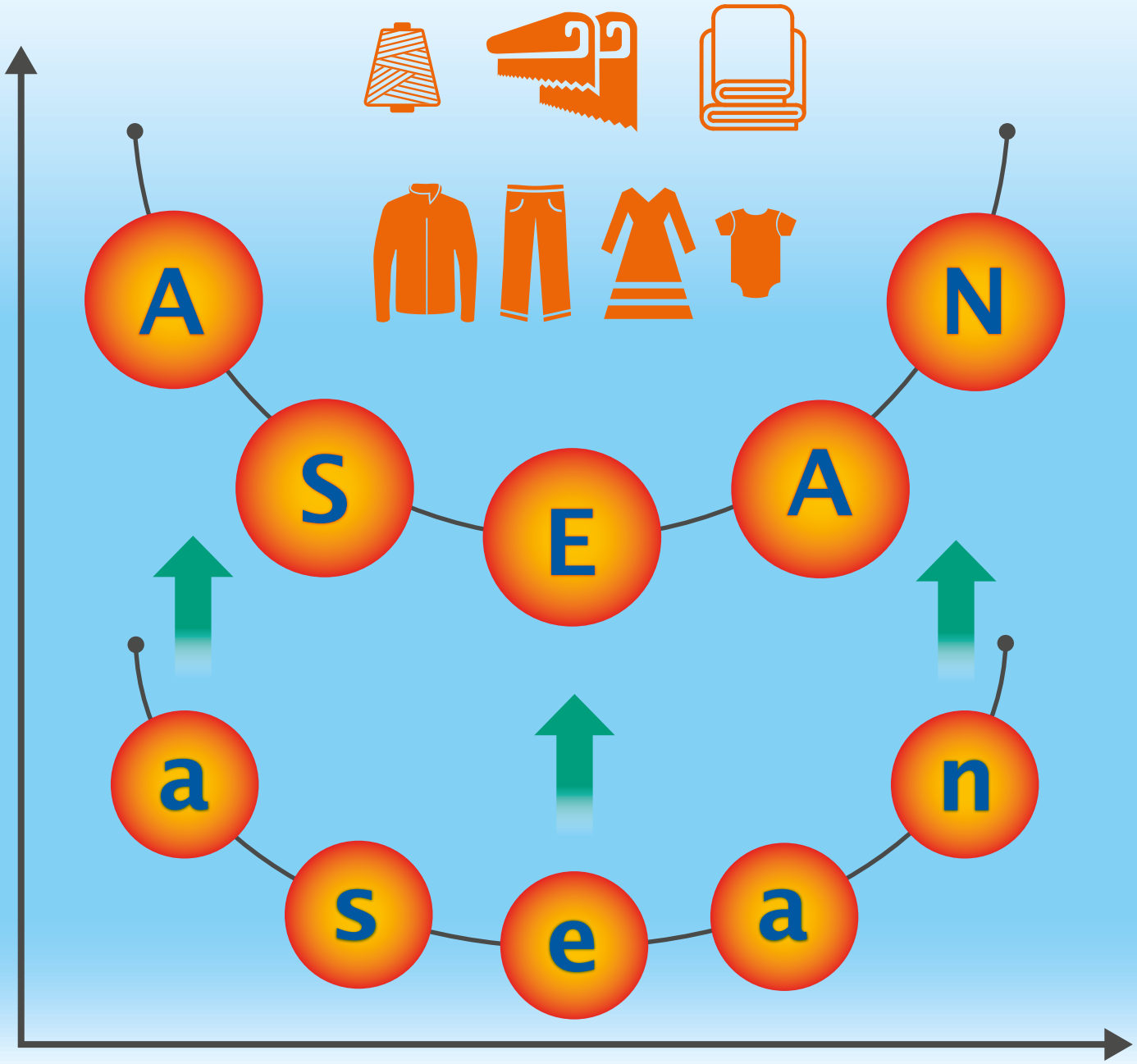
Global Value Chains in ASEAN
Textiles and Clothing

PAPER 14
MARCH
2020



ASEAN-JAPAN
CENTRE

国際機関 日本アセアンセンター

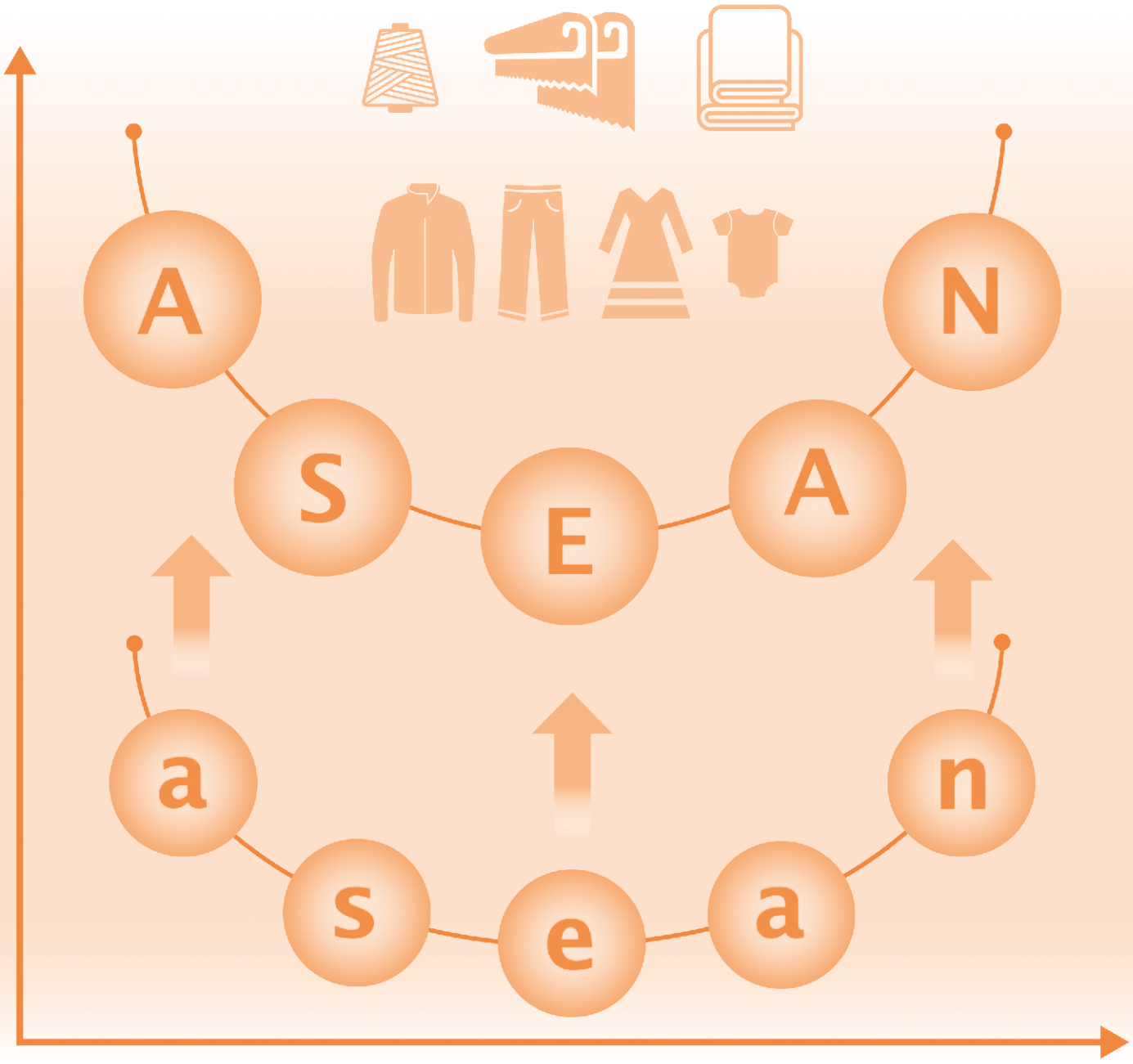
For inquiries, contact ASEAN-Japan Centre
(ASEAN Promotion Centre on Trade, Investment and Tourism)

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

Paper 14 / March 2020 / Global Value Chains in ASEAN: Textiles and Clothing

Global Value Chains in ASEAN
Textiles and Clothing

PAPER 14
MARCH
2020



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 14th 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
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
Paper 12. Automobiles (published in January 2020)
Paper 13. Electronics
Paper 14. Textiles and clothing
Paper 15. Agribusiness (published in March 2020)
Paper 16. Tourism (published in March 2018)

Prepared by Kenta Goto (Kansai University). The author wishes to thank Masataka Fujita and Upalat Korwatanasakul (both ASEAN-Japan Centre) and other staff members of the AJC for their contribution. 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.

ABBREVIATIONS

ADB	Asian Development Bank
ADBI	Asian Development Bank Institute
AJC	ASEAN-Japan Centre
ASEAN	Association of Southeast Asian Nations
CMT	cut, make and trim
COMECON	Council for Mutual Economic Assistance
DVA	domestic value added
DVX	value added incorporated in other countries' exports
EU	European Union
FDI	foreign direct investment
FVA	foreign value added
GDP	gross domestic product
GVC	global value chain
HS	Harmonized System
IDE-JETRO	Institute of Developing Economies-Japan External Trade Organization
MFA	Multifibre Arrangement
MIT	middle-income trap
OECD	Organization for Economic Co-operation and Development
OBM	original brand manufacturing
ODM	original design manufacturing
OEM	original equipment manufacturer
PPP	Purchasing power parity
RCA	revealed comparative advantage
RVC	regional value chain
SOE	state-owned enterprise
TCL	textile, clothing and leather
TPP	Trans-Pacific Partnership
UNCTAD	United Nations Conference on Trade and Development

KEY MESSAGES

Textiles and clothing[1] are archetypal industries through which developing countries achieve industrialization and integration into the global economy. It is an important industry for many ASEAN member countries.

It is essential to recognize the significant intra-industry variation in terms of technological attributes and factor intensity. For ASEAN, the most vibrant is clothing, which is often a major exporter, generating significant employment.

Cambodia, Indonesia, Myanmar and Viet Nam are the world's major exporters of clothing. Textiles, in contrast, play a less salient role in its overall export structure because of their technology and capital intensity.

In the clothing industry, the lower-income ASEAN countries tend to specialize in labour-intensive activities such as cut, make and trim (CMT) operations. In contrast, knowledge-intensive processes such as design and marketing are concentrated in the more advanced economies of the region.

In 2017, the domestic value added (DVA) in exports of textiles, clothing and leather (TCL) in ASEAN was about $51 billion, or 68 per cent, while the foreign value added (FVA) was the remaining balance of about $24 billion, or 32 per cent.

Process and product upgrading occur primarily through technological transfer from lead firms (buyers) in global value chains (GVCs). However, functional upgrading is typically achieved through local and regional markets.

Failures to realize functional upgrading would leave enterprises in these industries with no option other than to apply a "race to the bottom" strategy. At the macro-level, this failure is among the root causes of the "middle-income trap." Local and regional markets are key to prevent this result and to achieve sustainable industrial development.

The connections of individual ASEAN countries to the textile and clothing GVCs can be described briefly as follows:

- Brunei Darussalam: Gross exports (DVA plus FVA) of the TCL industries are the second smallest in ASEAN after the Lao People's Democratic Republic, accounting for just 0.4 per cent of the ASEAN total. Nevertheless, the DVA share is high, suggesting strong backward linkages in-country.
- Cambodia: The TCL industries, particularly the clothing industry, produce the largest exports. They have expanded rapidly, particularly to the United States market, through preferential quota access to the market that was granted in return for good employment practices (the "Better Factories Cambodia" programme). As in Viet Nam and Myanmar, the industries are highly dependent on imported inputs, particularly from China. Most of the export-oriented enterprises in the clothing industry are also firms with Chinese investment.
- Indonesia: Indonesia is the largest exporter in ASEAN in gross terms (DVA plus FVA), with 81 per cent from domestic sources. Exports of both textiles and clothing are significant, with the export volume of the latter almost double that of the former.
- Lao People's Democratic Republic: The importance of Thailand as a value creator in the country's TCL exports is significant because of Thailand's position as one of the larger producers and exporters of textiles, and its proximity to the Lao People's Democratic Republic.

[1] This industry often includes "leather". Thus, statistical data on textiles and clothing refers to textiles, clothing and leather, the last item of which is not typically separated out. Leather is mentioned in the text only when relevant.

- Malaysia: China plays a dominant role in FVA for the TCL industries in Malaysia, followed by the United States and Japan. DVA is just about 53 per cent, which may reflect the country's relatively high income level in the region (particularly when compared with that of the Philippines). As such, the value of textile exports was much larger than in other countries, at about $1 billion.
- Myanmar: Participation in the TCL value chain is still limited. However, the abundance of cheap labour could facilitate the country's integration in the future, which would most likely induce an increase in FVA in its clothing exports.
- Philippines: Like Malaysia, the Philippines is dependent on China for its inputs, as reflected in its high FVA. DVA in clothing, however, is significantly higher than that for Malaysia. The textile industry remains small, which may be primarily due to its capital and technology intensity.
- Singapore: Although it is the most developed country in ASEAN, Singapore's TCL industries remain significant. However, its share of DVA in gross exports is the lowest in the region, at about one-seventh. Upgrading potentials are largest in catering to knowledge-intensive functions such as branding, design and marketing.
- Thailand: The TCL industries were leading exporters in the 1990s. However, as wage levels increased with significant economic development, the country started losing international comparative advantage in the labour-intensive assembly functions in the clothing industry. The challenge is to achieve functional upgrading, where the local, domestic market will play a crucial role.
- Viet Nam: As ASEAN's largest exporter of clothing, and the world's third largest, Viet Nam has achieved significant agglomeration in the labour-intensive assembly functions in the clothing GVC. However, recent increases in wage levels and labour shortages in the industry are posing challenges, which must be met with sustainable upgrading strategies. While process and product upgrading remain important, the key will be to figure out options to achieve functional upgrading through the development of the domestic market. Japan's relationship with Viet Nam is particularly significant, shown by the high FVA share in Viet Nam's TCL exports.

ASEAN and Japan are partners in the TCL industries. Estimates by the AJC indicate that a $1 million increase in Japanese exports in the TCL industries would draw about $32,000 from ASEAN as inputs.

Policies to promote the TCL industry in ASEAN should carefully take into account the differences of each of the member countries, particularly with respect to the dynamics of international comparative advantage, which primarily stem from differences in technological and resource endowments. Promoting further regional integration will expand and deepen intraregional networks of production and distribution. To promote inclusiveness, efforts to upgrade the skills of the labour force will be crucial. A refocusing on the ASEAN regional market would prove fruitful for sustained industrial upgrading.

This report focuses on the textile and clothing industry in ASEAN, and provides an overview of how each of its member countries is positioned within the global value chains (GVCs) for textiles and clothing, using data on value added trade. It first introduces the contexts and background, and then provides a summary of the regional structures of textile and clothing trade. Next, it outlines the analytical perspective in relation to GVC research, given the key attributes of the industries. It then looks into data on value added trade data from the ASEAN-Japan Centre (AJC), the United Nations Conference on Trade and Development (UNCTAD), and Eora (the AJC-UNCTAD-Eora database),[2] and attempts to analyze and interpret these industries by synthesizing these data with country-specific contexts, with some emphasis on Viet Nam, Cambodia and Thailand. Finally, it provides issues to consider in relation to future challenges and opportunities.

The main aim of this report is to provide a baseline account of the international structure of the production and distribution of textiles and clothing, and highlight the concomitant challenges as well as prospects, particularly with a focus on upgrading and promoting sustainable development. It is expected that the report will be of use as a source of reference in further discussing policy options to maximize the benefits and minimize the associated risks of the proliferating GVCs as well as the further use of data on value added trade. However, it should be noted that the statistics used in this report aggregate a wide variety of subsectors with high intra-industry heterogeneity.

The textile and clothing industries are often considered the archetypal industries through which developing countries achieve industrialization and integration into the global economy.

Together they are one of the economic sectors in which intra-industry division of labour has progressed extensively at the global level. Production processes that were once integrated within one country have become increasingly fragmented, and each of the production blocks are now being relocated across borders to different countries with different factor endowments. Companies are connected through various types of governance and inter-firm relationships, and lead firms, typically brand owners and retailers from developed countries, coordinate and configure these value chains with a view to dynamically optimizing collective efficiency. This report focus on this industry in ASEAN member countries.

As the diversity within ASEAN is significant, the position and significance of these industries in relation to each member's economy are different accordingly. It is therefore useful to first take stock of how each of these countries compare with each other. Table 1 summarizes some of the key country statistics.

The first notable variation can be observed in size, in terms of both population and economy. Although there are large countries such as Indonesia and the Philippines with populations larger than 100 million, those of the Lao People's Democratic Republic and Singapore are less than 7 and 6 million respectively, and that of Brunei Darussalam does not even reach half a million. In terms of economic size, Indonesia is again the largest in ASEAN with a gross domestic product (GDP) of $932 billion, while those of the Lao People's Democratic Republic and Brunei Darussalam are just $15 and $11 billion, respectively. In terms of income levels, the region embraces Singapore, one of the richest countries in the world, with GDP per capita of $55,234 in 2016 ($89,103 in purchasing power parity (PPP) terms). It is also home to some of the poorest countries in the world, including Myanmar and Cambodia, with GDP per capita of $1,196 and $1,270 ($5,721 and $3,734 in PPP terms),

[2] They are not the only organizations that produce data on trade in value added. The Organisation for Economic Co-operation and Development (OECD) produces data that it calls trade in value added (TiVA), which is widely used.

respectively. As lower-income countries tend to exhibit comparative advantages in labour-intensive activities and higher-income countries in capital- and knowledge-intensive activities, it would not be surprising to see significant variation in the patterns of how the ASEAN countries are connected to GVCs for textiles and clothing.

Table 1. **Country overview, 2016**

	GDP (current US$ million)	GDP per capita (current US$)	GDP per capita, PPP (current international $)	Population, total
Brunei Darussalam	11 401	26 939	77 421	423 196
Cambodia	20 017	1 270	3 734	15 762 370
Indonesia	932 256	3 570	11 611	261 115 456
Lao People's Democratic Republic	15 806	2 339	6 550	6 758 353
Malaysia	296 753	9 515	27 700	31 187 265
Myanmar	63 256	1 196	5 721	52 885 223
Philippines	304 889	2 951	7 801	103 320 222
Singapore	309 764	55 243	89 103	5 607 283
Thailand	411 755	5 979	16 938	68 863 514
Viet Nam	205 276	2 171	6 296	94 569 072

Source: World Development Indicators.

Cambodia, Indonesia, Myanmar, and Viet Nam are the world's major exporters of clothing, whereas ASEAN's textile industry plays a less significant role.

Textiles and clothing are often discussed as if they constituted parts of one coherent industry with homogeneous factor intensity characteristics. This is, however, very misleading. Textiles and clothing differ significantly in terms of technological attributes; the clothing industry is highly labour-intensive while the textile industry is much more intensive in capital and technology. Therefore, although developing countries tend to exhibit strong comparative advantages in the production of clothing, they hardly do so in the production of textiles (particularly synthetic fibre), including the subsectors of spinning, weaving, knitting and other related processes such as dyeing and finishing.

Tables 2 and 3 summarize the export volumes of clothing and textiles from ASEAN countries and those from Japan and China in 2016, respectively.[3] Japan and China are included in the tables as benchmarks to put the country data for ASEAN members into perspective. One obvious fact is the dominance of China in both clothing and textiles exports. Another, possibly more interesting, fact is the different position of Japan as an exporter of clothing and textiles.

[3] The data for Bangladesh were not available in the UN database.

The Harmonized Commodity Description and Coding Systems (HS) classifies clothing into two broad categories based on the fabrics used – knitted (HS 61) or woven (HS 62). Knitted-fabric-based clothing and woven-fabric-based clothing have very different production process characteristics, which may result in different forms of industrial organization. This point is elaborated in the latter part of this report, as it may be crucial for interpreting value added data.

Clothing was Japan's main export item in the 1960s, which spearheaded its entry into the global economy through export-oriented industrialization as it embarked on its rapid postwar growth trajectory. As table 2 suggests, however, Japan is no longer significant in the export of clothing – its value was just $453 million in 2016, which was only about 6 per cent of the value in Cambodia and 2 per cent of that in Viet Nam. The fundamentals behind this decline, of course, are the labour intensiveness of the processes involved in the production of clothing, which is no longer compatible with Japan's factor endowments. Looking at ASEAN, Viet Nam stands out as a major player in the export of clothing. It is the third largest exporter globally, after China and Bangladesh. Indonesia, Cambodia and Myanmar rank high as well, as can be predicted from their low income levels (which imply low wage levels).

However, Japan's export volume of textiles is still significant and is in fact larger than any other ASEAN country, as depicted in table 3. It exceeded that of Viet Nam, which in 2016 was the largest exporting country in ASEAN. It was also 1.7 times that of Thailand, 4 times that of Malaysia and 97 times that of Cambodia. The primary reason for this, as mentioned earlier, is simply because the production processes of textiles tend to be much more capital and technology intensive compared with those of clothing. A similar trend can be observed in the relationship between the export of textiles from Singapore, ASEAN's most developed member, and that of Cambodia: Singapore's exports outweighs Cambodia's by a magnitude of more than 10.

It should be noted, nevertheless, that textiles include a wider set of subcommodities with very different factor intensities than clothing. For instance, while Japan remains significant in terms of the export of man-made filaments (HS 54), its position is much weaker in cotton (HS 52). This is because production of man-made filaments, including key synthetic fibres such as polyester and nylon, requires larger investment outlays and complex technological capacity to manage operations than the cotton category. It is also worthwhile to mention that while textiles are key inputs for clothing, they are also used as inputs for a much wider set of intermediate and final products such as for interior and home decoration, furniture and other industrial commodities such as car components (e.g. tires and car seats).

For the ASEAN region as a whole, the clothing industry is thus much more significant as an export-based industry than the textile industry. As such, this report will place more emphasis on the analysis of the clothing value chain in ASEAN than the textile value chain.

Table 2. **Global exports of clothing, 2016** (Millions of dollars and per cent)

	Apparel and clothing accessories; knitted or crocheted (HS61)	Apparel and clothing accessories; not knitted or crocheted (HS62)	Total	Share (%)
China	74 413	72 065	146 478	36.9
Japan	204	249	453	0.1
Viet Nam	10 801	11 608	22 410	5.7
Indonesia	3 291	3 880	7 171	1.8
Cambodia	6 108	519	6 627	1.7
Thailand	1 657	779	2 436	0.6
Myanmar	92	1 483	1 575	0.4
Singapore	732	586	1 317	0.3
Malaysia	967	330	1 297	0.3
Philippines	634	373	1 007	0.3
Lao People's Democratic Republic	43	107	149	0.0
Brunei Darussalam	4	3	7	0.0
ASEAN Total	**24 330**	**19 667**	**43 997**	**11.1**
Total	**198 764**	**197 678**	**396 443**	

Source: UN Comtrade.

Table 3. **Global exports of textiles, 2016** (Millions of dollars and per cent)

	HS52 Cotton	HS54 Man-made filaments	HS55 Man-made staple fibres	HS60 Knitted fabrics	Total	Share (%)
China	14 966	16 561	12 114	14 415	58 056	35.4
Japan	514	2 061	1 352	584	4 511	2.7
Viet Nam	2 096	750	492	601	3 938	2.4
Indonesia	782	1 005	2 026	98	3 911	2.4
Cambodia	480	744	1 126	319	2 669	1.6
Thailand	236	444	240	129	1 048	0.6
Myanmar	49	236	112	71	469	0.3
Singapore	1	1	8	31	41	0.0
Malaysia	2	3	21	1	28	0.0
Philippines	8	0	18	0	26	0.0
Lao People's Democratic Republic	0	0	0	0	0	0.0
Brunei Darussalam	0	0	0	0	0	0.0
ASEAN Total	**3 654**	**3 183**	**4 043**	**1 250**	**12 130**	**7.4**
Total	**50 749**	**44 820**	**36 121**	**32 501**	**164 192**	

Source: UN Comtrade.

ASEAN countries specialize in labour-intensive activities such as cut, make, and trim in the clothing industry. In contrast, more technology- and capital-intensive activities are concentrated in the textile industry and developed economies.

Clothing GVCs are buyer-driven, where lead firms (value chain coordinators) are typically retailers and brand owners from developed countries. These lead firms undertake high value added functions in the chain, including design and marketing, at both the beginning and the end of the production and distribution processes. They also exercise power in configuring the chains by selecting local producers and input suppliers, setting product specification and delivery terms, and also determining the distribution of the particular processes (and thus value added) among the stakeholders in their particular chains.

Within such chains, local production firms in most ASEAN countries cater to the labour-intensive assembly functions in the production of clothing, typically CMT operations. In these operations, input materials such as fabrics are supplied by chain coordinators, and local producers receive a fee for processing them (Goto, 2007; Natsuda et al., 2010; Goto et al., 2011). The CMT function is highly labour intensive and has relatively standardized skill requirements. However, space remains for clothing producers (garment factories) to further integrate other functions such as input sourcing, product design and marketing activities, which tend to be more knowledge intensive and thus difficult to undertake. For woven-fabric-based clothing, the division of labour between the textile industry (spinning, knitting, weaving and finishing) and CMT companies is typically clear, whereas for knitted-fabric-based clothing an integrated production structure is more common, with the knitting and the CMT processes taking place within the same factory. These differences should be acknowledged when interpreting the value added data. For instance, countries that focus more on knitted-fabric-based clothing should in general have a higher ratio of domestic value added content.

In contrast, the textile industry entails a much more diverse set of subproducts, including the production of raw materials (which may extend into the agriculture sector, as in the case of cotton), yarn (spinning), and fabrics (weaving and knitting). These production processes are more capital and technology intensive, particularly in the production of synthetic fibre (filament). International fragmentation in production is also more apparent in the textile industry because of the high level of heterogeneity in factor intensities of each production process. It is very common that each process is undertaken by highly specialized companies in different countries.

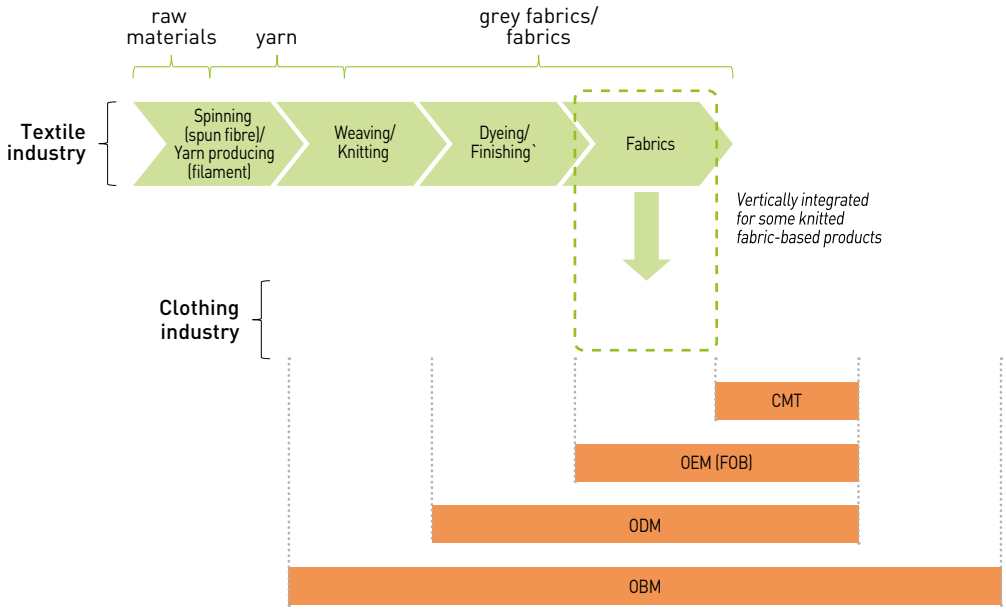
Figure 1 depicts how the textile and clothing value chains interact, and the processes involved in the production and distribution flow for both product categories.

Although the majority of companies in developing countries connect to clothing value chains coordinated by foreign buyers by undertaking CMT operations, other production modalities are sometimes observed. They include original equipment manufacturing (OEM), original design manufacturing (ODM) and original brand manufacturing (OBM). In the CMT arrangement, the vertical division of labour is fine tuned to the extent that the company is in charge only of the labour-intensive assembly processes, whereas under the OBM arrangement the different production processes such as branding, design, procurement and marketing are completely integrated. The OEM and ODM arrangements fall in-between. For the export-oriented industry, it is typical that local producers cater only to the CMT functions in fragmented value chains, under the coordination and supervision of foreign buyers.

A typical CMT operation thus involves enterprises from countries with different international comparative advantages. For instance, in value chains oriented to the Japanese market, buyers tend to be brand owners such as Uniqlo, in which trading companies act as agents to coordinate production and distribution. Input materials, mainly textiles, are sourced from middle-income countries that exhibit advantages in capital-intensive processes, such as Thailand or Indonesia.

These are then shipped to locations such as Viet Nam, where labour costs have tended to be lower. However, because of the recent significant increases in labour costs in Viet Nam, CMT operations are now also increasingly expanding into "frontier countries" such as Cambodia and Myanmar.

Figure 1. **Production and distribution flow of the textiles and clothing value chain**



Source: Modified from Fukunishi, Goto and Yamagata (2013).

Economic upgrading

Although heterogeneity within the textile and clothing industry is significant, the clothing industry is probably the most labour-intensive. It thus serves as one of the first industries in which developing countries can gain a foothold in the global economy. As such, the ability of to enter into this chain and to capture an increasingly larger share of the value in the chain is therefore of crucial concern. Economic upgrading is the key term for analyzing the different trajectories to achieve this goal.

There is broad consensus in GVC research on categorizing economic upgrading into three main areas – (1) *process* upgrading, (2) *product* upgrading and (3) *functional* upgrading (Gereffi and Memodovic, 2004; Kaplinsky, 2005; Palpacuer et al., 2005; Goto et al., 2011).[4] Process upgrading is concerned with increasing technological efficiency in the production process, which can be achieved by adopting new technology or applying new management methods. Product upgrading is about shifting towards the production of products with higher value added. Several studies have identified the positive contribution to process and product upgrading of technological transfer from buyers in developed countries to producers in developing countries (Goto et al., 2011; Schmitz and Knorringa, 2000). Functional upgrading is switching from one functional area to another and is the most difficult to achieve.

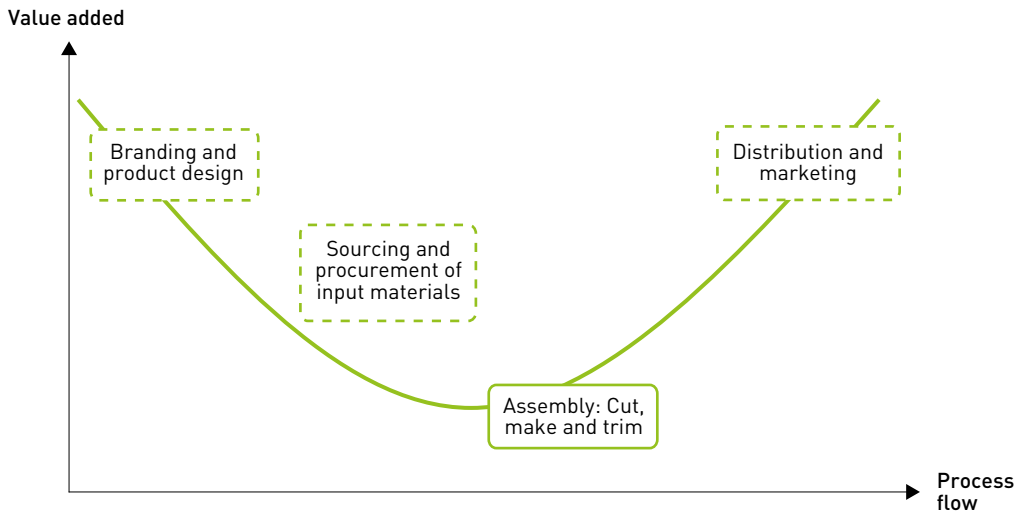
[4] For a technical note on product and process upgrading, see Goto (2014).

The clothing value chain illustrates how these three types of upgrading relate to each other. Figure 2 depicts the production processes of the clothing industry and associates each of them with the corresponding relative levels of value addition. Branding, product design and marketing functions are of high knowledge intensity and more difficult to undertake successfully than other functions in the process. As such, entry barriers are high and thus are associated with higher levels of value addition relative to other functions. In contrast, because the labour-intensive CMT function is the easiest to undertake, entry barriers are also the lowest and these operations produce relatively low levels of value addition. As in many industries, most of the functions at the beginning and end of the production flow tend to be more difficult and of higher value added, and the ones in the middle tend to be of the lowest value added, so the figure typically takes a U shape. That is why this figure is called the "smiling curve".

For developing countries, upgrading typically can happen through process and/or product upgrading. These two types are complementary; in other words, it remains very difficult, if not impossible, to upgrade products unless some process upgrading has occurred. However, these two types of upgrading take place *within* a particular functional node (e.g. CMT) in the value chain through which the developing country is connected. Functional upgrading, in contrast, entails a *shift* along the chain and induces a move from one functional area to another that requires different factor intensities (e.g. a shift from a labour-intensive function to a capital- or knowledge-intensive one).

One of the key contexts of GVC research is its explicit recognition of asymmetric power relationships between lead firms (buyers) and local suppliers. Lead firms outsource functions in which they no longer have comparative advantages; however, the functions that they retain internally are those that constitute their core competence areas. These could include functions such as design, branding and marketing, in the case of the clothing industry. As such, while it is sensible for lead firms to transfer technology and knowledge that are related to "peripheral" functions that they outsource, they have strong incentives to protect the functional areas that are at the core of their competencies. This means that it is not realistic for local suppliers in developing countries to expect technological transfer from lead firms that would help local suppliers achieve functional upgrading.

Figure 2. **The clothing smiling curve: Functional hierarchy in the clothing production-distribution flow**



Source: Modified from Goto (2014).

In the case of clothing exports, the difference between traditional export statistics and those of value added trade is dependent upon the contractual arrangements (the production modality, such as CMT, OEM, OBM) under which local ASEAN firms operate in the value chain. For instance, as described in figure 1, in a CMT arrangement, clothing-producing companies receive all input materials from their (domestic or foreign) buyers free of charge, without transfer of ownership. This occurs regardless of the country of origin of the textiles (fabrics). As such, two scenarios are possible: (1) textiles are produced domestically, and (2) textiles are produced in third countries and brought into the country free of charge or imported with transfer of ownership (with payment). In the first scenario, the contribution of textiles will be included in the domestic value addition of exports, while in the second scenario it will not, regardless of whether the materials used are paid for. This holds in the other extreme cases, for example, where the clothing-producing company integrates all the processes and functions internally (the OBM modality).

The domestic proportion of value addition under OBM should be much higher than under CMT; however, as value added generated in other processes such as design, branding and marketing functions (most of which are non-tradables) accrues in the domestic economy as well. The difference in the proportion of the domestic value added contribution should be much higher in companies that produce under OBM arrangements than in those that operate under CMT contracts. In short, to be able to fully interpret the data in both traditional trade statistics and those on value added trade, one should at least have some idea of how the target country is connected to value chains in terms of contractual arrangements. This crucial point is also one of the major bottlenecks when it comes to the interpretation and assessment of aggregated data, such as those used in this report, to draw out further policy implications (box 1).

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 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 series are as follows:

1. **Foreign value added:** Foreign value added (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 GDP.
2. **Domestic value added:** Domestic value added (DVA) is the part of exports created in country, i.e. the part of exports that contributes to GDP. 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).

The sum of foreign and domestic value added equates to gross exports.

3. **Value added incorporated in other countries' exports: DVX** 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 is the same.

.../

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

4. **GVC participation** indicates 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 (FVA) the value added supplied to other countries' exports (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 domestic value added 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 corrects the limitation of the foreign and domestic value added indicators, in which countries at the beginning of the value chain (e.g. exporters of raw materials) by definition have a low foreign value added 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. A number of complex methods have been devised in the literature to measure GVC length; however, 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 on the comparative advantages and competitiveness of countries, and hence form a basis for development strategies and policies.

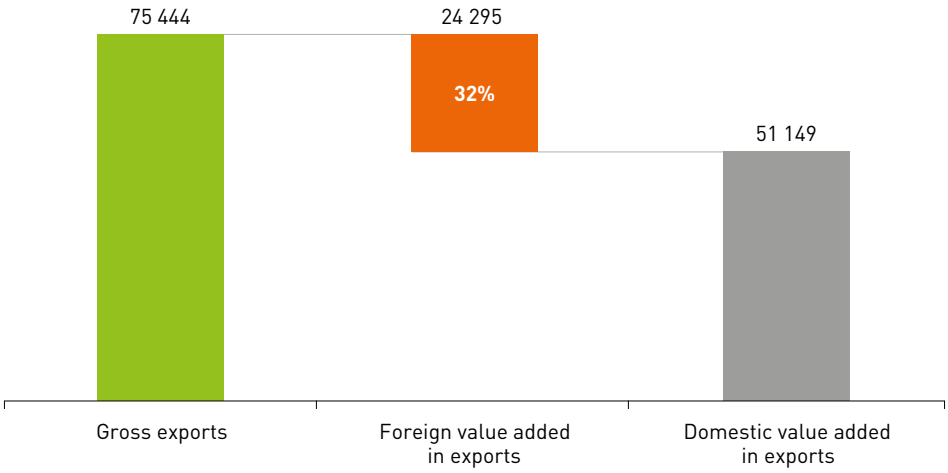
Source: Adapted from UNCTAD (2013).

In 2017, the domestic value added (DVA) in the export of textiles, clothing and leather (TCL) in ASEAN was about $51 billion, or 68 per cent, while the foreign value added (FVA) was about $24 billion, or 32 per cent.

The breakdown for each of the ASEAN members is outlined in table 4. What is striking is the difference of each country's position when compared with those shown in tables 2 and 3, which report export values based on traditional trade statistics. For example, statistics from the UN Comtrade database suggest that Viet Nam was by far the largest exporter of textiles and clothing in ASEAN, exceeding the second largest exporter (Indonesia) in export value by more than double in 2016; while Viet Nam's exports were $26,348 million, those of Indonesia were $11,082 million. However, the gross exports of Viet Nam shown in table 4 suggest that they were merely $6.933 million in 2017, which is much lower than the amounts reported in tables 2 and 3. It is also much lower than those of Indonesia – just about one-fourth.

Two plausible reasons for these differences relate to the fact that Indonesia seems to have stronger international comparative advantages in textile export, particularly in synthetic fibre, and the possibility that Indonesia has stronger domestic intra-industry linkages (between producers of clothing and textile). Viet Nam's export-oriented clothing industry operates almost entirely under CMT modalities, in which imported fabrics (some from Indonesia) play a major role. However, again, because of the high intra-industry heterogeneity, these statistics should be treated as indicative.

Figure 3. **Value added exports from textiles, clothing and leather, 2017** (Millions of dollars)



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

Table 4 and figure 4 suggest that the share of domestic value added in these industries in 2017 was highest for Myanmar, with a DVA of 98.6 per cent, and lowest for Singapore, with a DVA of 13.9 per cent. One of the reasons behind these counterintuitive figures could be that Singapore has developed to such an extent that it has lost comparative advantages in the export of both textiles and clothing, and is now relocating its production processes to neighboring countries, thereby increasing FVA (and thus decreasing DVA).

Regarding Myanmar, the interpretation of a DVA share of 98.6 per cent (FVA share of 1.4 per cent) may prove somewhat difficult, as it is known to be among the most rapidly growing destinations for international buyers to place orders under CMT arrangements, which is of high import intensity and export orientation. One of the possible reasons is that, until the year in question (2017) when Myanmar began to liberalize international transactions, the ownership of the input materials (textiles and accessories) remained in the hands of foreign buyers because of the difficulties associated with international credit and payment settlements, and thus are not reflected in domestic or international transactions. Another is that Myanmar has a disproportionately larger share of exports of leather and other subcategories that are less import intensive – shares that are not necessarily reflected in the traditional HS classifications.

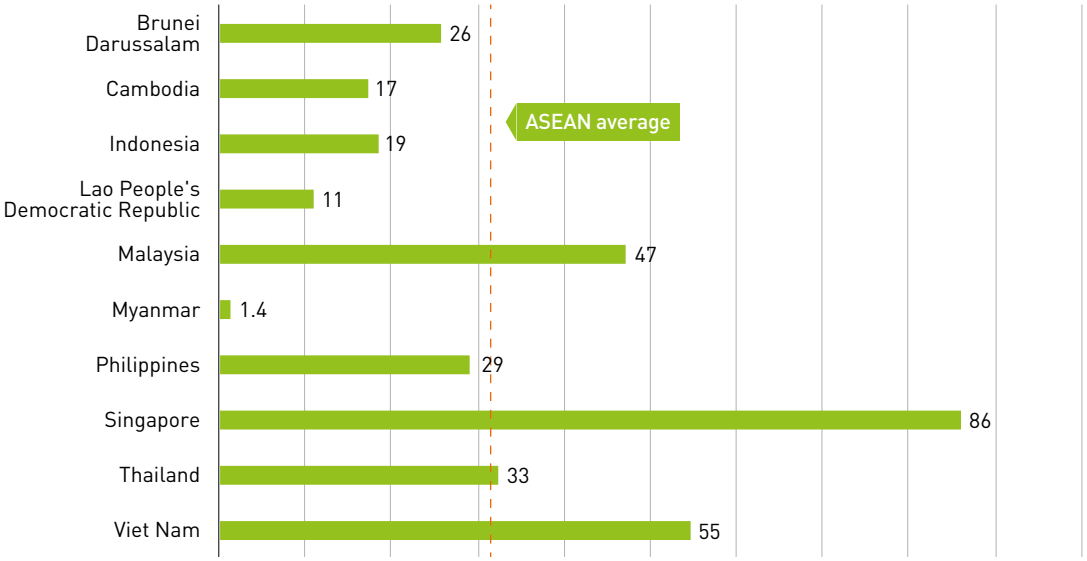
Figure 5 provides a summary of where the ASEAN TCL industries procure their inputs and to what extent. Five countries account for more than half of foreign inputs used in these industries in ASEAN. China is the largest value added creator, and Japan ranks second, followed by the United States, the Republic of Korea and Germany. Again, this allocation stems from the fact that the production of textiles can be highly capital and technology intensive, in which more developed countries typically exhibit international comparative advantages. However, ASEAN proves significant as well, accounting for about 16 per cent of foreign inputs, which suggests a high level of intraregional (horizontal) trade in the TCL industries, and thus progressive regional integration in ASEAN.

Table 4. **Value added exports from textiles, clothing and leather, 2017**
(Millions of dollars and per cent)

Country	Value			Share		
	Gross exports	Domestic value added	Foreign value added	Gross exports (%)	Domestic value added	Foreign value added
Brunei Darussalam	266	197	68	100	74.2	25.8
Cambodia	1 299	1 074	225	100	82.7	17.3
Indonesia	26 931	21 930	5 001	100	81.4	18.6
Lao People's Democratic Republic	142	126	16	100	89.0	11.0
Malaysia	7 060	3 721	3 338	100	52.7	47.3
Myanmar	367	362	5	100	98.6	1.4
Philippines	7 449	5 289	2 159	100	71.0	29.0
Singapore	2 921	407	2 515	100	13.9	86.1
Thailand	22 077	14 900	7 176	100	67.5	32.5
Viet Nam	6 933	3 143	3 791	100	45.3	54.7
Total	**75 444**	**51 149**	**24 295**	**100**	**67.8**	**32.2**

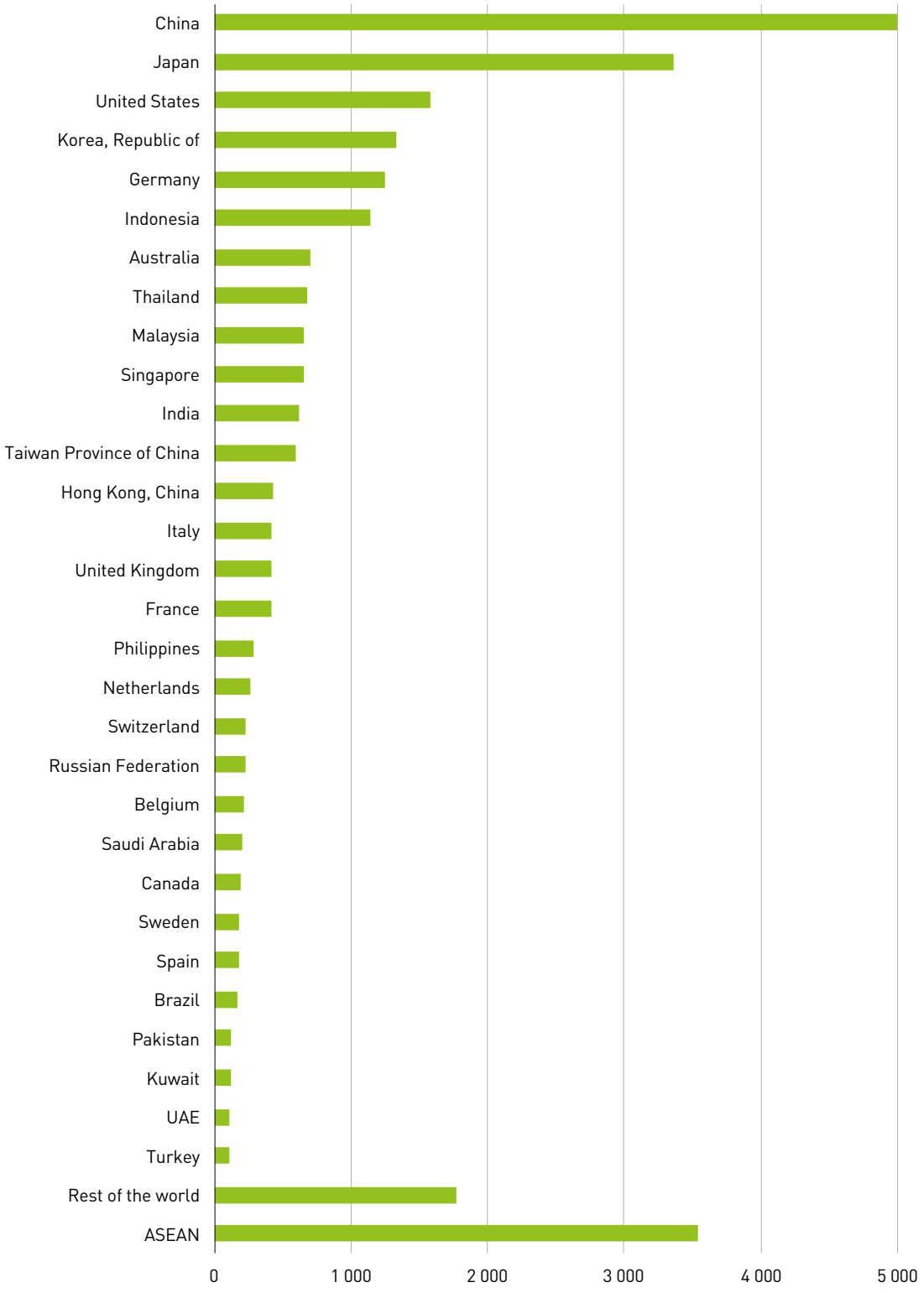
Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

Figure 4. **Share of foreign value added in textiles, clothing and leather, 2017** (Per cent)



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

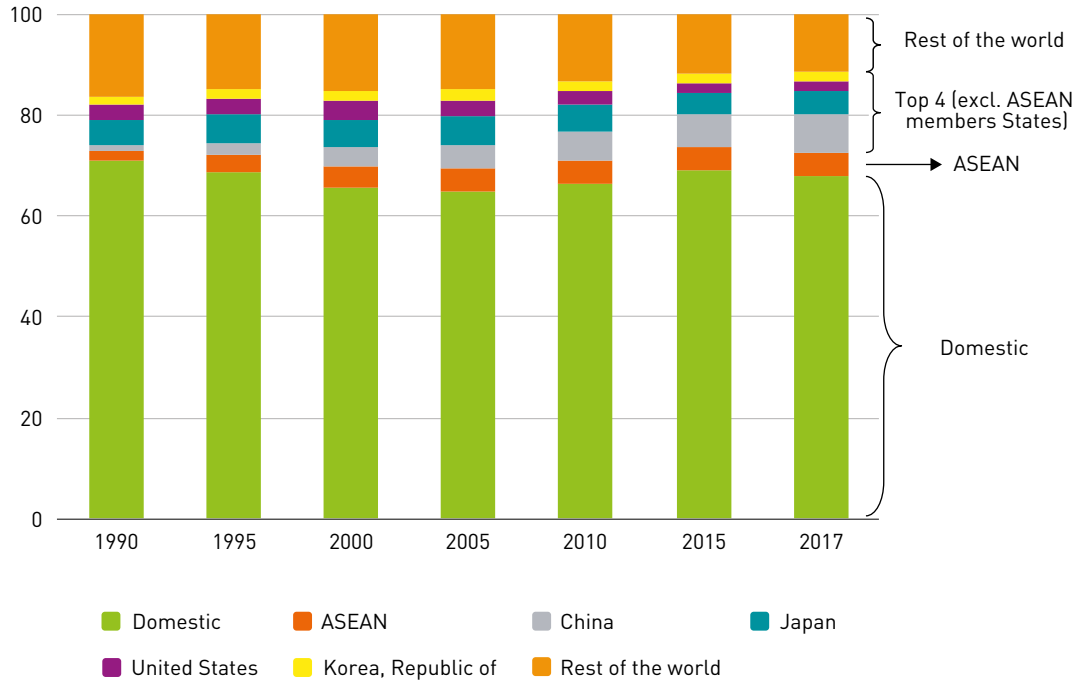
Figure 5. **Top 30 creators of foreign value added for ASEAN exports of textiles, clothing and leather, 2017** (Millions of dollars)



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

Figure 6 summarizes the distribution of value added in the export of TCL products from ASEAN. One of the trends it reflects is the increasing role played by the domestic economy in terms of value added creation. Another is the decline of inputs from more developed countries such as Japan and the United States, and an increase from ASEAN countries. As countries develop, they shift towards more capital-intensive industries, which could lead to an increased emphasis on the production of textiles. As the textile industry tends to be more integrated, this increased emphasis may lead to greater domestic value added content.

Figure 6. **Value added exports of textiles, clothing and leather from ASEAN, by domestic, ASEAN and top four foreign country creators of value added, selected years**
(Per cent)



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

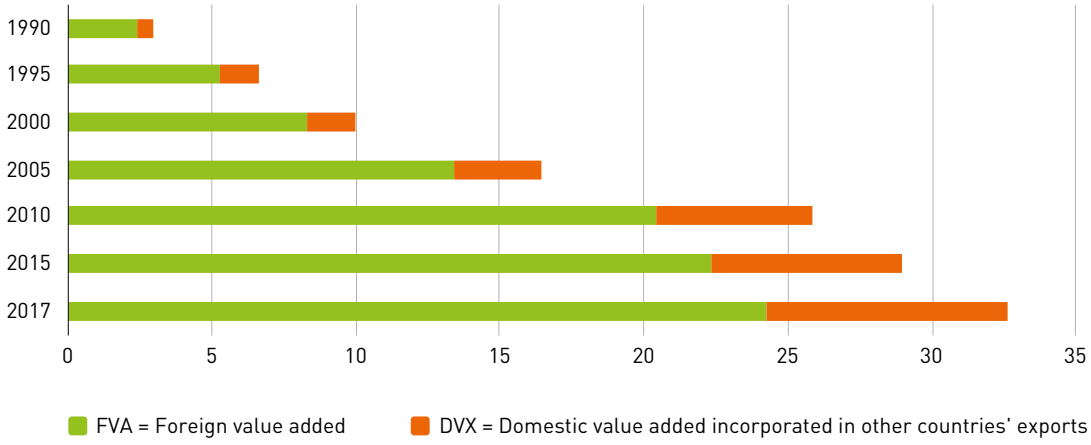
Figure 7 summarizes the evolving trends of the GVC participation of the ASEAN TCL industries. It may suggest that fragmentation is accelerating where ASEAN countries are now increasingly integrated in GVCs and embedded in mutually dependent relationships with others. It should be noted that because DVX measures how much of exports are used as inputs for another country's exports, it is highly likely that these statistics primarily capture values in textiles and leather, and to a much lesser extent those for clothing.

Table 5 outlines what is referred to as GVC participation, which is calculated by adding FVA and DVX (value added incorporated in other countries' exports) (box 1). This is based on the idea that the larger the proportions of inputs originating from foreign sources (imports), and the larger the proportions of a country's exports being used by the importing country as inputs for their exports, the more integrated the country is in GVCs and hence the greater its GVC participation.

Again, this is a crude measure which must be used with caution primarily because the statistics are available only at a highly aggregated level at this time; whereas textiles and leather can be both traded as intermediary goods and consumer (final) goods, clothing tends to be traded as final goods. As such, depending on a country's trade structure with respect to clothing and textiles, it may exhibit either lower or higher GVC participation.

Table 5 suggests that in ASEAN although GVC participation remains high, participation in regional value chains (RVCs) has also progressed steadily; in 2017 the regional participation rate share out of all GVCs was 16 per cent. However, this ratio is much lower than the average of other target industries under investigation, which is roughly one-quarter (see Paper 1 of this series).

Figure 7. **Evolution of GVC participation in ASEAN textiles, clothing and leather, 1990–2017**
(Billions of dollars)



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

Table 5. **GVC and RVC participation in exports of textiles, clothing and leather, 1990–2017**
(Per cent of total exports)

	FVA: Foreign value added			DVX: Domestic value added incorporated in other countries' exports			Value chain participation	
Year	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	29.2	27.0	2.2	7.2	6.2	0.9	36.4	3.1
1995	31.4	27.9	3.5	8.0	6.6	1.4	39.4	5.0
2000	34.3	30.0	4.3	6.9	5.5	1.4	41.3	5.7
2005	35.2	30.7	4.5	8.2	6.8	1.4	43.3	5.9
2010	33.8	29.1	4.7	9.0	7.5	1.5	42.8	6.2
2015	30.8	26.4	4.5	9.2	7.6	1.6	40.1	6.1
2017	32.2	27.5	4.7	11.0	8.9	2.1	43.2	6.8

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

Figure 8 presents country-based statistics of GVC participation for 2017. Thailand and Indonesia are the most integrated into TCL value chains, while the Lao People's Democratic Republic and Myanmar are the least integrated. This may in fact be because although Thailand and Indonesia both have sizeable textile and clothing industries, the Lao People's Democratic Republic and Myanmar are primarily focusing on clothing.

Figure 8. **GVC participation in textiles, clothing and leather in ASEAN, 2017: value in gross exports of textiles, clothing and leather** (Millions of dollars)

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

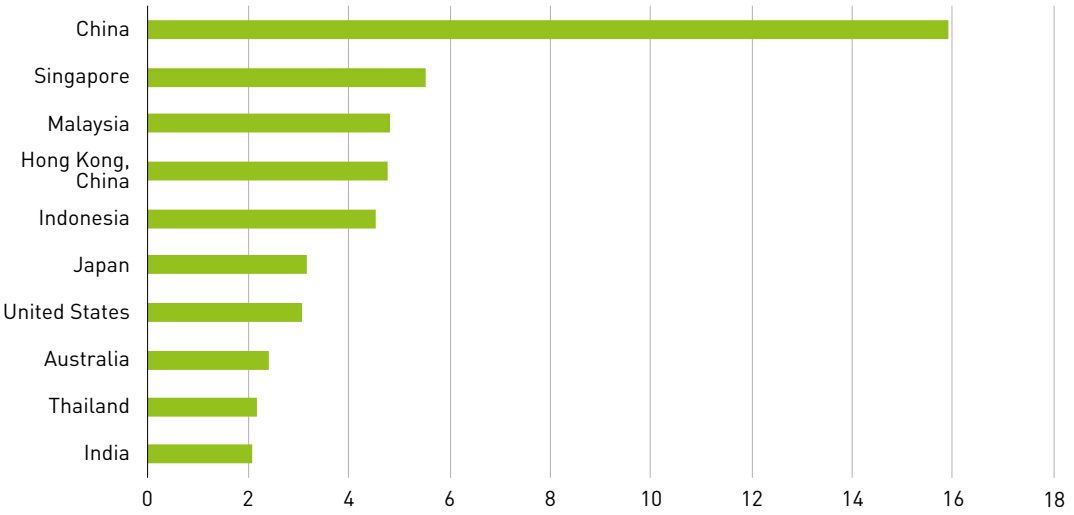
Textile and clothing GVCs differ by ASEAN country

This section outlines the TCL industries in each of the ASEAN member countries using data on value added trade. It also attempts to provide a more in-depth comparison of Cambodia, Thailand and Viet Nam.

Figure 9 summarizes how much foreign inputs the TCL industry of Brunei Darussalam uses and from which country. From table 4, the gross exports of TCL in 2017 was $266 million, the second smallest after that of the Lao People's Democratic Republic, and accounting for just 0.4 per cent of the ASEAN total. The share of DVA was high at 74 per cent, which suggests that its TCL industries are highly integrated through backward linkages. Tables 2 and 3 suggest that Brunei Darussalam's exports of TCL are almost entirely dominated by clothing, of which about 57 per cent is knitted clothing, which may explain the low import intensity.

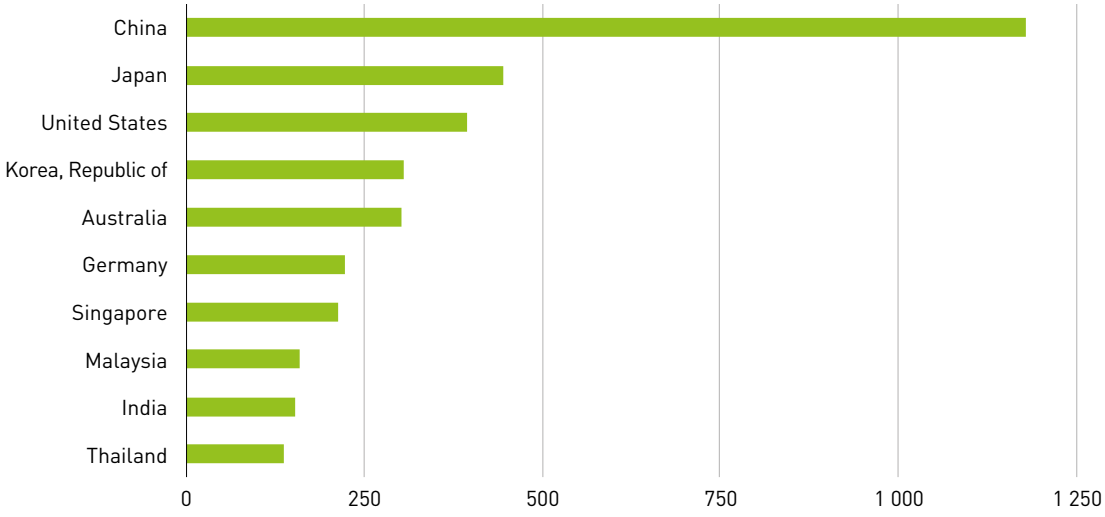
The FVA statistics for Indonesia are summarized in figure 10a. In terms of sources, Thailand is its largest partner, followed by China and Japan; however, the dominant position of Thailand is striking. In gross terms, Indonesia is the largest exporter (DVA plus FVA) in ASEAN, with $26.931 million, of which 81 per cent comes from domestic sources (table 4). From table 2 and table 3, both textiles and clothing exports are significant, with the latter export volume almost double that of the former.

Figure 9. **Foreign value added in exports of textiles, clothing and leather from Brunei Darussalam, 2017: 10 largest contributors to value in gross exports of textiles, clothing and leather** (Millions of dollars)



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

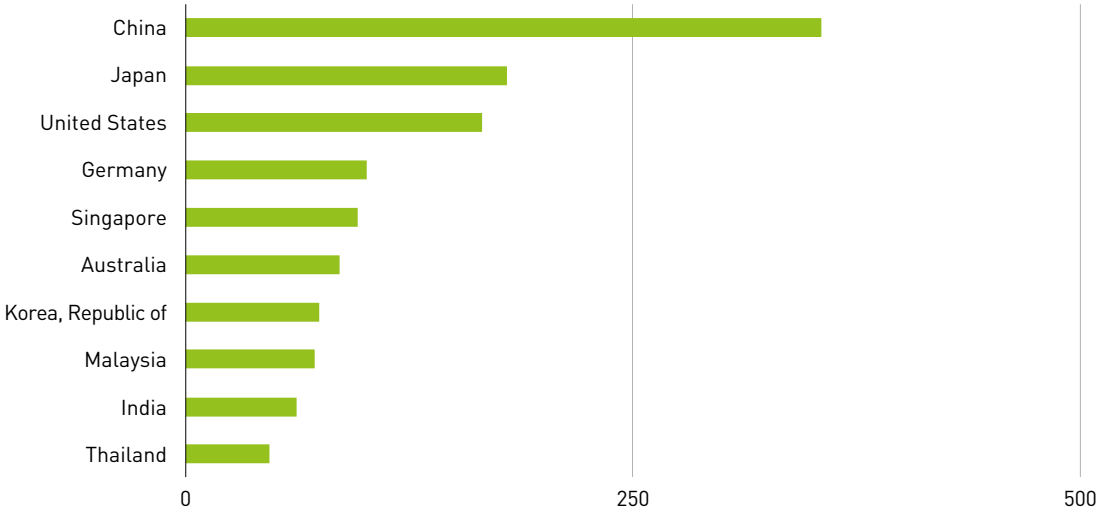
Figure 10a. **Foreign value added in exports of textiles, clothing and leather from Indonesia, 2017: 10 largest contributors of value in gross exports of textiles, clothing and leather** (Millions of dollars)



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

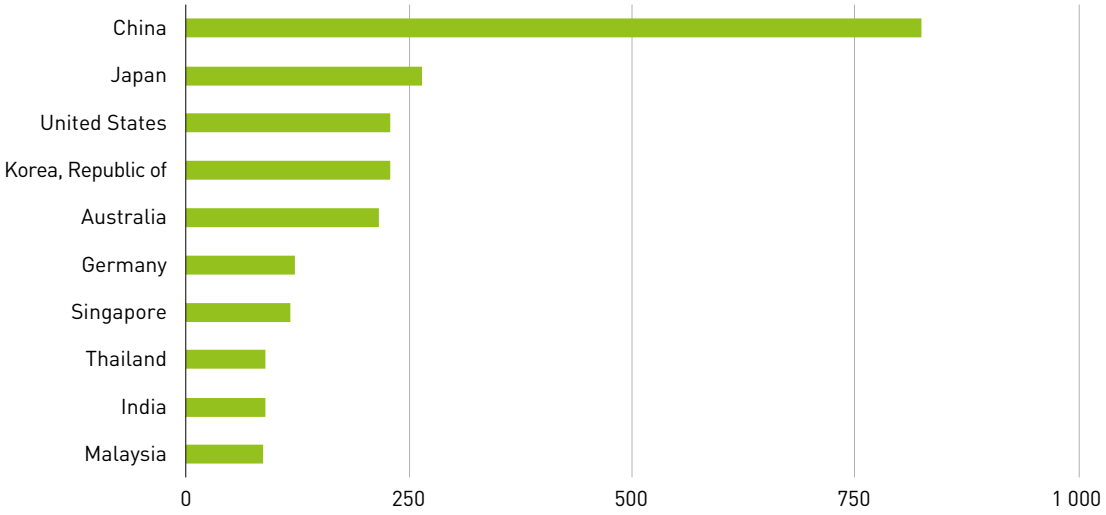
Figures 10b and 10c show FVA statistics for textiles and clothing exports of Indonesia, respectively. For both, Indonesia is most dependent on imported inputs from China, although this is particularly evident for clothing. Inputs from the United States and Japan play relatively larger roles in Indonesia's export of textiles, probably because of the higher technological and capital intensities in the production of raw materials, especially when it comes to synthetic fibre.

Figure 10b. **Foreign value added in exports of textiles from Indonesia, 2017: 10 largest contributors of value in gross exports of textiles** (Millions of dollars)



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

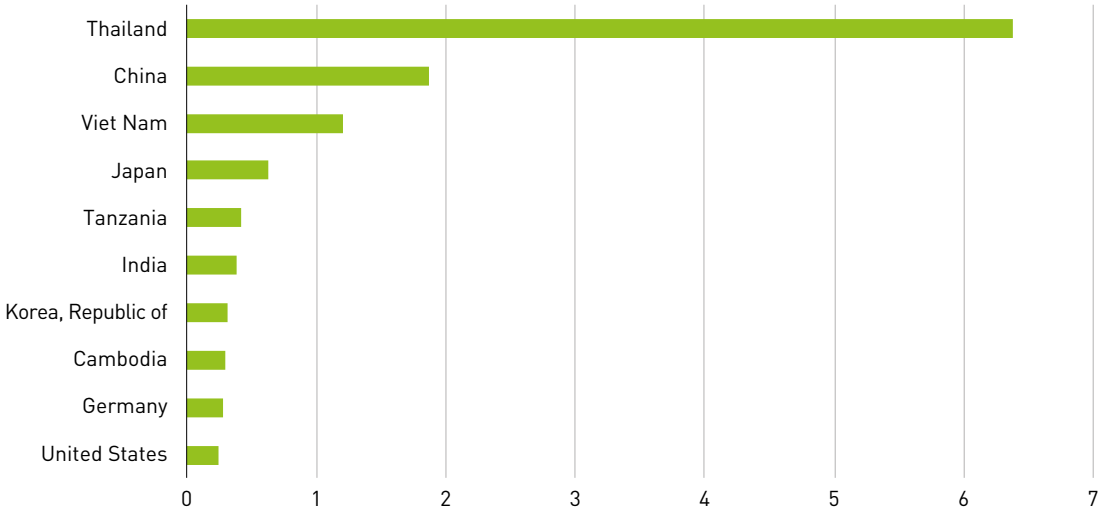
Figure 10c. **Foreign value added in exports of clothing from Indonesia, 2017: 10 largest contributors of value in gross exports of clothing** (Millions of dollars)



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

The FVA data for the Lao People's Democratic Republic are summarized in figure 11. The similarity with those of Brunei Darussalam is striking. One notable difference is the significant presence of Thailand as a value creator in TCL exports from the Lao People's Democratic Republic. This significance is explained by Thailand's position as one of the larger producers and exporters of textiles, and its proximity (the same can be said about Brunei Darussalam and Singapore).

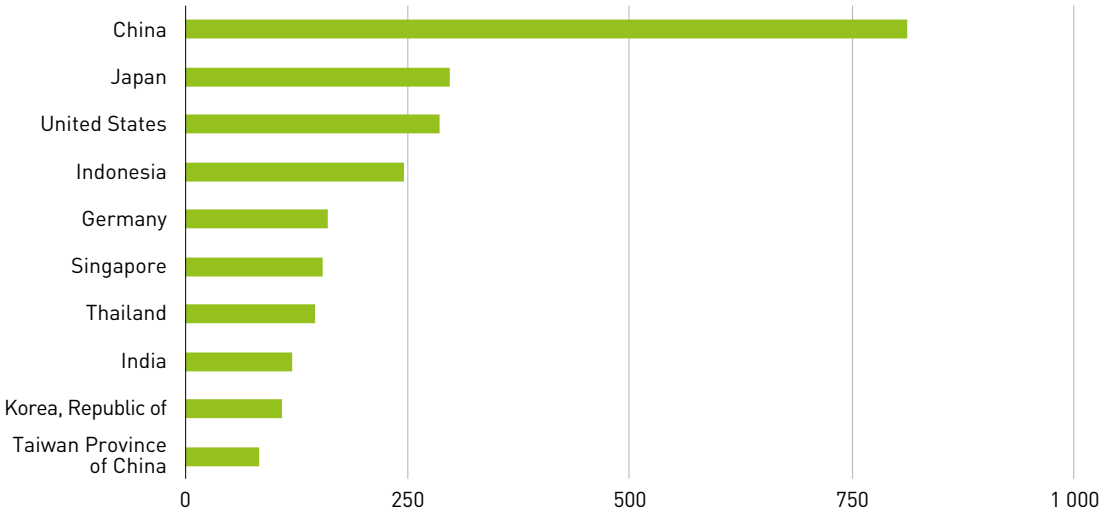
Figure 11. **Foreign value added in exports of textiles, clothing and leather from the Lao People's Democratic Republic 2017: 10 largest contributors of value in gross exports of textiles, clothing and leather** (Millions of dollars)



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

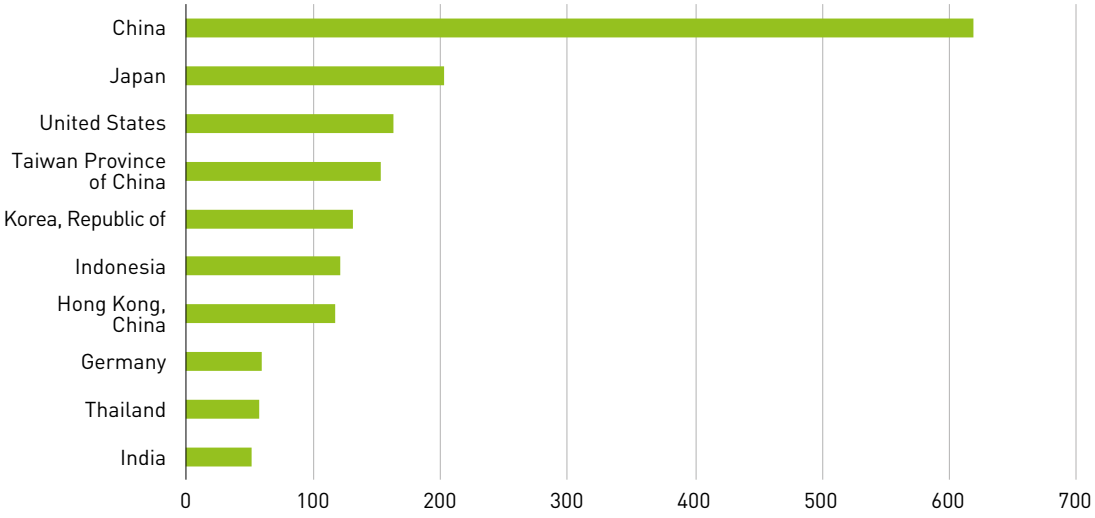
The statistics for Malaysia and the Philippines are, again, quite similar. The FVA for TCL exports from each country is shown in figures 12a and 13a, where China is dominant for both, followed by either the United States or Japan. What is interesting, however, is the fact that although DVA for the Philippines is 71 per cent, that for Malaysia is just about 53 per cent. According to table 1, the per capita GDP of Malaysia is about $9,500 while that for the Philippines is $2,950. The trade structure, as manifested in tables 2 and 3, suggests that although in both countries the export value of clothing is roughly $1 billion, the value of their textile exports differs significantly; while that of Malaysia was about $1 billion, that of the Philippines was just about $27 million. When the production of clothing takes place under a CMT modality, it tends to exhibit a higher FVA (and thus lower DVA). Therefore, it may be reasonable that the FVA for the Philippines is higher than that of Malaysia.

Figure 12a. **Foreign value added in exports of textiles, clothing and leather from Malaysia, 2017: 10 largest contributors of value in gross exports of textiles, clothing and leather** (Millions of dollars)



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

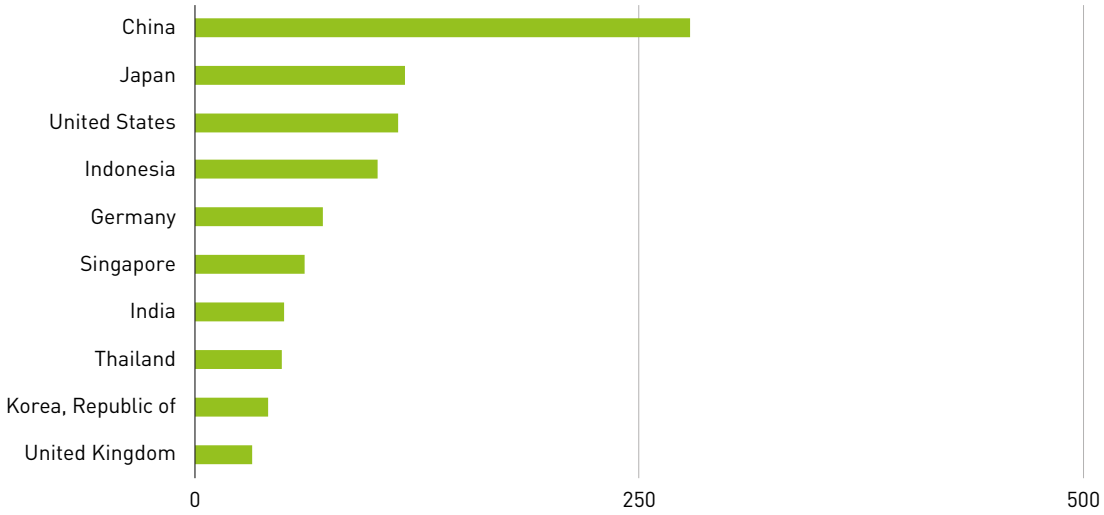
Figure 13a. **Foreign value added in exports of textiles, clothing and leather from Philippines, 2017: 10 largest contributors of value in gross exports of textiles, clothing and leather** (Millions of dollars)



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

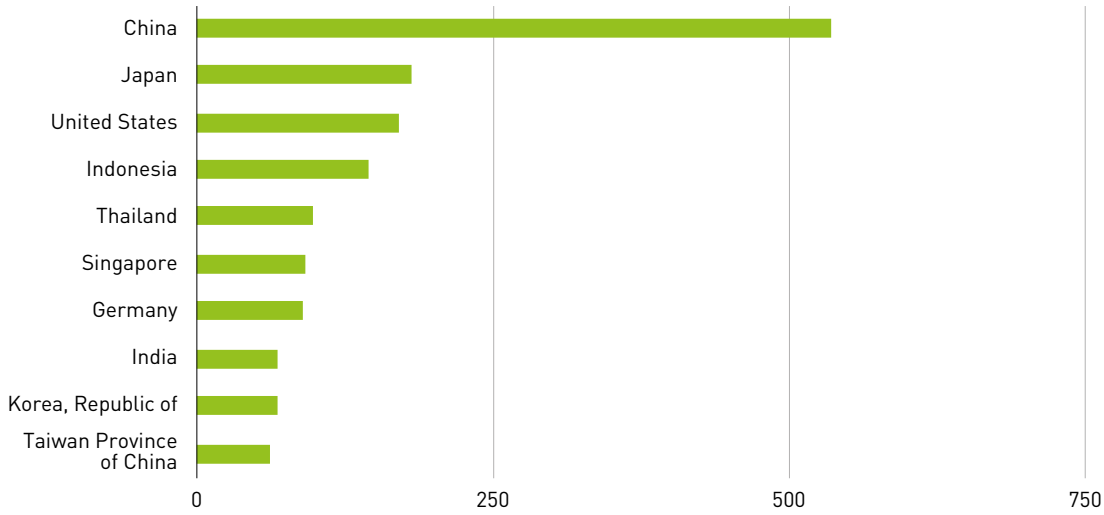
Figures 12b and 12c show FVA in exports in textiles and in clothing from Malaysia, and figures 13b and 13c are those for the Philippines. Although the contribution of China is significant for exports of both textiles and clothing from both countries, it plays a relatively less dominant role in the export of textiles from the Philippines.

Figure 12b. **Foreign value added in exports of textiles from Malaysia, 2017: 10 largest contributors of value in gross exports of textiles** (Millions of dollars)



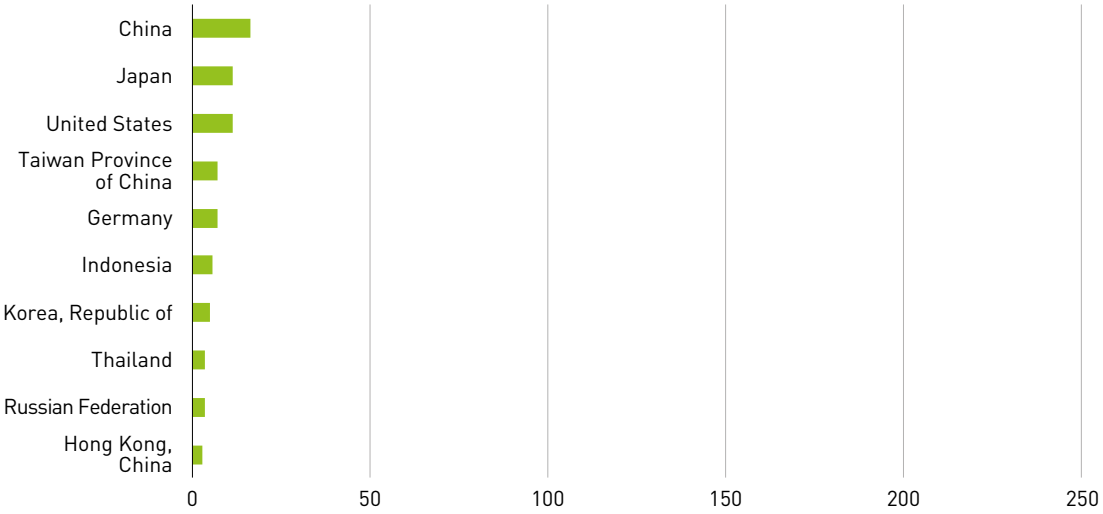
Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

Figure 12c. **Foreign value added in exports of clothing from Malaysia, 2017: 10 largest contributors of value in gross exports of clothing** (Millions of dollars)



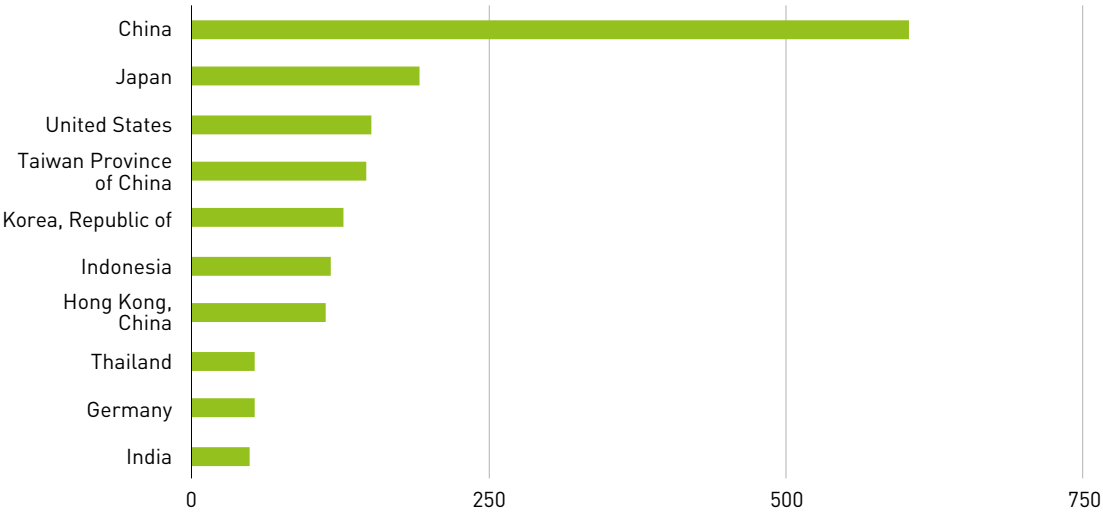
Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

Figure 13b. **Foreign value added in exports of textiles from Philippines, 2017: 10 largest contributors of value in gross exports of textiles** (Millions of dollars)



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

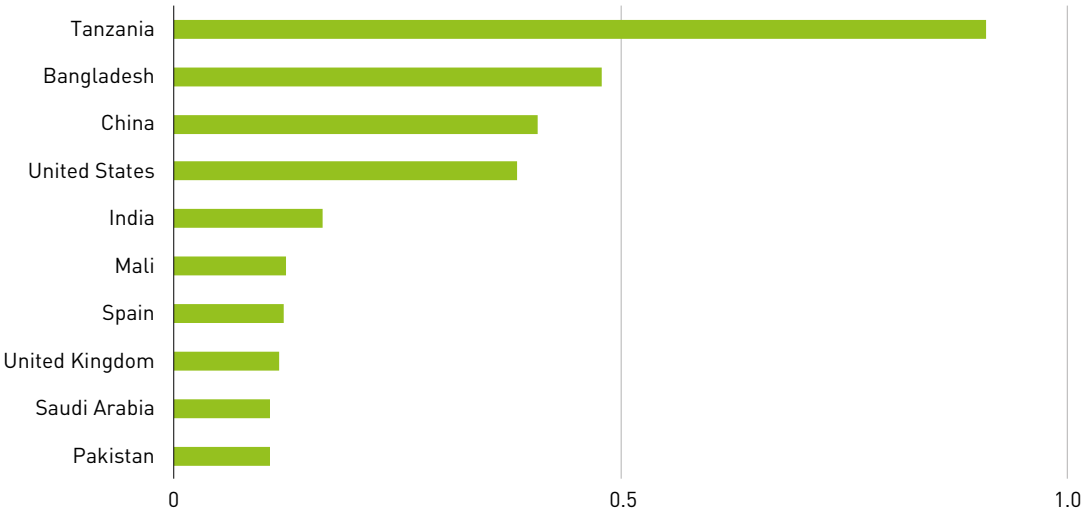
Figure 13c. **Foreign value added in exports of clothing from Philippines, 2017: 10 largest contributors of value in gross exports of clothing** (Millions of dollars)



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

Myanmar is one of the poorest countries in ASEAN, with ample labour available at relatively low wage levels, making it an attractive base for clothing production. Its clothing exports are almost entirely based on CMT operations. As such, the DVA in clothing that is exported from Myanmar accrues only from the processing fee, which is typically a very small proportion of the entire value chain. Interestingly, and unlike in other ASEAN countries, Tanzania and Bangladesh – the major textile and clothing exporters from Africa and South Asia – figure as important contributors of value added to Myanmar clothing exports, though their values are small. The fact that the United States has become another such contributor is highly likely a recent phenomenon, particularly since 2012 when the United States eased its economic embargo against Myanmar upon that country's move from a military towards a more democratic regime.

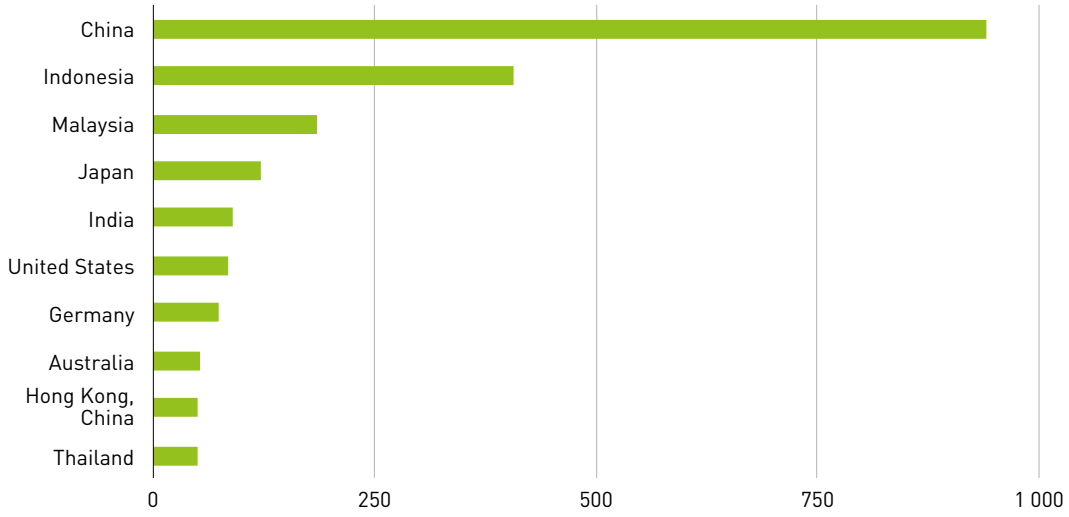
Figure 14. **Foreign value added in exports of textiles, clothing and leather from Myanmar, 2017: 10 largest contributorsof value in gross exports of textiles, clothing and leather** (Millions of dollars)



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

While Singapore is the most developed country in ASEAN in terms of its per capita GDP, its TCL industries remain significant – in fact, its export volume of clothing in the traditional sense is actually larger than that of Malaysia. However, table 4 suggests that the share of DVA in its gross exports is the lowest in the region, at about one-seventh. As briefly mentioned earlier, there is a possibility that most of the processing now takes place in locations where labour costs are cheaper, such as China and Indonesia, as depicted in figure 15a, with Singapore undertaking minimal transformations of products for re-export.

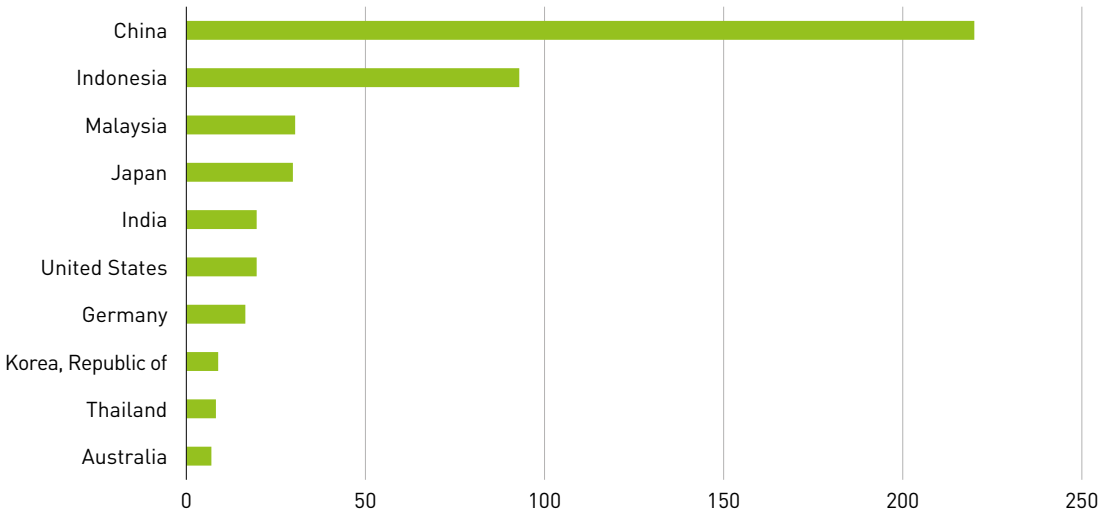
Figure 15a. **Foreign value added in exports of textiles, clothing and leather from Singapore, 2017: 10 largest contributors of value in gross exports of textiles, clothing and leather** (Millions of dollars)



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

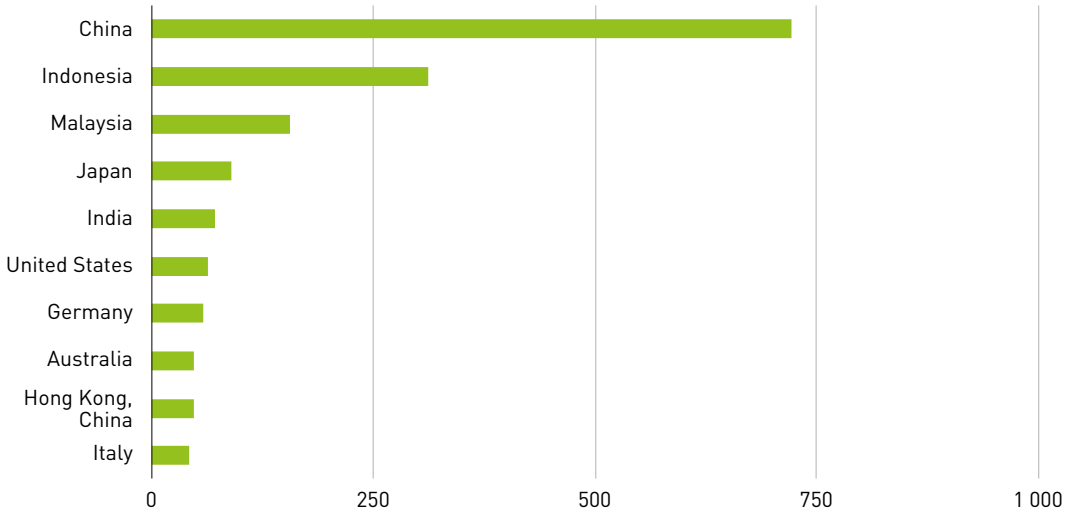
Figures 15b and 15c depict FVA in the exports of textiles and clothing from Singapore according to contributing countries. Again, China is the largest contributor for both textiles and clothing.

Figure 15b. **Foreign value added in exports of textiles from Singapore, 2017: 10 largest contributors of value in gross exports of textiles** (Millions of dollars)



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

Figure 15c. **Foreign value added in exports of clothing from Singapore, 2017: 10 largest contributors of value in gross exports of clothing** (Millions of dollars)



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

A closer look at Cambodia, Viet Nam and Thailand through a simple comparative analysis, using the FVA data for each of those countries, is useful for two reasons. First is, the significant roles the clothing industry plays (or has played) in their exports; second, focusing on these three countries makes it possible to relate the differences in their integration into RVCs to differences in their stages of economic development.

Among the three countries, Thailand was the first to be successful in the export of TCL. Figure 16 depicts the different positions of the three countries in terms of international comparative advantage.

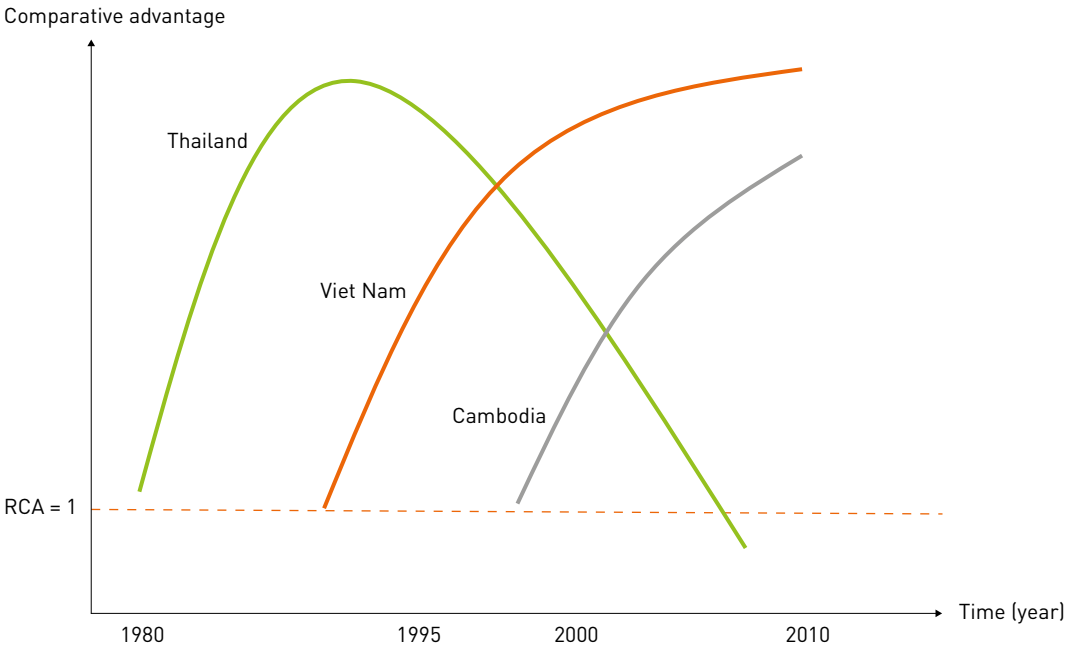
Thailand became particularly competitive in the export of clothing during the 1980s, when the Multifibre Arrangement (MFA) regulated international trade of textile products to European Union (EU) and North American markets through extensive quotas. However, as workers' wage levels increased with economic development, Thailand's clothing industry started losing its international comparative advantage. It had already started to decline by the early 1990s and by 2007, its revealed comparative advantage (RCA) index for clothing trade had dropped below one which suggests that it had lost its international comparative advantage at that point (Goto and Endo, 2014).[5]

Although business prospects for export markets are challenging, those in the domestic market seem to be expanding, due in part to the rise of incomes in Thailand. Quite a few clothing manufacturing companies have been refocusing their business orientation towards the domestic markets.[6] This shift accompanies changes in production structures, in which companies now must cater to a wider set of functions, including design, marketing, sourcing and distribution.

[5] The RCA is calculated as follows: X stands for exports, i and j denote industry i and country j, respectively, and t stands for year t.
The calculation is $RCA_{ijt} = \left[\frac{x_{ijt} / \sum_i x_{ijt}}{\sum_j x_{ijt} / \sum_j \sum_i x_{ijt}} \right]$. Although the RCA of Thailand is below one, it remains a net exporter of clothing.

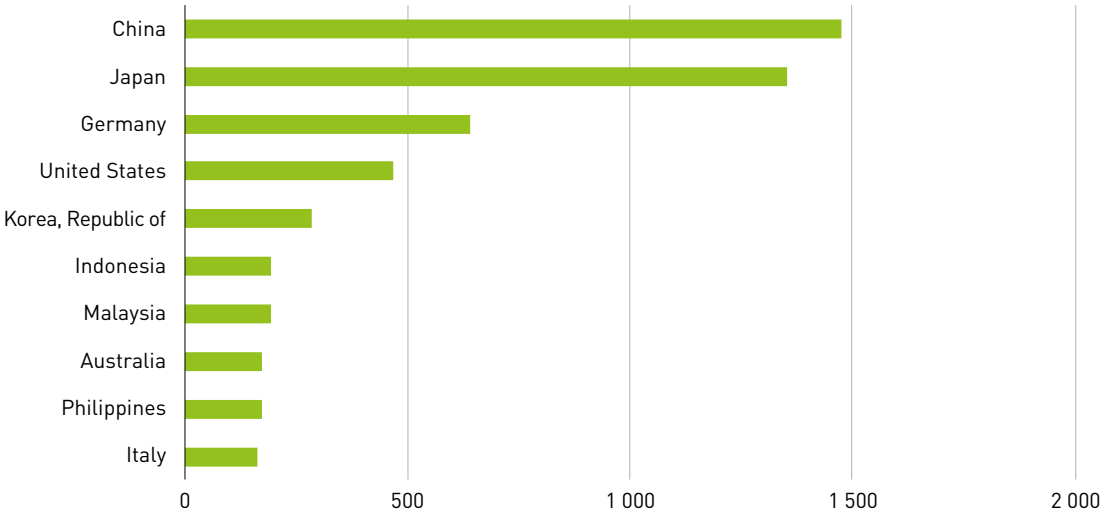
[6] Based on fieldwork in Bangkok in 2017.

Figure 16. **Changing comparative advantages of the three countries in the clothing industry: Cambodia, Thailand and Viet Nam**



Source: AJC.
RCA = revealed comparative advantage.

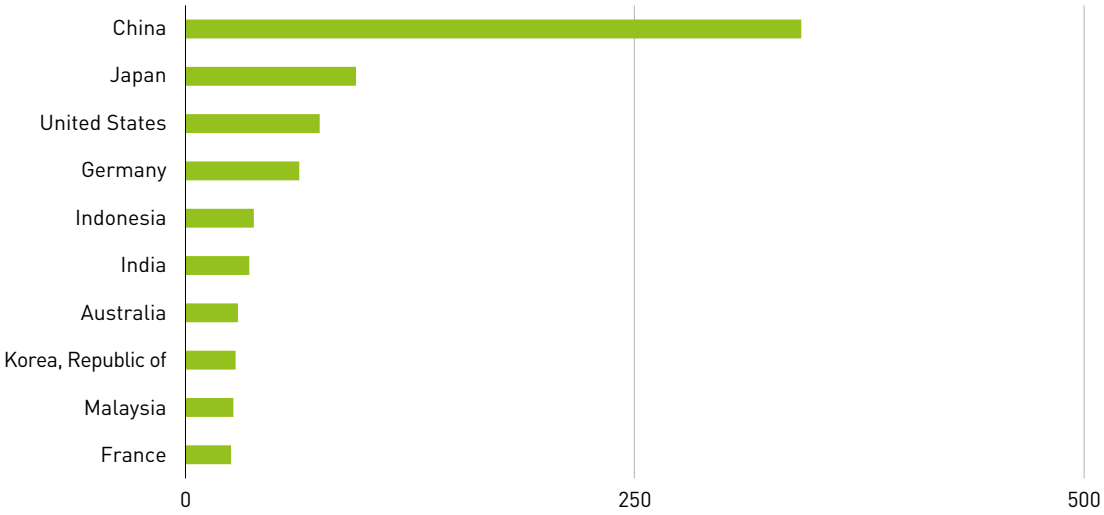
Figure 17a. **Foreign value added in exports of textiles, clothing and leather from Thailand, 2017: 10 largest contributors of value in gross exports of textiles, clothing and leather** (Millions of dollars)



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

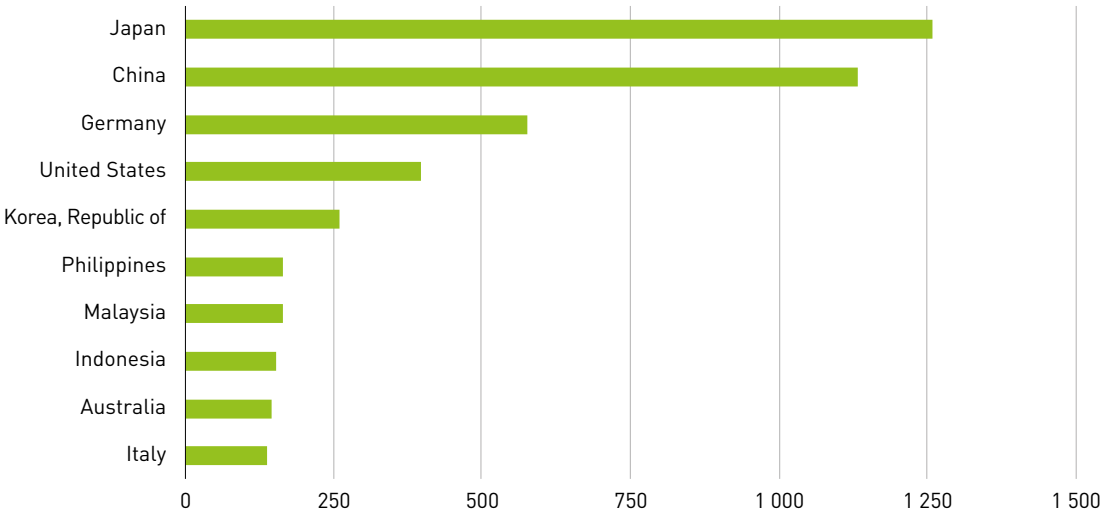
Figures 17b and 17c show FVA in textile and clothing exports from Thailand, respectively. Again, China comes at the top. It is interesting to note that Thailand is quite dependent on inputs from more developed countries, including Japan and the United States, for both textiles and clothing.

Figure 17b. **Foreign value added in exports of textiles from Thailand, 2017: 10 largest contributors of value in gross exports of textiles** (Millions of dollars)



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

Figure 17c. **Foreign value added in exports of clothing from Thailand, 2017: 10 largest contributors of value in gross exports of clothing** (Millions of dollars)



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

In contrast, in the 1990s Viet Nam started to raise its profile in the international business of clothing. A key turning point was the normalization of its diplomatic relationship with the United States in 1995, which signaled Viet Nam's return to the international economy. Although this reestablished their bilateral diplomatic relationship, it did not lead to full restoration of their economic trade relationship, and thus Viet Nam was still not connected to the United States economy as an export destination. However, it did lead to a rapid increase in businesses oriented towards the Japanese market. Japanese buyers responded quickly by establishing outsourcing relationships with Viet Nam's clothing manufacturing companies. Unlike many developing countries, in which export-oriented clothing companies have been FDI firms, those in Viet Nam were mostly large state-owned enterprises (SOEs), which were established and operated during the eras of the Soviet economic bloc or the Council for Mutual Economic Assistance (COMECON) (Goto, 2003). A bilateral trade agreement with the United States came into effect in 2001, which led to an export boom in clothing.

Although Viet Nam's debut into the international economy was led by exports of clothing, its textile industry was also already significant in terms of the numbers of enterprises (mostly SOEs) and workers, even as early as the 1990s. However, this industry lacked international competitiveness because of its technological backwardness, and thus most of the clothing produced for export used imported fabrics from neighboring countries, particularly from Japan. As such, Viet Nam's export-oriented clothing industry has basically been CMT based, with very high import intensity.

During this period, significant technological transfer into the clothing industry occurred through inter-firm channels with Japanese buyers. Technology transfer in value chains that were oriented towards the United States market, for example, were typically very limited (Goto et al., 2011). The textile industry did not grow like the clothing industry. However, in the 2010s, Viet Nam started to attract FDI into this industry, mostly from economies such as the Republic of Korea and Taiwan Province of China. This was particularly evident during the negotiations of the original Trans-Pacific Partnership (the) agreement (box 2). Viet Nam was a negotiating member of the TPP, while Republic of Korea and Taiwan Province of China were not. Korean and Taiwanese textile companies were nevertheless able to benefit from the agreement by simply moving to Viet Nam, which increased FDI into that industry from these economies (Goto, 2017). This has led to the recent increase of textile exports, which should also contribute further to the FVA content of Viet Nam's TCL exports (figures 18a, 18b and 18c).

Box 2. **Regional trade agreements (RTAs), Generalized System of Preferences (GSPs), and rules of origins**

Asia, in particular ASEAN, is a region where global value chains have evolved most extensively. Production processes once integrated within a country have now been fragmented in smaller production blocks. These have been relocated across borders to locations where factor endowments are more compatible with the technological attributes of each of the production blocks. This has been made possible by the rapid advancements in the internet-based information and communication technology (ICT) in the latter part of the 1990s.

The evolution of these value chains in Asia were primarily led by strategic behavior of multinational enterprises (MNEs). Nevertheless, policies of individual countries promoting openness in trade and investment have played key roles too. In addition, regional trade agreements (RTAs) as well as Generalized System of Preferences (GSPs) have also had significant influence on how local economies were to be connected to these international production and distribution networks.

.../

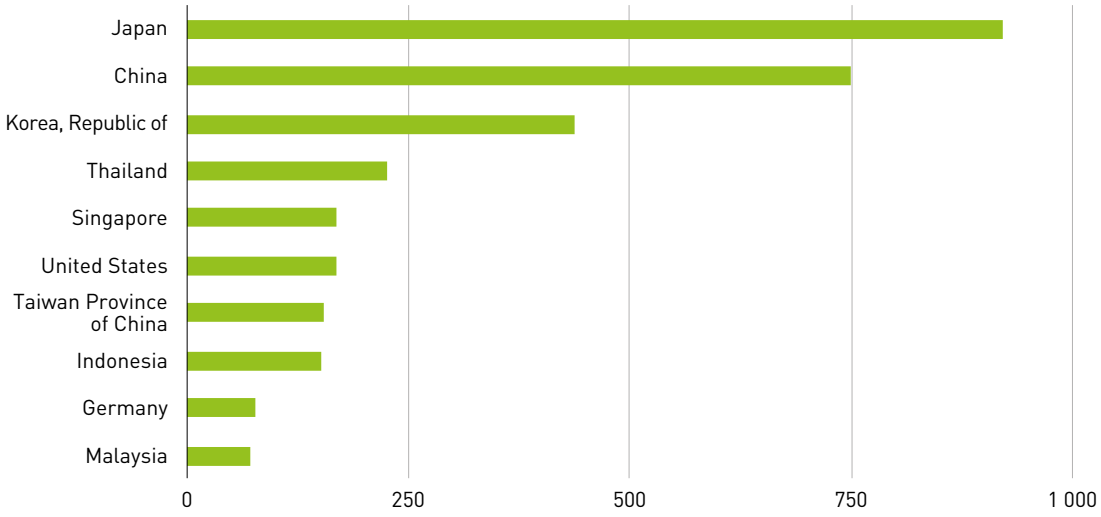
Box 2. **Regional trade agreements (RTAs), Generalized System of Preferences (GSPs), and rules of origins** (Concluded)

Because production today takes place in such fragmented networks, importing countries must now set up rules to validate the country of origin for each of its imports. Such rules of origin (ROO) are crucial to determine whether the particular good would be eligible for preferential access to the respective markets of the signatory countries.

As briefly mentioned in the text, during the negotiation process of the original Trans-Pacific Partnership agreement (in which the US was one of the negotiating members), discussions pertinent to the ROO on textiles and clothing were centered around the so called "three-transformation", or "yarn forward" rule. This rule requires that the production of yarn, fabrics and clothing (and hence the term "three transformation") had to take place within TPP member countries to be eligible for TPP market access. For countries such as Viet Nam, where the textiles for the export-oriented clothing sector were mainly imported from non-TPP countries, this yarn forward rule was seen as a major impediment to access the US market through the TPP framework.

On the other hand, because of this ROO, and the potentialities for business expansion into the US market, there was also significant inflow of FDI from non-TPP countries to TPP members. For instance, Viet Nam was experiencing a sudden investment boom in its textile sector from non-TPP economies such as the Republic of Korea, Taiwan Province of China and China. The implementation of RTAs and changes in GSPs by developed countries would have large impacts on how value-added would be distributed along the value chain.

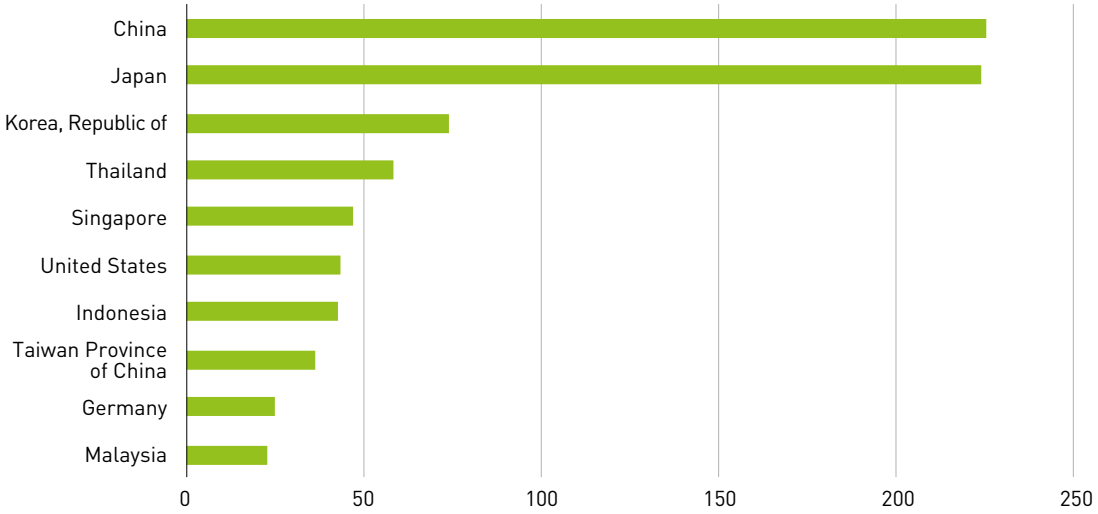
Figure 18a. **Foreign value added in exports of textiles, clothing and leather from Viet Nam, 2017: 10 largest contributors of value in gross exports of textiles, clothing and leather** (Millions of dollars)



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

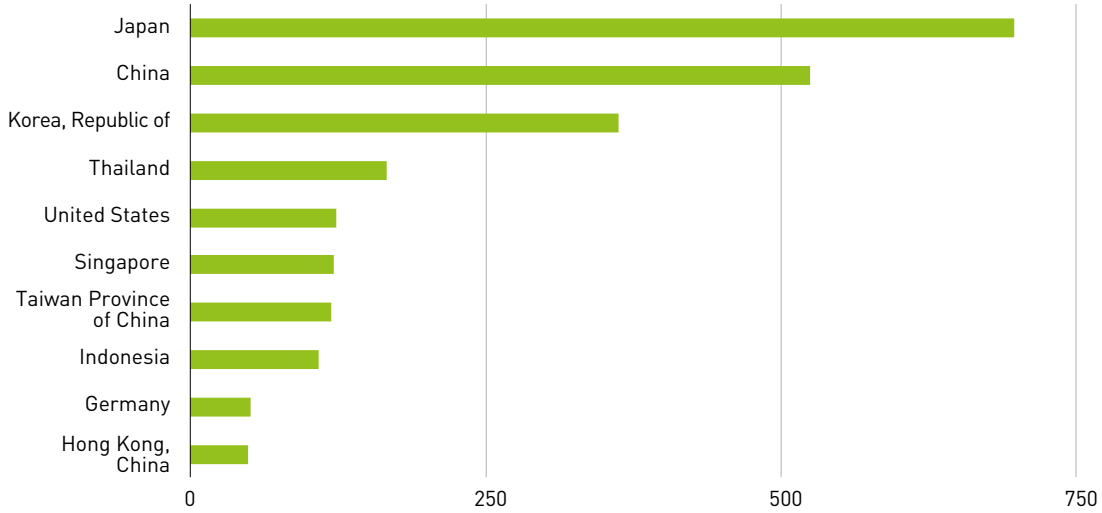
Figures 18b and 18c summarize FVA contributions of textiles and clothing, respectively, from Viet Nam. One thing that stands out is the significance of Japan, compared with other countries. This is particularly true for its contribution to Viet Nam's exports in clothing, where Japan surpassed China. One of the possible reasons for this dominance could be the positive role Japan played during Viet Nam's integration into the regional and global value chains in the latter part of the 1990s. Compared with Thailand, Viet Nam is also more dependent on inputs from Asian countries, such as the Republic of Korea and Thailand.

Figure 18b. **Foreign value added in exports of textiles from Viet Nam, 2017: 10 largest contributors of value in gross exports of textiles** (Millions of dollars)



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

Figure 18c. **Foreign value added in exports of clothing from Viet Nam, 2017: 10 largest contributors of value in gross exports of clothing** (Millions of dollars)

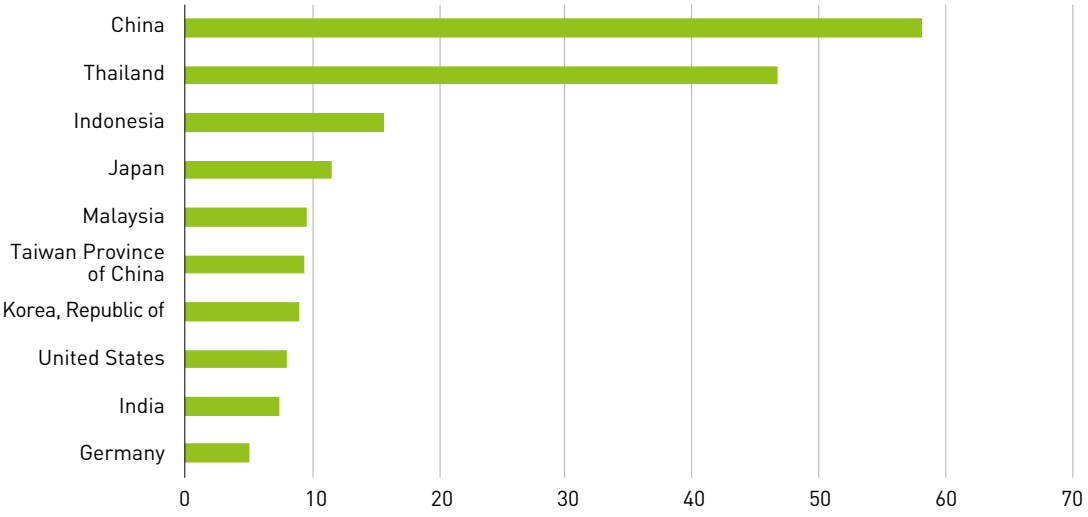


Source: AJC-UNCTAD-Eora database on ASEAN GVCs.

Cambodia started to gain momentum in the export of garments in the twenty-first century. Its exports expanded rapidly, particularly towards the United States market. Global trade of textile products was still exempt from normal World Trade Organization rules, and were regulated under the MFA. In this context, the United States granted import quotas to local Cambodian garment factories in return for good employment practices. The program, called "Better Factories Cambodia," was implemented by the International Labour Organization and the International Finance Corporation.

The Cambodian clothing industry is quite different from the Vietnamese one, mainly because of the heavy presence of FDI companies, especially those from China (Natsuda et al., 2010). However, the production modality, is CMT based, as in Viet Nam. Most of the inputs (fabrics and other accessories) are imported, in which China plays a dominant role. Japan has not been a traditional trade partner in these imports, and as such, the presence of Japanese buyers in Cambodia is small – which may partly explain the small Japanese FVA in the export of CTL from Cambodia (figure 19).

Figure 19. **Foreign value added in exports of textiles, clothing and leather from Cambodia, 2017: 10 largest contributors of value in gross exports of textiles, clothing and leather** (Millions of dollars)



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

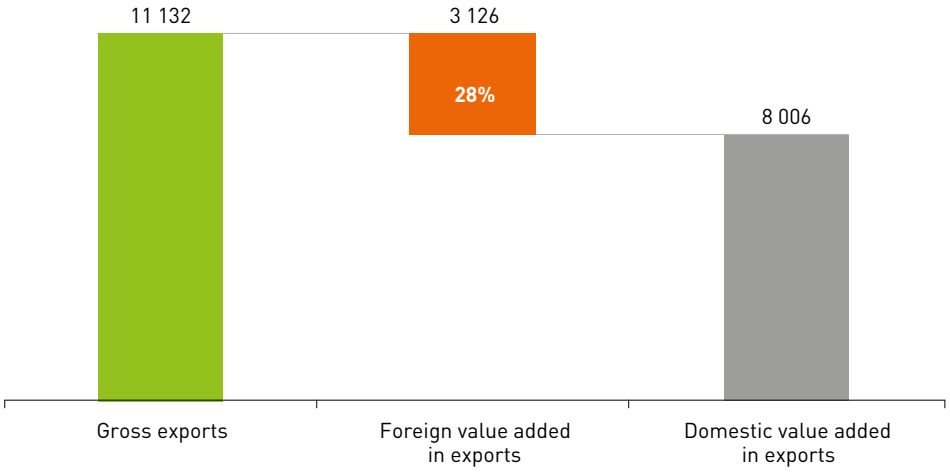
As indicated in table 2, these three countries differ significantly in terms of the products they produce. For example, while Viet Nam's export composition of clothing for knitted- and woven garments was almost equal at 48 per cent and 52 per cent respectively, the export composition in Thailand was much more skewed towards exports of knitted garments (68 per cent). Cambodia was very extreme, with 92 per cent of its clothing exports being knitted garments. This has implications for the DVA ratios. The production of knitted garments tends to be much more vertically integrated in terms of process technology than woven garments, which would lead to a higher DVA ratio if they were integrated domestically. As such, if everything were equal, then the DVA share for Cambodia should be among the highest (or the FVA should be the lowest). However, materials (e.g. fabrics) used for knitted garments tend to be brought into Cambodia free of charge for production (and thus not reflected in FVA or DVA). In other words, there is no or little domestic vertical integration

in Cambodia yet. However, the country has not participated in the international vertical integration of textiles and clothing (or shows a low level of integration in the GVCs) , resulting in low FVA. This makes the DVA share higher.

Figure 4 seems to support this analysis. It suggests that in 2017 FVA was among the highest (and DVA among the lowest) for Viet Nam (together with Singapore), probably because exports includes a large share of woven clothing, for which production tends to be more fragmented and less integrated. Thailand was fourth in terms of FVA, and Cambodia among the lowest (or among the highest in terms of DVA), with a 17 per cent share. However, as there are no data at more disaggregated levels, this point remains inconclusive.

Finally, as a benchmark, take a look at the case of Japan (figure 20 and table 6). DVA is 72 per cent, which is almost identical to the ASEAN average. However, as Japan is active only in the trade of textiles, especially in synthetic fibre (both filament and staple fibre), FVA might primarily be petrol and related chemical products to be used in the production of these products. This may explain why ASEAN does not figure prominently as the source of FVA in Japanese TCL exports – with the exception of Indonesia, which is also a large exporter of oil and related products.

Figure 20. **Structure of Japanese value added exports in textiles, clothing and leather, 2017**
(Millions of dollars)



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

Table 6. **Value added exports of Japanese textiles, clothing and leather, 1990–2017** (Millions of dollars)

	1990	1995	2000	2005	2010	2015	2017
Gross exports	4 325	5 168	6 039	7 347	9 828	9 498	11 132
Domestic value added	3 811	4 593	5 089	5 589	7 587	6 645	8 006
Foreign value added	514	575	950	1 758	2 241	2 853	3 126
Of which, ASEAN	46	61	111	203	259	337	356
Brunei Darussalam	1	1	1	2	2	3	4
Cambodia	0	0	0	0	0	0	0
Indonesia	21	31	56	109	156	208	213
Lao People's Democratic Republic	0	0	0	0	0	0	0
Malaysia	7	7	14	24	29	36	40
Myanmar	0	0	0	0	1	1	1
Philippines	3	4	7	12	16	20	23
Singapore	2	3	4	8	12	14	12
Thailand	9	12	25	42	38	50	54
Viet Nam	2	2	4	5	4	5	8

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

Policy recommendations

In Asia, awareness of issues related to the middle-income trap has grown. Concerns have been raised about possibilities of developing countries falling into this trap, particularly those in ASEAN (ADB, 2011; Gill and Kharas, 2007; World Bank, 2010). Broadly defined, the middle-income trap is a situation in which middle-income countries are not able to move up to higher-income status. However, the approaches to this problem, and thus the issues identified, vary widely. In relation to GVCs, Goto and Endo (2014) attribute the middle-income trap to the failure of local industries to upgrade into functions that are of higher value added. In the case of the production of clothing, such functions include sourcing and/or production of input materials such as textiles. It also entails knowledge-intensive functions such as marketing, product design branding, as depicted in figure 1. Given that in the ASEAN countries that are suffering from or may suffer from the trap the textile and clothing industries account for a significant economic and social contributions, providing a solution to the middle-income trap would be tantamount to providing a policy recommendation for these industries on how to move up along the GVC curve and shift the GVC curve upward. Therefore, two preliminary policy recommendations are identified here to address the potential threats of the middle-income trap and ways to capture larger proportions of the value added in clothing GVCs.

Encouraging backward linkages through agglomeration of forward functions (CMT)

For countries that are integrated into clothing GVCs through labour-intensive CMT functions, policies should incorporate non-protective levers to promote local sourcing of input materials including textiles, conditional on clear, dynamic, international comparative advantages. Building such backward linkages requires local capacity to cater for the supply of these inputs. This capacity may become particularly important for lower-income member countries of ASEAN in the long run,

including Cambodia, Myanmar, the Lao People's Democratic Republic and Viet Nam, where current local CMT operations tend to bring materials from abroad or be highly import intensive.

As discussed earlier, however, the textile industry is typically capital intensive, where the technological attributes differ significantly by the CMT function. Viet Nam nevertheless provides an interesting case: it was able to attract FDI into this industry from neighboring economies such as the Republic of Korea, China and Taiwan Province of China (box 2).

Two preconditions are required for such FDI-based backward linkages to evolve. The first one is a significant level of agglomeration of competitive enterprises catering for the CMT function in the domestic economy (forward functions). The second is an enabling environment that encourages inward FDI into spinning, weaving and knitting. The first condition is particularly important, because of the significant economy of scale effects of the textile industry. In this agglomeration, the highest priority should be on process upgrading in the CMT function, in which technology transfer from international buyers typically play major roles.

Development of the domestic or regional market

The middle-income trap often stems from the failure of enterprises to upgrade into functions with higher skill and knowledge content. As such, the ability of local enterprises to functionally upgrade is dependent on whether they can manage the shifts in using different factors of production with different intensities. This becomes key to address this problem as well as upgrade the GVCs of these industries. However, as discussed earlier, the possibility of such forms of upgrading tends to be higher in domestic and regional value chains, because of the relative ease of converting abstract market information into tangible product specifications. One of the potential policy priorities in relation to this is to build effective institutions to support business development and transactions, such as information dissemination mechanisms on inter-firm trade credit relationships, or effective implementation and enforcement of legislation on intellectual property rights. These institutions are necessary to help enterprises to reduce uncertainties inherent in businesses in general, as well as those specific to the clothing industry.

REFERENCES

Asian Development Bank. (2011). *Asia 2050: Realizing the Asian Century*. Singapore: ADB.

Fukunishi, T., K. Goto, and T. Yamagata (2013). *Aid for Trade and Value Chains in Textiles and Apparel*. Geneva: WTO/OECD/IDE-JETRO.

Gereffi, G., and O. Memedovic (2004). Inserting local industries into global value chains and global production networks: opportunities and challenges for upgrading with a focus on Asia, China's rising competitiveness and the phasing out of the Multi-Fibre Arrangement, Vienna: United Nations Industrial Development Organization.

Gill, I., and H. Kharas. (2007). *An East Asian Renaissance: Ideas for Economic Growth*. Washington, DC: The World Bank.

Giuliani, E., C. Pietrobelli, and R. Rabellotti (2005). "Upgrading in global value chains: lessons from Latin American clusters", *World Development*, 33 (4), 549-73.

Goto, K. (2003). "The textile and garment industry: an analysis of the underdeveloped distribution system", in Ohno, K., and N. Kawabata (eds.), *Vietnam's Industrialization Strategy in the Age of Globalization*, Tokyo: Nihon Hyoronsha Publishers, pp. 125-172 (in Japanese).

Goto, K. (2007). "The development strategy of the Vietnamese export-oriented garment industry: vertical integration or process and product upgrading?", *Asian Profile*, 35 (6), 521–29.

Goto, K. (2014). "Vietnam: Upgrading from the Export to the Domestic Market" in Fukunishi, T.. and T. Yamagata (eds.), *The Garment Industry in Low-income Countries: An Entry Point of Industrialization*. Basingstoke and New York: Palgrave Macmillan, pp. 105-131.

Goto, K. (2017). "'Firms' and 'nations' in the era of globalization: Vietnam's textile and apparel industry and the TPP", in *Kansai and the Asia Pacific Economic Outlook 2016-2017*, Osaka: Asia Pacific Institute of Research (Maruzen Planet), pp. 110-114.

Goto, K., and T. Endo (2014). "Upgrading, relocating, informalising? Local strategies in the era of globalisation: the Thai garment industry", *Journal of Contemporary Asia*, 44(1), 1-18.

Goto, K., K. Natsuda, and J. Thoburn (2011). "Meeting the challenge of China: the Vietnamese garment industry in the post MFA era", Global Networks, 11 (3), 355-379.

Humphrey, J., and H. Schmitz (2000). "Governance and upgrading: linking industrial cluster and global value chain research", IDS Working Paper 120, University of Sussex.

Kaplinsky, R. (2005). *Globalization, Poverty and Inequality*, London: Polity Press.

Natsuda, K., K. Goto, and J. Thoburn (2010). "Challenges to the Cambodian garment industry in the global garment value chain", *The European Journal of Development Research*, 22 (4), 469-493.

Palpacuer, F., P. Gibbon and L. Thomsen (2005). "New challenges for developing country suppliers in global garments chains: a comparative European perspective", *World Development*, 33 (3), 409–30.

Schmitz, H., and P. Knorringa (2000). "Learning from global buyers", *Journal of Development Studies*, 37 (2), 177–205.

UNCTAD (2013). *World Investment Report 2013: Global Value Chains: Investment and Trade for Development*. New York and Geneva: United Nations.

World Bank. 2010. *East Asia and Pacific Economic Update: Robust Recovery, Rising Risks*. Washington, DC: World Bank.

Xing, Y., and N. Detert (2010). "How the iPhone widens the United States Trade deficit with the People's Republic of China", ADBI Working Paper 257. Tokyo: Asian Development Bank Institute.

ANNEX TABLES

Annex table 1. **Value added exports of textiles, clothing and leather from ASEAN, by value added creator, 1990–2017** (Millions of dollars)

		Exports from ASEAN						
	Value added creator	1990	1995	2000	2005	2010	2015	2017
Foreign value added (FVA)	**World**	2 387	5 314	8 295	13 371	20 396	22 314	24 295
	Developed countries	1 250	2 873	4 070	6 644	9 623	9 406	10 031
	Europe	490	1 106	1 533	2 714	3 896	3 901	4 111
	European Union	460	1 032	1 441	2 556	3 614	3 600	3 805
	Austria	8	19	28	56	85	90	90
	Belgium	38	78	91	167	207	229	215
	France	67	137	171	320	457	448	406
	Germany	119	263	370	687	1 072	928	1 240
	Italy	66	125	158	297	425	429	414
	Netherlands	40	123	174	212	258	266	261
	Spain	14	36	48	110	148	160	169
	Sweden	22	40	55	108	160	176	179
	United Kingdom	54	136	226	361	438	499	408
	Other developed Europe	30	74	92	158	282	301	305
	Norway	8	18	30	48	76	71	78
	Switzerland	22	55	60	108	202	226	224
	North America	258	606	952	1 301	1 769	1 761	1 764
	Canada	23	44	85	131	183	193	190
	United States	234	562	867	1 170	1 586	1 567	1 575
	Other developed countries	502	1 161	1 585	2 629	3 958	3 744	4 156
	Australia	84	163	227	385	629	723	694
	Japan	407	971	1 311	2 186	3 233	2 916	3 358
	New Zealand	7	19	33	37	60	66	66
	Developing countries	1 114	2 405	4 167	6 585	10 502	12 602	13 956
	Africa	25	54	90	160	276	246	250
	South Africa	6	21	32	58	91	88	79
	Latin America and the Caribbean	28	65	114	190	354	363	386
	Brazil	9	20	31	65	141	144	158
	Asia	1 060	2 282	3 959	6 228	9 857	11 978	13 305
	West Asia	77	133	212	389	538	641	663
	Kuwait	7	18	35	76	92	117	115
	Saudi Arabia	34	53	77	113	151	177	192
	Turkey	12	25	30	52	88	85	102
	United Arab Emirates	16	22	34	74	91	125	106
	South, East and South-east Asia	983	2 148	3 747	5 839	9 320	11 337	12 642
	East Asia	751	1 413	2 458	3 671	5 659	7 146	8 208
	China	102	371	889	1 848	3 576	4 794	5 853
	Hong Kong, China	59	175	283	368	393	533	425
	Korea, Republic of	139	330	494	779	1 021	1 218	1 326
	Taiwan Province of China	450	537	789	670	660	590	590
	South Asia	55	142	244	455	824	954	903
	Bangladesh	3	9	36	40	54	68	64
	India	29	81	135	288	568	660	611
	Iran, Islamic Republic of	11	20	29	54	79	95	92
	Pakistan	11	28	39	65	109	115	119
	ASEAN	178	594	1 045	1 712	2 837	3 237	3 531
	Brunei Darussalam	3	6	9	19	26	31	24
	Cambodia	0	3	5	9	14	16	15
	Indonesia	44	175	300	411	710	828	1 136
	Lao People's Democratic Republic	0	1	3	5	8	9	10
	Malaysia	38	89	190	341	544	634	654
	Myanmar	2	5	24	23	42	54	50
	Philippines	6	20	44	101	213	253	276
	Singapore	38	122	193	365	713	760	647
	Thailand	42	160	246	394	530	607	667
	Viet Nam	5	13	33	44	37	46	53
	Transition economies	23	36	59	142	271	307	307
	Russian Federation	18	27	44	106	203	238	217
Domestic value added (DVA)		5 787	11 591	15 869	24 642	39 990	50 025	51 149
Gross exports		8 174	16 905	24 165	38 013	60 386	72 339	75 444

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

Note: All values are estimated. The region/country/economy is that to which the value added is attributed. For the GVC terminology, see box 1.

Annex table 2-1. **Value added exports of textiles, clothing and leather from ASEAN, by value added creator, 1990**
(Millions of dollars)

	Value added creator	Brunei Darussalam	Cambodia	Indonesia	Lao People's Democratic Republic
Foreign value added (FVA)	**World**	4	1	446	2
	Developed countries	2	0	237	1
	Europe	1	0	88	0
	European Union	1	0	83	0
	Austria	0	0	2	0
	Belgium	0	0	7	0
	France	0	0	10	0
	Germany	0	0	21	0
	Italy	0	0	9	0
	Netherlands	0	0	10	0
	Spain	0	0	3	0
	Sweden	0	0	3	0
	United Kingdom	0	0	10	0
	Other developed Europe	0	0	5	0
	Norway	0	0	2	0
	Switzerland	0	0	3	0
	North America	0	0	54	0
	Canada	0	0	5	0
	United States	0	0	49	0
	Other developed countries	0	0	95	0
	Australia	0	0	28	0
	Japan	0	0	65	0
	New Zealand	0	0	1	0
	Developing countries	3	1	206	1
	Africa	0	0	6	0
	South Africa	0	0	2	0
	Latin America and the Caribbean	0	0	7	0
	Brazil	0	0	3	0
	Asia	2	1	194	1
	West Asia	0	0	23	0
	Kuwait	0	0	2	0
	Saudi Arabia	0	0	11	0
	Turkey	0	0	7	0
	United Arab Emirates	0	0	2	0
	South, East and South-east Asia	2	1	170	1
	East Asia	1	1	129	0
	China	0	0	23	0
	Hong Kong, China	0	0	8	0
	Korea, Republic of	0	0	45	0
	Taiwan Province of China	0	0	53	0
	South Asia	0	0	9	0
	Bangladesh	0	0	0	0
	India	0	0	5	0
	Iran, Islamic Republic of	0	0	2	0
	Pakistan	0	0	2	0
	ASEAN	1	0	33	1
	Brunei Darussalam	-	0	0	0
	Cambodia	0	-	0	0
	Indonesia	0	0	-	0
	Lao People's Democratic Republic	0	0	0	-
	Malaysia	0	0	8	0
	Myanmar	0	0	0	0
	Philippines	0	0	1	0
	Singapore	1	0	12	0
	Thailand	0	0	9	0
	Viet Nam	0	0	2	0
	Transition economies	0	0	3	0
	Russian Federation	0	0	3	0
	Domestic value added (DVA)	11	4	1 672	8
	Gross exports	15	5	2 118	9

Source: AJC-UNCTAD-Eora database on ASEAN GVCs.
Note: All values are estimated. The region/country/economy is that to which the value added is attributed. For the GVC terminology, see box 1.

Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam
298	5	334	260	792	244
150	2	120	130	540	68
54	1	39	62	226	20
51	1	37	59	211	18
1	0	0	1	3	0
3	0	2	3	22	1
6	0	4	9	35	3
13	0	8	11	61	5
7	0	5	15	27	3
4	0	10	3	12	1
2	0	1	3	5	1
3	0	1	2	12	1
8	0	4	8	21	2
4	0	2	3	15	1
1	0	1	1	3	0
3	0	1	2	11	1
36	0	32	28	90	17
3	0	2	2	10	1
33	0	29	26	80	15
60	1	49	40	224	32
8	0	7	10	27	4
50	0	39	29	195	27
1	0	2	1	1	0
145	3	212	129	239	174
2	0	2	2	10	2
1	0	1	1	2	0
3	1	3	4	9	2
1	0	1	2	2	0
140	2	206	123	221	171
6	0	9	5	28	5
1	0	1	1	2	1
3	0	4	2	11	2
1	0	1	1	2	0
1	0	2	1	9	1
134	2	197	117	193	166
97	1	166	65	147	143
12	0	10	13	36	8
10	0	13	12	12	4
11	0	22	13	34	15
65	1	122	27	65	116
7	0	6	13	15	3
0	0	0	2	0	0
4	0	2	9	7	1
1	0	2	1	4	1
2	0	1	2	4	1
29	0	25	39	30	20
0	0	0	1	2	0
0	0	0	0	0	0
8	0	10	11	11	4
0	0	0	0	0	0
-	0	4	16	8	2
0	-	0	1	1	0
1	0	-	1	2	1
10	0	3	-	7	5
9	0	7	9	-	7
0	0	1	1	1	-
2	0	2	1	12	2
2	0	1	1	10	1
510	30	536	130	2 709	177
808	35	870	391	3 501	421

Annex table 2-2. **Value added exports of textiles, clothing and leather from ASEAN, by value added creator, 1995**
(Millions of dollars)

	Value added creator	Brunei Darussalam	Cambodia	Indonesia	Lao People's Democratic Republic
Foreign value added (FVA)	**World**	9	21	939	4
	Developed countries	4	7	540	1
	Europe	2	3	212	1
	European Union	1	3	199	1
	Austria	0	0	4	0
	Belgium	0	0	17	0
	France	0	1	24	0
	Germany	0	1	45	0
	Italy	0	0	16	0
	Netherlands	0	0	39	0
	Spain	0	0	6	0
	Sweden	0	0	5	0
	United Kingdom	0	0	24	0
	Other developed Europe	0	0	13	0
	Norway	0	0	4	0
	Switzerland	0	0	9	0
	North America	1	1	118	0
	Canada	0	0	9	0
	United States	1	1	109	0
	Other developed countries	1	2	210	0
	Australia	0	0	62	0
	Japan	1	2	145	0
	New Zealand	0	0	3	0
	Developing countries	5	14	393	3
	Africa	0	0	13	0
	South Africa	0	0	4	0
	Latin America and the Caribbean	0	0	15	0
	Brazil	0	0	6	0
	Asia	5	14	365	2
	West Asia	0	0	42	0
	Kuwait	0	0	5	0
	Saudi Arabia	0	0	20	0
	Turkey	0	0	12	0
	United Arab Emirates	0	0	3	0
	South, East and South-east Asia	5	13	323	2
	East Asia	1	7	219	0
	China	0	2	60	0
	Hong Kong, China	0	1	23	0
	Korea, Republic of	0	1	77	0
	Taiwan Province of China	0	3	59	0
	South Asia	0	0	23	0
	Bangladesh	0	0	1	0
	India	0	0	13	0
	Iran, Islamic Republic of	0	0	4	0
	Pakistan	0	0	4	0
	ASEAN	3	6	82	2
	Brunei Darussalam	-	0	0	0
	Cambodia	0	-	0	0
	Indonesia	0	1	-	0
	Lao People's Democratic Republic	0	0	0	-
	Malaysia	1	1	19	0
	Myanmar	0	0	0	0
	Philippines	0	0	3	0
	Singapore	1	1	32	0
	Thailand	1	3	21	1
	Viet Nam	0	1	6	0
	Transition economies	0	0	6	0
	Russian Federation	0	0	5	0
Domestic value added (DVA)		37	61	3 740	19
Gross exports		46	82	4 679	23

Source: AJC-UNCTAD-Eora database on ASEAN GVCs.
Note: All values are estimated. The region/country/economy is that to which the value added is attributed. For the GVC terminology, see box 1.

Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam
904	2	767	525	1 421	721
485	1	321	251	973	290
185	1	113	120	403	66
171	1	108	112	375	61
4	0	1	2	7	1
12	0	5	6	34	3
22	0	11	17	52	10
45	0	22	21	114	15
21	0	12	26	41	9
15	0	34	7	23	4
7	0	3	6	10	3
7	0	2	3	21	2
26	0	11	17	49	8
14	0	5	8	28	5
3	0	2	2	6	1
11	0	4	5	22	4
121	0	88	59	167	51
8	0	5	4	15	3
113	0	82	55	152	47
178	0	120	72	403	173
20	0	14	18	39	10
153	0	97	51	360	161
4	0	7	2	2	1
413	1	442	272	435	426
7	0	5	6	18	4
3	0	2	3	6	1
10	0	9	9	17	5
3	0	4	3	4	1
396	1	425	257	400	417
15	0	17	9	40	9
2	0	2	1	6	2
6	0	7	4	12	4
3	0	3	2	4	1
2	0	4	1	10	1
381	1	408	248	359	408
219	0	294	122	248	302
73	0	51	43	93	49
38	0	45	28	23	17
36	0	61	24	75	55
72	0	137	28	57	180
27	0	17	30	34	10
1	0	0	4	2	2
17	0	8	19	19	4
2	0	5	2	6	2
7	0	4	4	7	2
135	0	96	96	77	97
0	0	0	3	2	0
0	0	0	2	0	0
40	0	45	34	32	22
0	0	0	0	0	1
-	0	10	32	19	8
0	-	0	2	3	0
6	0	-	2	5	3
41	0	10	-	14	22
46	0	29	20	-	40
2	0	2	2	1	-
5	0	4	2	13	5
4	0	3	1	10	3
789	138	1 294	273	4 448	791
1 693	140	2 061	798	5 870	1 512

Annex table 2-3. **Value added exports of textiles, clothing and leather from ASEAN, by value added creator, 2000**
(Millions of dollars)

	Value added creator	Brunei Darussalam	Cambodia	Indonesia	Lao People's Democratic Republic
Foreign value added (FVA)	**World**	9	81	1 730	4
	Developed countries	4	23	913	1
	Europe	2	10	366	1
	European Union	2	10	343	0
	Austria	0	0	6	0
	Belgium	0	0	26	0
	France	0	2	37	0
	Germany	0	2	74	0
	Italy	0	1	26	0
	Netherlands	0	1	76	0
	Spain	0	0	10	0
	Sweden	0	0	7	0
	United Kingdom	0	1	51	0
	Other developed Europe	0	1	23	0
	Norway	0	0	8	0
	Switzerland	0	1	14	0
	North America	1	5	236	0
	Canada	0	1	24	0
	United States	1	5	212	0
	Other developed countries	1	8	311	0
	Australia	0	1	99	0
	Japan	1	6	203	0
	New Zealand	0	0	7	0
	Developing countries	5	57	802	2
	Africa	0	1	27	0
	South Africa	0	0	9	0
	Latin America and the Caribbean	0	1	32	0
	Brazil	0	0	9	0
	Asia	5	55	742	2
	West Asia	0	1	75	0
	Kuwait	0	0	13	0
	Saudi Arabia	0	0	33	0
	Turkey	0	0	14	0
	United Arab Emirates	0	0	7	0
	South, East and South-east Asia	5	54	667	2
	East Asia	1	24	450	0
	China	0	8	152	0
	Hong Kong, China	0	5	39	0
	Korea, Republic of	0	2	131	0
	Taiwan Province of China	0	9	128	0
	South Asia	0	1	44	0
	Bangladesh	0	0	2	0
	India	0	1	29	0
	Iran, Islamic Republic of	0	0	7	0
	Pakistan	0	0	5	0
	ASEAN	3	28	173	2
	Brunei Darussalam	-	0	1	0
	Cambodia	0	-	1	0
	Indonesia	0	5	-	0
	Lao People's Democratic Republic	0	0	0	-
	Malaysia	1	3	50	0
	Myanmar	0	0	1	0
	Philippines	0	0	5	0
	Singapore	2	4	56	0
	Thailand	0	11	45	1
	Viet Nam	0	5	13	0
	Transition economies	0	1	15	0
	Russian Federation	0	0	12	0
Domestic value added (DVA)		77	313	5 696	22
Gross exports		86	394	7 426	26

Source: AJC-UNCTAD-Eora database on ASEAN GVCs.
Note: All values are estimated. The region/country/economy is that to which the value added is attributed. For the GVC terminology, see box 1.

Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam
1 359	2	1 100	658	2 275	1 077
644	1	404	281	1 419	379
237	1	142	129	528	118
220	0	135	121	500	109
5	0	2	2	11	2
13	0	6	6	34	5
27	0	13	18	56	17
57	0	28	22	161	26
26	0	16	27	48	15
18	0	36	8	28	8
9	0	4	6	13	6
7	0	2	2	33	3
41	0	18	22	75	17
17	0	7	8	28	9
5	0	2	3	8	3
12	0	4	5	19	5
184	0	120	76	249	81
15	0	9	6	23	7
169	0	110	69	226	74
223	0	143	77	642	180
26	0	18	19	49	16
189	0	109	55	588	161
6	0	12	2	3	2
707	1	691	374	839	688
11	0	8	8	26	7
5	0	2	3	10	2
17	0	13	11	30	9
4	0	4	4	9	2
679	1	668	355	783	670
23	0	27	12	57	16
3	0	3	2	9	5
9	0	10	4	14	6
3	0	4	2	6	1
3	0	7	2	13	2
656	1	641	343	726	654
411	0	460	163	490	458
209	0	120	71	232	96
54	0	84	35	30	35
47	0	85	23	106	98
100	0	170	33	119	228
41	0	28	39	68	21
2	0	1	5	22	4
27	0	14	26	29	10
3	0	7	2	7	3
9	0	6	5	10	4
203	0	153	141	168	174
1	0	0	4	3	0
0	0	0	2	0	1
79	0	68	54	56	38
0	0	0	0	1	2
-	0	18	53	44	21
1	-	1	2	18	1
7	0	-	3	23	6
51	0	15	-	20	46
60	0	48	19	-	61
4	0	4	3	4	-
8	0	6	3	17	10
6	0	4	2	12	7
1 231	251	1 821	358	4 614	1 486
2 590	254	2 921	1 016	6 889	2 563

Annex table 2-4. **Value added exports of textiles, clothing and leather from ASEAN, by value added creator, 2005**
(Millions of dollars)

	Value added creator	Brunei Darussalam	Cambodia	Indonesia	Lao People's Democratic Republic
Foreign value added (FVA)	**World**	17	148	2 476	8
	Developed countries	6	45	1 238	2
	Europe	3	22	532	1
	European Union	3	20	497	1
	Austria	0	0	11	0
	Belgium	0	1	39	0
	France	0	5	61	0
	Germany	1	4	117	0
	Italy	0	2	44	0
	Netherlands	0	1	74	0
	Spain	0	1	20	0
	Sweden	0	0	11	0
	United Kingdom	1	3	69	0
	Other developed Europe	0	2	34	0
	Norway	0	0	11	0
	Switzerland	0	1	23	0
	North America	2	9	282	0
	Canada	0	1	31	0
	United States	2	8	252	0
	Other developed countries	2	14	424	1
	Australia	1	3	148	0
	Japan	1	11	264	0
	New Zealand	0	0	8	0
	Developing countries	10	101	1 213	5
	Africa	0	2	43	0
	South Africa	0	1	14	0
	Latin America and the Caribbean	0	2	47	0
	Brazil	0	0	17	0
	Asia	10	97	1 123	5
	West Asia	0	2	118	0
	Kuwait	0	1	27	0
	Saudi Arabia	0	1	46	0
	Turkey	0	0	23	0
	United Arab Emirates	0	0	12	0
	South, East and South-east Asia	9	95	1 004	5
	East Asia	2	43	647	1
	China	1	21	339	1
	Hong Kong, China	0	8	49	0
	Korea, Republic of	0	5	168	0
	Taiwan Province of China	0	9	90	0
	South Asia	1	2	84	0
	Bangladesh	0	0	3	0
	India	0	2	60	0
	Iran, Islamic Republic of	0	0	11	0
	Pakistan	0	0	8	0
	ASEAN	6	50	273	3
	Brunei Darussalam	-	0	1	0
	Cambodia	0	-	0	0
	Indonesia	1	7	-	0
	Lao People's Democratic Republic	0	0	0	-
	Malaysia	2	6	74	0
	Myanmar	0	0	1	0
	Philippines	0	0	10	0
	Singapore	3	8	99	0
	Thailand	1	24	70	3
	Viet Nam	0	4	18	0
	Transition economies	0	2	25	0
	Russian Federation	0	1	20	0
Domestic value added (DVA)		126	567	8 599	37
Gross exports		144	715	11 075	45

Source: AJC-UNCTAD-Eora database on ASEAN GVCs.
Note: All values are estimated. The region/country/economy is that to which the value added is attributed. For the GVC terminology, see box 1.

Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam
1 994	1	1 519	1 110	4 017	2 081
946	0	556	435	2 499	915
403	0	197	229	1 100	226
375	0	187	215	1 047	210
8	0	3	4	26	4
24	0	10	11	71	10
47	0	21	32	120	33
96	0	43	39	339	48
46	0	26	48	102	30
28	0	31	13	52	13
19	0	8	13	37	13
12	0	4	4	72	5
62	0	24	34	137	32
28	0	10	14	53	16
8	0	3	4	16	4
20	0	7	9	36	11
241	0	166	96	363	142
22	0	13	9	44	11
219	0	153	87	320	131
302	0	193	110	1 036	548
44	0	26	34	98	32
245	0	158	70	926	509
9	0	4	4	6	5
1 030	0	951	669	1 468	1 138
20	0	12	14	56	13
8	0	4	5	23	4
27	0	19	18	60	17
8	0	8	8	21	4
982	0	917	637	1 351	1 107
41	0	41	21	132	33
7	0	4	4	24	11
14	0	13	7	24	9
6	0	6	4	12	2
7	0	11	3	36	5
941	0	876	616	1 219	1 075
543	0	661	295	801	680
308	0	265	173	487	252
59	0	105	48	45	54
80	0	120	41	173	191
94	0	171	32	92	182
84	0	51	79	105	48
2	0	1	9	16	9
58	0	26	55	62	25
8	0	12	4	11	6
15	0	11	9	14	8
314	0	164	242	313	347
1	0	0	8	8	1
1	0	0	6	1	2
102	0	66	84	82	68
0	0	0	0	1	3
-	0	28	95	96	41
1	-	0	2	18	1
13	0	-	6	58	14
94	0	25	-	43	93
96	0	38	37	-	126
6	0	5	5	6	-
18	0	12	6	50	28
15	0	9	4	38	19
1 928	158	2 763	507	7 932	2 026
3 922	158	4 282	1 617	11 949	4 106

Annex table 2-5. **Value added exports of textiles, clothing and leather from ASEAN, by value added creator, 2010**
(Millions of dollars)

	Value added creator	Brunei Darussalam	Cambodia	Indonesia	Lao People's Democratic Republic
Foreign value added (FVA)	**World**	37	256	3 984	15
	Developed countries	12	72	1 855	4
	Europe	6	36	770	2
	European Union	5	32	705	2
	Austria	0	1	16	0
	Belgium	0	1	50	0
	France	1	8	90	0
	Germany	1	7	183	0
	Italy	1	3	66	0
	Netherlands	0	2	79	0
	Spain	0	1	29	0
	Sweden	0	1	18	0
	United Kingdom	1	4	92	0
	Other developed Europe	0	3	65	0
	Norway	0	1	18	0
	Switzerland	0	2	46	0
	North America	3	13	411	1
	Canada	0	1	47	0
	United States	3	12	364	1
	Other developed countries	3	23	675	1
	Australia	1	5	245	0
	Japan	2	17	409	1
	New Zealand	0	1	14	0
	Developing countries	24	180	2 078	11
	Africa	1	5	77	1
	South Africa	0	1	22	0
	Latin America and the Caribbean	1	5	89	1
	Brazil	0	1	34	0
	Asia	22	171	1 911	9
	West Asia	1	4	184	0
	Kuwait	0	1	42	0
	Saudi Arabia	0	1	67	0
	Turkey	0	0	40	0
	United Arab Emirates	0	1	16	0
	South, East and South-east Asia	21	167	1 727	9
	East Asia	5	76	1 071	2
	China	3	46	715	1
	Hong Kong, China	1	10	51	0
	Korea, Republic of	1	9	215	0
	Taiwan Province of China	1	11	89	0
	South Asia	1	5	176	1
	Bangladesh	0	0	6	0
	India	1	4	132	0
	Iran, Islamic Republic of	0	1	18	0
	Pakistan	0	0	16	0
	ASEAN	15	86	481	6
	Brunei Darussalam	-	0	2	0
	Cambodia	0	-	0	0
	Indonesia	2	14	-	0
	Lao People's Democratic Republic	0	0	0	-
	Malaysia	4	10	127	0
	Myanmar	0	0	1	0
	Philippines	0	1	20	0
	Singapore	7	17	216	0
	Thailand	1	38	100	5
	Viet Nam	0	5	13	0
	Transition economies	1	4	50	1
	Russian Federation	0	2	39	0
Domestic value added (DVA)		182	988	16 498	103
Gross exports		218	1 244	20 482	118

Source: AJC-UNCTAD-Eora database on ASEAN GVCs.
Note: All values are estimated. The region/country/economy is that to which the value added is attributed. For the GVC terminology, see box 1.

Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam
3 033	1	2 007	1 577	6 459	3 029
1 333	0	705	575	3 749	1 317
593	0	244	311	1 656	279
543	0	228	287	1 555	256
11	0	4	6	42	5
33	0	13	14	83	12
68	0	28	43	178	40
146	0	59	55	558	62
65	0	35	64	155	37
43	0	20	18	80	16
25	0	10	16	53	14
18	0	5	6	105	6
81	0	29	40	154	35
50	0	17	23	101	23
13	0	4	7	27	6
36	0	12	16	72	17
325	0	193	118	529	177
31	0	15	12	61	15
295	0	178	105	467	162
415	0	268	147	1 565	861
74	0	37	58	161	48
319	0	219	79	1 384	804
15	0	5	7	10	7
1 664	0	1 279	989	2 613	1 664
33	0	19	21	100	20
12	0	5	7	38	6
50	0	30	35	117	27
16	0	14	18	52	6
1 580	0	1 223	932	2 394	1 616
58	0	53	27	167	45
9	0	5	5	18	13
19	0	16	8	30	11
9	0	10	6	21	2
8	0	13	3	43	7
1 522	0	1 170	905	2 227	1 571
814	0	853	418	1 434	986
566	0	453	302	1 033	456
63	0	113	49	54	53
89	0	112	36	246	314
95	0	175	29	97	162
167	0	85	128	182	78
4	0	2	15	15	11
121	0	48	89	127	46
12	0	17	6	16	9
27	0	18	15	21	12
541	0	231	359	611	507
1	0	0	11	10	1
1	0	1	9	2	2
194	0	103	139	152	105
0	0	0	0	3	4
-	0	32	137	180	55
2	-	1	3	34	1
25	0	-	9	135	21
185	0	42	-	90	156
127	0	48	48	-	161
6	0	4	3	5	-
36	0	22	12	97	48
30	0	17	9	74	32
3 172	285	4 447	785	12 073	1 457
6 205	286	6 454	2 362	18 531	4 486

Annex table 2-6. **Value added exports of textiles, clothing and leather from ASEAN, by value added creator, 2015**
(Millions of dollars)

	Value added creator	Brunei Darussalam	Cambodia	Indonesia	Lao People's Democratic Republic
Foreign value added (FVA)	**World**	43	299	4 446	17
	Developed countries	13	72	1 889	4
	Europe	6	37	790	2
	European Union	6	33	718	2
	Austria	0	1	17	0
	Belgium	0	1	58	0
	France	1	8	89	0
	Germany	1	6	155	0
	Italy	1	3	68	0
	Netherlands	0	2	86	0
	Spain	0	1	32	0
	Sweden	0	1	20	0
	United Kingdom	2	5	105	0
	Other developed Europe	1	4	72	0
	Norway	0	1	18	0
	Switzerland	0	3	53	0
	North America	3	13	421	1
	Canada	0	1	50	0
	United States	3	12	371	1
	Other developed countries	4	22	678	1
	Australia	2	5	288	0
	Japan	2	15	367	1
	New Zealand	0	1	16	0
	Developing countries	29	224	2 497	13
	Africa	1	4	63	1
	South Africa	0	1	21	0
	Latin America and the Caribbean	1	4	94	1
	Brazil	0	1	36	0
	Asia	27	215	2 339	11
	West Asia	1	4	222	0
	Kuwait	0	1	55	0
	Saudi Arabia	0	1	80	0
	Turkey	0	0	41	0
	United Arab Emirates	0	1	22	0
	South, East and South-east Asia	26	210	2 117	11
	East Asia	7	97	1 348	3
	China	5	61	923	2
	Hong Kong, China	1	14	71	0
	Korea, Republic of	1	11	269	0
	Taiwan Province of China	1	11	83	0
	South Asia	2	6	211	1
	Bangladesh	0	0	8	0
	India	1	5	158	0
	Iran, Islamic Republic of	0	1	23	0
	Pakistan	0	0	18	0
	ASEAN	17	107	558	8
	Brunei Darussalam	-	0	2	0
	Cambodia	0	-	0	0
	Indonesia	2	18	-	0
	Lao People's Democratic Republic	0	0	0	-
	Malaysia	4	12	148	0
	Myanmar	0	0	2	0
	Philippines	0	1	23	0
	Singapore	8	19	245	0
	Thailand	2	49	122	7
	Viet Nam	0	7	16	0
	Transition economies	1	4	60	1
	Russian Federation	0	2	48	0
Domestic value added (DVA)		225	1 136	20 503	119
Gross exports		268	1 435	24 948	136

Source: AJC-UNCTAD-Eora database on ASEAN GVCs.
Note: All values are estimated. The region/country/economy is that to which the value added is attributed. For the GVC terminology, see box 1.

Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam
3 242	1	2 108	1 864	7 341	2 953
1 245	0	632	605	3 844	1 102
563	0	224	329	1 704	245
513	0	208	303	1 596	222
11	0	4	6	46	4
35	0	13	16	94	12
63	0	25	45	182	35
119	0	46	48	509	43
62	0	33	68	161	33
42	0	19	19	83	15
26	0	10	18	58	14
19	0	5	6	120	6
88	0	30	48	186	36
51	0	16	26	108	22
12	0	4	7	26	5
39	0	12	19	81	17
310	0	178	124	565	146
31	0	15	14	68	14
280	0	162	110	497	132
371	0	230	152	1 575	712
78	0	38	70	193	49
270	0	179	71	1 359	653
16	0	6	8	12	8
1 957	0	1 452	1 246	3 382	1 802
30	0	15	20	94	17
11	0	5	7	38	5
47	0	29	37	126	24
15	0	14	18	55	6
1 879	0	1 399	1 188	3 160	1 760
65	0	58	33	207	51
11	0	5	6	23	16
21	0	17	10	37	12
8	0	8	5	19	2
11	0	16	5	62	9
1 815	0	1 340	1 155	2 953	1 709
1 044	0	996	556	1 993	1 102
777	0	559	412	1 503	552
83	0	148	70	80	65
100	0	127	45	316	349
83	0	162	28	89	134
183	0	94	158	217	83
5	0	2	21	19	12
132	0	53	110	153	48
14	0	20	7	19	10
28	0	18	16	23	12
588	0	251	441	743	524
1	0	0	13	12	1
1	0	1	10	2	2
216	0	116	173	189	113
0	0	0	0	4	4
-	0	33	165	216	55
2	-	1	4	43	1
28	0	-	11	167	23
192	0	41	-	104	150
141	0	54	60	-	174
7	0	5	5	6	-
39	0	24	14	115	49
34	0	19	10	91	34
3 722	368	5 435	910	15 131	2 478
6 964	368	7 543	2 774	22 472	5 431

Annex table 2-7. **Value added exports of textiles, clothing and leather from ASEAN, by value added creator, 2017**
(Millions of dollars)

	Value added creator	Brunei Darussalam	Cambodia	Indonesia	Lao People's Democratic Republic
Foreign value added (FVA)	**World**	68	225	5 001	16
	Developed countries	17	45	2 119	2
	Europe	8	23	893	1
	European Union	7	20	816	1
	Austria	0	1	19	0
	Belgium	0	1	62	0
	France	1	2	93	0
	Germany	2	5	223	0
	Italy	1	2	72	0
	Netherlands	0	1	91	0
	Spain	0	2	36	0
	Sweden	0	1	21	0
	United Kingdom	1	3	96	0
	Other developed Europe	1	2	77	0
	Norway	0	1	20	0
	Switzerland	1	1	57	0
	North America	3	9	452	0
	Canada	0	1	56	0
	United States	3	8	396	0
	Other developed countries	6	14	774	1
	Australia	2	2	303	0
	Japan	3	12	446	1
	New Zealand	0	0	17	0
	Developing countries	50	177	2 820	13
	Africa	2	4	68	1
	South Africa	0	0	22	0
	Latin America and the Caribbean	2	5	106	0
	Brazil	0	1	43	0
	Asia	47	168	2 645	12
	West Asia	1	5	241	0
	Kuwait	0	1	57	0
	Saudi Arabia	0	2	86	0
	Turkey	0	1	50	0
	United Arab Emirates	0	1	21	0
	South, East and South-east Asia	46	163	2 403	12
	East Asia	24	78	1 634	2
	China	16	58	1 178	2
	Hong Kong, China	5	1	62	0
	Korea, Republic of	2	9	305	0
	Taiwan Province of China	1	9	88	0
	South Asia	3	9	207	1
	Bangladesh	0	1	8	0
	India	2	7	151	0
	Iran, Islamic Republic of	0	0	23	0
	Pakistan	0	0	20	0
	ASEAN	19	76	562	9
	Brunei Darussalam	-	0	2	0
	Cambodia	0	-	1	0
	Indonesia	5	16	-	0
	Lao People's Democratic Republic	0	0	0	-
	Malaysia	5	9	159	0
	Myanmar	0	0	2	0
	Philippines	0	1	28	0
	Singapore	6	2	213	0
	Thailand	2	47	137	6
	Viet Nam	2	1	20	1
	Transition economies	1	3	63	0
	Russian Federation	0	1	47	0
Domestic value added (DVA)		197	1 074	21 930	126
Gross exports		266	1 299	26 931	142

Source: AJC-UNCTAD-Eora database on ASEAN GVCs.
Note: All values are estimated. The region/country/economy is that to which the value added is attributed. For the GVC terminology, see box 1.

Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam
3 338	5	2 159	2 515	7 176	3 791
1 319	2	655	534	3 866	1 472
605	1	229	258	1 786	307
552	1	214	239	1 675	281
11	0	4	5	46	5
35	0	12	12	79	13
62	0	23	28	157	40
161	0	60	74	640	76
64	0	31	47	161	37
41	0	19	13	79	17
28	0	10	9	66	18
19	0	5	5	121	7
75	0	25	22	151	35
53	0	16	19	110	26
13	0	4	5	29	6
40	0	11	13	80	20
316	0	177	95	529	182
32	0	15	12	59	15
284	0	162	84	470	167
398	0	249	181	1 551	982
77	0	34	53	173	50
298	0	202	120	1 356	921
16	0	5	6	11	9
1 979	4	1 480	1 957	3 215	2 260
31	1	15	20	90	19
11	0	4	4	33	5
52	0	30	27	134	30
17	0	15	11	62	8
1 896	2	1 426	1 910	2 990	2 210
69	0	60	37	195	55
10	0	5	5	21	17
23	0	18	10	41	13
10	0	9	6	23	3
9	0	16	5	46	8
1 827	2	1 367	1 872	2 794	2 155
1 070	1	1 021	1 059	1 912	1 406
813	0	620	940	1 476	749
67	0	116	50	60	65
108	0	131	48	287	437
82	0	153	20	82	155
169	1	92	133	193	97
5	0	2	18	15	13
118	0	50	90	133	58
14	0	20	6	18	10
29	0	18	16	22	14
587	0	254	680	690	652
1	0	0	9	10	1
1	0	1	9	2	2
247	0	121	406	192	150
0	0	0	0	3	6
-	0	35	185	192	69
2	-	1	4	39	2
30	0	-	15	172	29
153	0	34	-	71	169
145	0	57	48	-	224
8	0	6	6	9	-
40	0	24	23	95	59
32	0	18	11	68	40
3 721	362	5 289	407	14 900	3 143
7 060	367	7 449	2 921	22 077	6 933

Annex table 3. **ASEAN's value added exports of textiles, clothing and leather incorporated in other countries' exports, by region/country, 1990–2017** (Millions of dollars)

	DVX from ASEAN						
Region/country	**1990**	**1995**	**2000**	**2005**	**2010**	**2015**	**2017**
World	585	1 353	1 676	3 106	5 449	6 659	8 331
Developed countries	359	771	864	1 632	2 762	3 294	4 393
Europe	274	585	635	1 223	2 157	2 535	3 453
European Union	270	575	626	1 203	2 118	2 492	3 382
Austria	5	11	12	25	45	53	74
Belgium	34	67	72	142	251	307	374
France	27	51	59	100	156	190	265
Germany	58	118	135	275	516	565	759
Italy	46	101	101	185	315	383	441
Netherlands	32	69	66	126	233	284	387
Spain	7	20	27	56	92	114	143
Sweden	5	10	11	20	36	44	66
United Kingdom	24	52	52	94	167	173	251
Other developed Europe	5	11	10	21	39	43	72
Norway	2	5	5	7	13	14	23
Switzerland	2	5	5	13	25	28	48
North America	45	111	131	209	310	368	532
Canada	21	53	68	114	166	198	358
United States	24	59	64	95	144	171	174
Other developed countries	39	74	97	199	295	390	408
Australia	2	5	4	9	19	24	31
Japan	34	63	84	174	248	332	335
New Zealand	2	4	5	8	15	18	26
Developing countries	222	576	803	1 459	2 657	3 330	3 879
Africa	7	15	18	31	55	67	75
South Africa	1	3	4	8	15	19	24
Latin America and the Caribbean	7	53	79	136	232	286	490
Brazil	0	3	3	8	16	23	36
Asia	207	506	705	1 289	2 367	2 973	3 311
West Asia	8	24	31	58	113	147	181
Kuwait	0	0	0	1	2	2	3
Saudi Arabia	3	5	4	7	14	15	14
Turkey	2	6	11	23	49	65	80
United Arab Emirates	1	8	11	21	37	51	65
South, East and South-east Asia	200	483	674	1 231	2 255	2 826	3 130
East Asia	115	223	315	668	1 256	1 583	1 459
China	6	43	107	317	680	849	856
Hong Kong, China	22	53	63	128	211	263	228
Korea, Republic of	30	64	92	172	299	400	310
Taiwan Province of China	57	62	52	51	63	68	63
South Asia	7	16	19	35	68	93	67
Bangladesh	1	2	3	4	8	12	10
India	1	3	6	16	34	47	23
Iran, Islamic Republic of	0	1	1	2	3	4	4
Pakistan	3	5	4	5	8	10	11
ASEAN	77	244	341	528	931	1 150	1 604
Brunei Darussalam	1	1	1	2	5	6	7
Cambodia	0	1	1	2	4	6	4
Indonesia	3	9	13	22	38	49	47
Lao People's Democratic Republic	0	1	1	1	2	2	3
Malaysia	14	70	103	155	273	325	342
Myanmar	0	0	0	0	0	0	0
Philippines	7	27	56	58	83	98	99
Singapore	42	99	111	207	398	508	937
Thailand	8	25	37	50	82	104	97
Viet Nam	2	11	18	29	45	51	69
Transition economies	4	7	9	16	30	36	59
Russian Federation	2	3	5	8	13	16	34

Source: AJC-UNCTAD-Eora database on ASEAN GVCs.
Note: All values are estimated. The region/country/economy is that to which the value added is attributed. For the GVC terminology, see box 1.

ASEAN-Japan Centre

ISBN 978-4-910293-01-1

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