12	181
893	2 916	927	83 298	7 351	25 446	39 556	33	421	7 758
215	680	219	14 621	1 338	3 951	7 315	6	81	1 379
130	413	131	8 700	749	2 482	4 231	3	47	849
12	51	17	1 361	132	288	782	0	9	109
47	129	40	2 554	243	673	1 286	1	14	237
24	84	29	1 898	198	475	967	1	10	176
50	115	39	3 592	292	1 244	1 581	1	16	332
42	97	32	2 767	199	987	1 201	1	12	263
5	12	5	548	58	157	268	0	3	47
628	2 121	668	65 085	5 721	20 251	30 661	26	324	6 047
0	1	0	46	6	17	19	0	0	4
71	207	67	6 136	539	2 049	2 732	2	30	567
0	0	0	33	5	12	13	0	0	2
157	552	164	17 536	1 441	5 605	8 237	7	85	1 610
1	1	0	89	6	41	33	0	0	6
14	69	19	1 494	151	495	666	1	8	128
344	1 186	380	34 823	3 073	10 384	16 713	15	177	3 340
38	101	36	4 719	474	1 581	2 153	1	22	374
2	4	1	209	25	67	94	0	1	16
7 334	21 568	5 223	1 263 241	154 532	296 193	561 870	1 355	7 499	202 809
8 948	27 167	7 047	1 418 228	169 979	340 966	636 841	1 416	8 290	216 819

Annex table 2.6. Value added exports of goods and services from Brunei Darussalam, by value added creator, and by

		Exports from Brunei Darussalam by sector/industry						
		Primary			Manufacturing			
Value added creator	Total	Agriculture, hunting, forestry and fishing	Mining and quarrying	Total	Food, beverages and tobacco	Textiles, clothing and leather	Wood and wood products	Coke, petroleum products and nuclear fuel
World	557 742	1 292	556 450	77 874	1 458	50 612	526	2 781
Developed countries	210 476	476	210 000	26 744	493	16 466	176	944
Europe	101 474	236	101 238	13 422	196	8 248	87	440
European Union	93 803	212	93 591	12 346	179	7 588	80	409
United Kingdom	24 449	47	24 402	3 011	39	1 809	19	89
Germany	22 791	39	22 752	2 703	39	1 566	18	103
Italy	8 551	16	8 535	1 282	15	849	7	34
France	8 584	17	8 566	1 213	20	759	7	40
Netherlands	5 115	11	5 103	709	14	444	6	25
Sweden	2 755	6	2 749	359	6	206	4	11
Belgium	3 651	8	3 643	531	8	336	4	17
Spain	3 500	10	3 490	489	7	316	3	20
Other developed Europe	7 671	24	7 647	1 076	17	659	6	31
Norway	1 768	5	1 763	248	5	157	2	9
Switzerland	5 366	14	5 352	724	11	428	4	20
North America	55 141	108	55 033	6 247	117	3 883	45	256
Canada	3 715	8	3 706	496	10	308	4	19
United States	51 358	99	51 260	5 738	106	3 566	41	237
Other developed countries	53 862	133	53 729	7 076	180	4 335	45	248
Australia	19 791	63	19 728	2 944	110	1 928	19	110
Japan	30 033	50	29 983	3 526	53	2 004	21	116
New Zealand	2 770	13	2 757	411	14	277	3	17
Developing countries	338 474	763	337 711	49 716	945	33 233	343	1 807
Africa	10 125	69	10 056	1 734	27	1 174	10	34
Latin America and the Caribbean	10 462	67	10 394	1 785	29	1 209	10	39
Asia	317 287	622	316 665	46 085	887	30 773	322	1 732
West Asia	7 932	30	7 902	1 178	20	792	7	40
South, East and South-East Asia	309 355	592	308 763	44 908	868	29 981	315	1 692
East Asia	63 249	119	63 131	10 739	127	7 425	58	306
China	41 218	70	41 148	7 074	85	4 947	37	223
Hong Kong, China	4 030	6	4 024	926	8	707	5	15
Korea, Republic of	10 478	18	10 460	1 431	20	863	9	41
Taiwan Province of China	7 056	20	7 036	1 221	14	848	7	26
South Asia	16 511	49	16 461	2 888	49	2 089	15	112
India	13 250	29	13 221	2 188	39	1 562	12	96
Iran, Islamic Republic of	2 202	13	2 189	370	6	259	2	11
ASEAN	229 595	424	229 171	31 281	692	20 467	243	1 274
Cambodia	161	1	159	74	1	65	0	1
Indonesia	22 114	43	22 071	3 829	70	2 697	30	120
Lao People's Democratic Republic	136	1	135	26	0	18	0	0
Malaysia	61 350	103	61 247	7 518	180	4 791	62	390
Myanmar	228	1	227	53	2	41	0	1
Philippines	5 393	13	5 381	671	19	381	5	21
Singapore	124 265	223	124 042	16 165	361	10 249	133	641
Thailand	15 187	35	15 151	2 812	58	2 127	12	95
VietNam	762	3	758	132	2	97	1	5
Domestic value added (DVA)	4 193 663	7 073	4 186 590	323 335	5 829	225 436	2 415	10 116
Gross exports	4 751 405	8 366	4 743 040	401 208	7 288	276 048	2 941	12 897

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

Note: All values are estimated. The region/country refers to that to which the value added attributes. See box 2 for the GVC terminology.

sector and industry, 2013 (Thousands of dollars)

Exports from Brunei Darussalam by sector/industry

			Services						
Metal and metal products	Electrical and electronic equipment	Motor vehicles and other transport equipment	Total	Trade	Hotels and restaurants	Transport, storage and communications	Financial intermediation and business activities, unsp.	Public administration and defence	Education, health and other services, unsp.
2 349	7 926	2 723	222 504	22 958	64 444	104 496	89	1 260	21 193
845	3 276	1 147	85 781	9 940	22 701	41 619	36	501	7 986
411	1 699	589	37 618	3 799	9 574	18 812	16	233	3 723
379	1 566	543	34 926	3 523	8 797	17 559	15	217	3 462
92	433	148	10 120	1 093	2 162	5 428	5	66	1 007
93	400	140	8 103	788	1 950	4 142	4	52	838
35	151	53	3 430	350	771	1 839	1	23	323
37	152	51	3 104	272	914	1 457	1	19	315
21	84	28	1 932	161	615	874	1	11	192
12	50	17	953	87	276	444	0	6	95
17	62	21	1 251	113	364	582	1	8	129
15	49	17	1 134	113	315	538	0	6	114
32	133	46	2 692	276	777	1 253	1	16	261
7	26	9	652	57	205	296	0	4	65
23	104	36	1 842	187	504	881	1	11	182
197	735	250	25 725	3 479	5 923	13 013	11	147	2 362
17	55	19	1 440	123	436	679	1	8	138
180	680	231	24 259	3 351	5 478	12 324	11	139	2 223
238	842	308	22 439	2 662	7 204	9 795	8	121	1 900
82	274	91	8 892	658	3 921	3 253	3	41	747
141	529	202	11 858	1 844	2 564	5 923	5	73	1 020
10	21	8	1 224	104	582	409	0	5	91
1 454	4 547	1 538	133 734	12 626	40 819	61 592	52	744	12 951
42	102	39	3 747	496	1 228	1 568	1	17	310
45	106	41	4 079	516	1 294	1 770	1	20	342
1 365	4 334	1 456	125 680	11 581	38 214	58 167	50	707	12 282
33	89	32	3 361	320	886	1 733	1	20	293
1 332	4 244	1 424	122 319	11 262	37 328	56 434	49	686	11 990
322	994	339	21 806	2 086	5 909	10 574	9	133	2 162
205	634	213	13 534	1 225	3 837	6 405	5	81	1 384
16	67	24	1 822	183	387	1 022	1	13	154
67	183	60	3 653	364	960	1 786	2	23	357
33	106	40	2 619	288	671	1 283	1	16	253
75	170	60	5 410	466	1 861	2 318	2	27	521
63	140	49	4 091	311	1 453	1 727	1	20	406
9	20	8	896	100	257	425	0	5	80
934	3 080	1 024	95 103	8 709	29 559	43 542	38	527	9 306
1	1	1	69	9	25	27	0	0	6
105	296	101	8 913	815	2 972	3 853	3	49	864
0	1	0	50	8	17	19	0	0	4
221	760	238	24 206	2 077	7 703	11 080	10	131	2 341
1	2	1	141	10	65	52	0	1	10
22	105	31	2 242	235	737	974	1	13	202
521	1 754	592	51 915	4 767	15 503	24 177	22	293	5 247
60	156	58	7 280	751	2 445	3 233	2	38	610
3	6	2	286	36	92	125	0	1	24
9 568	27 423	6 981	1 603 192	198 743	372 959	692 559	1 744	10 500	270 738
11 917	35 349	9 704	1 825 696	221 701	437 404	797 055	1 834	11 760	291 930

Annex table 3. Brunei Darussalam's value added exports incorporated in other countries, by region and country, 1990–2013 (Thousands of dollars)

Region/country	DVX from Brunei Darussalam					
	1990	1995	2000	2005	2010	2013
World	231 903	323 731	543 863	1 062 477	1 915 860	2 468 086
Developed countries	112 676	133 141	211 886	429 945	751 516	981 410
Europe	18 645	25 263	48 645	93 771	157 397	195 246
European Union	18 032	24 391	47 202	90 694	152 109	188 747
United Kingdom	2 690	4 012	6 710	11 958	19 612	23 619
Germany	4 296	5 328	11 508	23 505	39 495	49 826
Italy	974	1 424	2 644	5 314	9 574	11 693
France	1 550	1 999	3 977	7 157	11 085	13 628
Netherlands	2 613	3 780	8 151	12 899	20 912	25 432
Sweden	606	721	1 093	2 130	3 837	4 767
Belgium	1 795	2 331	3 992	8 070	13 688	16 557
Spain	459	779	1 606	3 435	5 662	7 065
Other developed Europe	613	872	1 443	3 077	5 288	6 499
Norway	247	358	563	870	1 468	1 700
Switzerland	318	462	809	2 080	3 553	4 412
North America	3 874	6 983	20 373	32 939	59 575	75 427
Canada	1 135	1 733	4 221	7 527	11 930	14 968
United States	2 706	5 219	16 115	25 374	47 584	60 390
Other developed countries	90 157	100 896	142 869	303 235	534 545	710 738
Australia	2 382	5 061	9 114	16 000	30 949	41 988
Japan	87 240	95 135	132 347	284 792	499 599	663 819
New Zealand	212	323	594	922	1 738	2 208
Developing countries	117 558	188 392	326 630	622 447	1 146 472	1 464 183
Africa	994	1 367	2 151	3 761	6 368	8 215
Latin America and the Caribbean	1 121	2 224	4 613	8 607	14 816	19 087
Asia	115 321	184 678	319 662	609 783	1 124 791	1 436 237
West Asia	764	1 058	1 537	3 136	6 374	8 845
South, East and South-east Asia	114 557	183 620	318 125	606 647	1 118 417	1 427 392
East Asia	79 223	112 197	201 506	359 998	698 835	887 028
China	1 352	4 677	15 190	52 449	122 663	159 345
Hong Kong, China	1 983	2 650	4 053	9 070	17 654	22 922
Korea, Republic of	55 498	87 731	159 623	272 658	529 784	673 463
Taiwan Province of China	20 318	17 060	22 500	25 573	28 273	30 678
South Asia	438	734	1 362	3 776	8 538	12 671
India	163	370	758	2 517	6 300	9 053
Iran, Islamic Republic of	91	118	208	548	942	1 784
ASEAN	34 896	70 689	115 257	242 872	411 045	527 693
Cambodia	5	27	74	168	267	354
Indonesia	1 455	3 127	7 642	11 924	19 372	25 663
Lao People's Democratic Republic	13	22	31	70	114	151
Malaysia	2 839	9 135	14 008	24 897	40 322	47 990
Myanmar	62	22	30	15	13	17
Philippines	592	1 335	2 657	5 404	7 961	9 962
Singapore	6 699	19 643	30 022	66 079	122 616	158 545
Thailand	22 819	36 712	59 344	131 115	215 575	279 258
Vietnam	411	666	1 448	3 200	4 805	5 753
Oceania	122	123	204	296	497	644
Transition economies	1 668	2 198	5 347	10 086	17 872	22 493

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

Note: All values are estimated. The value refers to that incorporated in exports from the countries listed. For the GVC terminology, see box 2.

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