

## API 2020 Briefing Paper No.1

# Post-COVID Supply Chain Reconfigurations: Convergence or Divergence in ASEAN Economic Integration?

Global value chains (GVCs) have become the dominant system of production in the East and Southeast Asian region, for both goods and services alike. Countries involved in GVCs tend to be associated with greater rates of innovation, job creation and overall growth.<sup>1</sup>

**However, the COVID-19 pandemic has exposed a systemic risk within the complex web of GVCs.** The closure of factories in certain parts of the world has resulted in shortages of intermediate parts, along with suspensions of logistics systems, transport networks and in-person work from lockdown measures. The interconnectedness of supply chains has meant that these losses have cumulative effects on industries worldwide, resulting in a collapse in global production. Many firms, particularly those reliant on manufacturing supply chains, have incurred significant losses, some of which could be permanent.

Over the past decade, China has become the epicenter of GVCs, with Chinese factories assuming

key production processes in industries including electricals, automotive, textiles and pharmaceuticals. As such, the initial outbreak of the virus in China disrupted many supply chains, severely affecting manufacturing output in regions including ASEAN. This has drawn attention to the systemic risk within the current configuration of GVCs, with many multinational corporations (MNCs) taking a more decisive stance on reducing reliance on the Chinese supply chain ecosystem. As a result, both international and Chinese firms are considering relocating away from China, diversifying their supply chains to protect against future shocks.<sup>3</sup>

**This is not the first wave of relocations away from China.** Previous stages were sparked by rising Chinese manufacturing wages and costs, followed by the US-China trade war. However, rather than being driven by cost-efficiency, this wave of relocations is motivated by the revelation of underlying systemic issues impacting the resilience of the value chain ecosystem. The effect of these relocations could be much larger, particularly for recipient countries, as

1. According to estimates by the World Bank, a 1% increase in GVC participation will raise income per capita by more than 1% (World Development Report 2020).

2. OECD (2020), COVID-19 and Global Value Chains: Policy

Options to Build More Resilient Production Networks.

3. According to a survey by Gartner, 33% of supply chain leaders have or are planning to move out of China by 2023.

many firms are seeking to complement their core China operations by establishing an alternative manufacturing hub – adopting the so-called China Plus One strategy.

Due to increased involvement in GVCs, particularly with extra-ASEAN trading partners, many ASEAN member states (AMS) have depended on a healthy global economy for growth.<sup>4</sup> Yet global growth is projected to fall by 4.9% in 2020 alone, with global foreign direct investment (FDI) flows to developing Asia to plunge by up to 45%, presenting a grim economic recovery outlook for ASEAN.<sup>5</sup> As such,

the relocation of MNCs to ASEAN is a prospect for recovery and is expected to create jobs and boost global trade participation.

**However, it is not clear that the gains from the relocation of MNCs will be distributed equally across all member states.** Some AMS are expected to benefit more than others. This raises the concern of whether the relocations will spark intra-regional competition for scarce FDI, creating a divergence in trade and investment policies between individual member states – hampering the region's economic integration efforts.

## Box 1: Why relocate to ASEAN?

The ASEAN regional appears to be an attractive relocation destination for five main reasons:

1. **Low manufacturing wages** in most AMS provide an advantage in terms of labour cost competitiveness;
2. ASEAN's relative **geographic proximity to China**, where many supply chain processes will still remain;
3. **Strong trading ties between ASEAN and China**, with ASEAN emerging as China's largest trading partner;
4. ASEAN's commitment towards establishing a **single market and production base**, providing greater market access to MNCs;
5. The **Regional Comprehensive Economic Partnership (RCEP)**, a free trade agreement between ASEAN and Australia, China, Japan, New Zealand and South Korea, is expected to be signed in late 2020, and will account for approximately 40% of world trade – the world's largest trade agreement.

4. See PwC (2018), *The Future of ASEAN – Time to Act*.

5. See IMF World Economic Outlook Update, June 2020 and

UNCTAD World Investment Report 2020: *International Production Beyond the Pandemic*

### Why do MNCs leave China?



### Which of the ASEAN member states stand to gain?

The ASEAN nations at the receiving end of the China Plus One strategy are largely contingent on the relocation objective of the firm, whether looking to establish an alternative manufacturing hub or seeking cheaper costs.

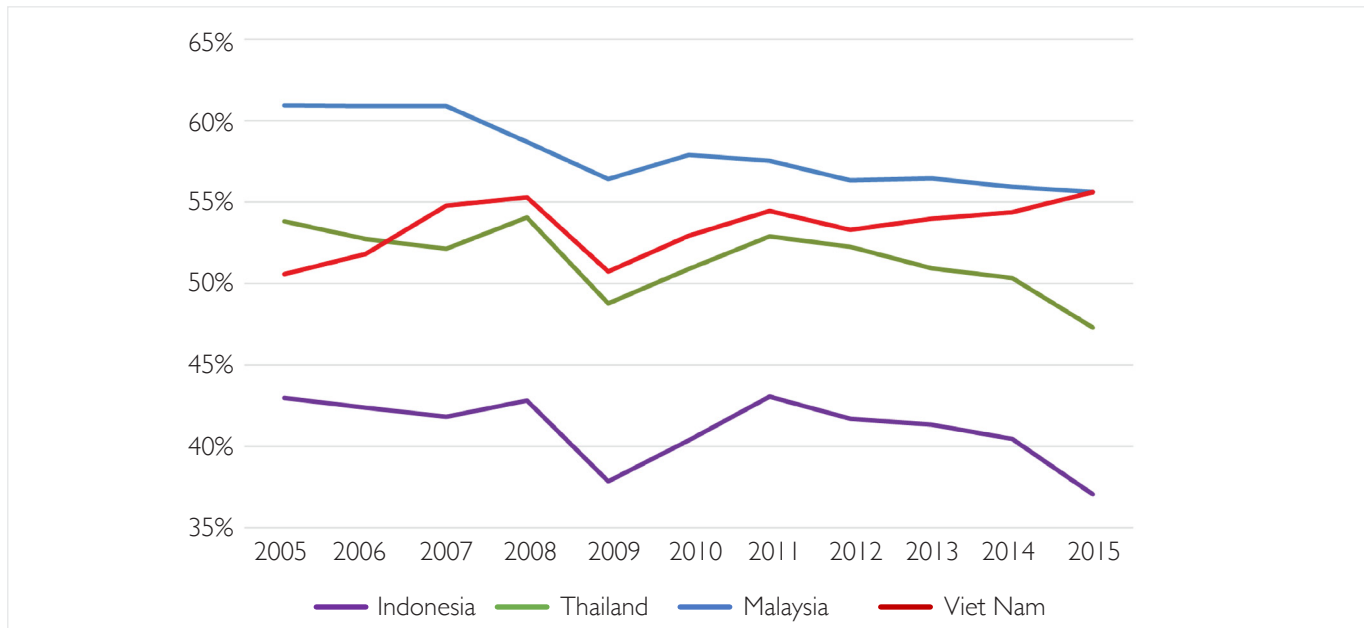
**MNCs establishing a regional manufacturing hub will likely integrate into ASEAN's supply chain ecosystem – the regional value chain (RVC)** – using an individual member state as a launchpad for the region. These firms will have to take the country's existing involvement in RVCs into consideration, in order to facilitate seamless integration into the ASEAN supply chain network. Liberal FDI and trade policies are also key, allowing

firms to enter the region without incurring the costs of navigating complex bureaucratic issues, while maintaining a high degree of GVC participation and preserving links with China.

On the other hand, firms departing due to rising Chinese manufacturing wages are predominantly in labour-intensive, low-technology manufacturing industries, seeking to relocate to AMS with lower wage levels. The degree of RVC participation is not as important a consideration as these industries do not rely as heavily on extensive supply chain networks – firms are seeking a low-cost location to undertake labour-intensive production processes, rather than establishing a regional hub.

## Integration into regional and global value chains – a diverging narrative

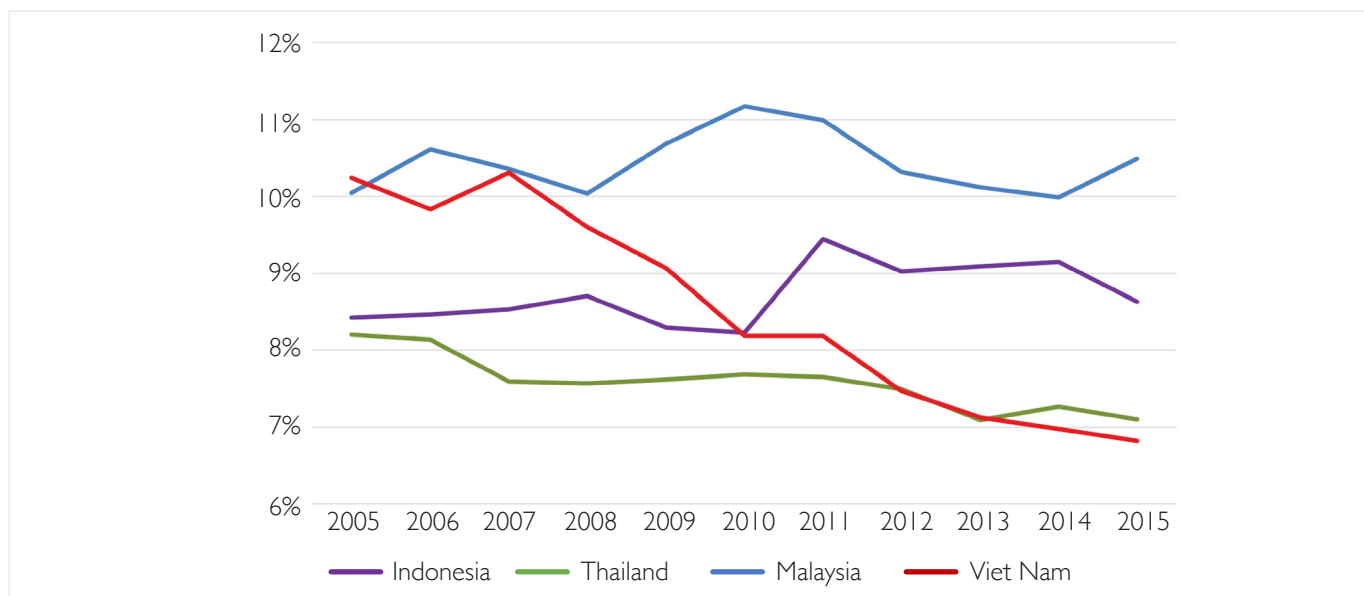
**Chart 1: GVC Participation, 2005 - 2015**



Source: OECD TiVA database

Note: GVC participation is calculated as the total value of forward and backward linkages to the world as a percentage of total value of exports – the proportion of exports linked to GVC participation (as opposed to the export of final goods).

**Chart 2: RVC Participation, 2005 - 2015**



Source: OECD TiVA database

Note: RVC participation is calculated as the total value of forward and backward linkages to other ASEAN countries as a percentage of total value of exports. RVC participation represents a subset of GVC participation

**The degree and trend of GVC and RVC participation varies greatly across ASEAN** (Charts 1 and 2). For instance, Viet Nam exhibits a rising trend in terms of GVC participation, in contrast to the stable or declining RVC participation. This highlights how Viet Nam's increasing prioritisation of extra-ASEAN value chain participation comes at the expense of regional economic integration. On the other hand, Indonesia's participation in GVCs remains particularly low and continues to decline,

with both GVC and RVC participation falling from 2011.

Malaysia continues to register both high RVC and GVC participations. As such, on this front, Malaysia appears to be an attractive relocation destination for a regional manufacturing hub base, enabling MNCs to maintain strong links with both intra- and extra-ASEAN supply chain partners.

## A balancing act between backward and forward linkages

### Box 2: Explaining domestic value added (DVA) and foreign value added (FVA)

- Domestic value added (DVA): the value of a country's gross exports created by the exporting country itself, contributing to a country's GDP. DVA is a measure of forward linkages. A high DVA share implies that a country has the domestic capacity to take on a greater share of production processes, contributing to current economic growth. Forward linkages also facilitate the diffusion of technological and managerial know-how from export partners.
- Foreign value added (FVA): the value of a country's gross exports which consists of inputs produced in other countries. The FVA share does not contribute to a country's GDP and is a measure of backward linkages. Higher FVA shares have been found to increase long-run productivity and competitiveness through adopting high-technology foreign intermediate goods, facilitating greater domestic production capacity and a higher DVA share in the long-run.<sup>6</sup>
- Gross exports are the sum of a country's FVA and DVA.
- It should be noted that the DVA share could be inflated by Pure Double-Counted terms (PDC), arising from the back-and-forth trade of intermediate goods. This term is generally small, thus the DVA shares used in this paper do not account for possible shares of PDC.<sup>7</sup> Nevertheless, the presence of PDC does indicate cross-border movements in intermediate goods, which highlights the intensity of trade and value chain collaboration between countries.<sup>8</sup>

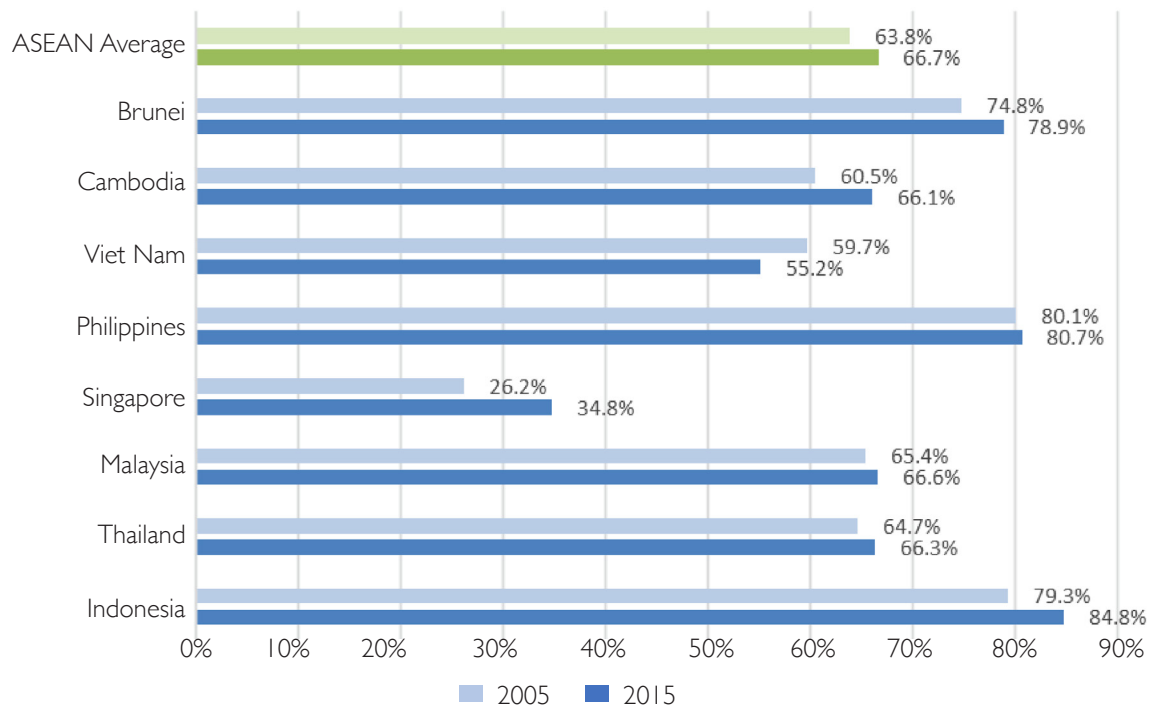
6. See ERIA Discussion Paper Series (301).

7. The OECD TiVA database does not publish data on PDC. However, the ASEAN Integration Report 2019 utilises the ADB TiVA database for similar trade indicators (including PDC), which

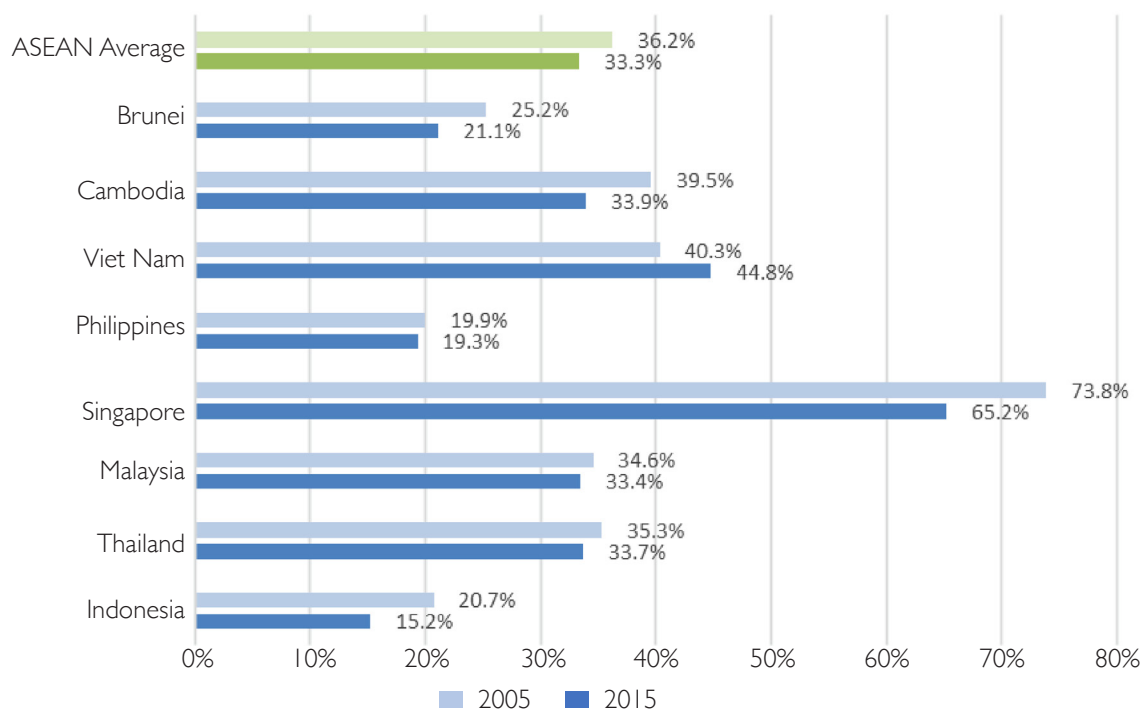
indicate relatively low PDC in most AMS.

8. PDC is also relevant for consistency between DVA and GDP, when considering the effect of DVA values and exports on the domestic economy.

**Chart 3: DVA in “Low” R&D Intensity Manufacturing Exports, 2005 & 2015**



**Chart 4: FVA in “Low” R&D Intensity Manufacturing Exports, 2005 & 2015**

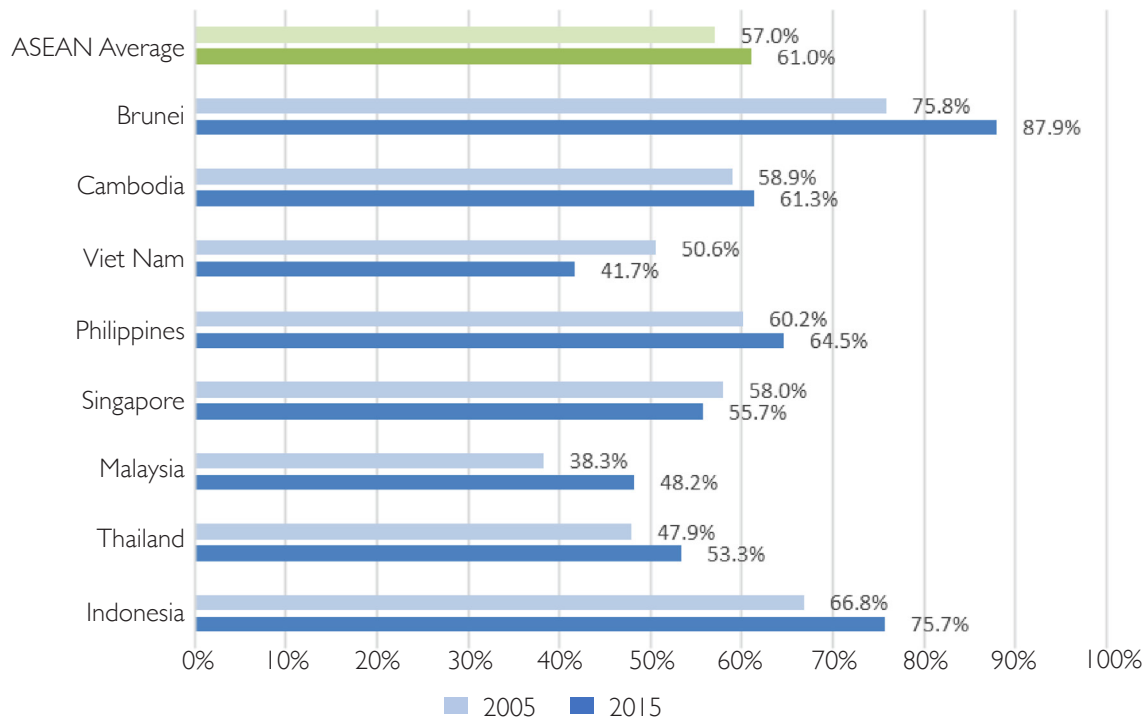


Source: OECD TiVA database

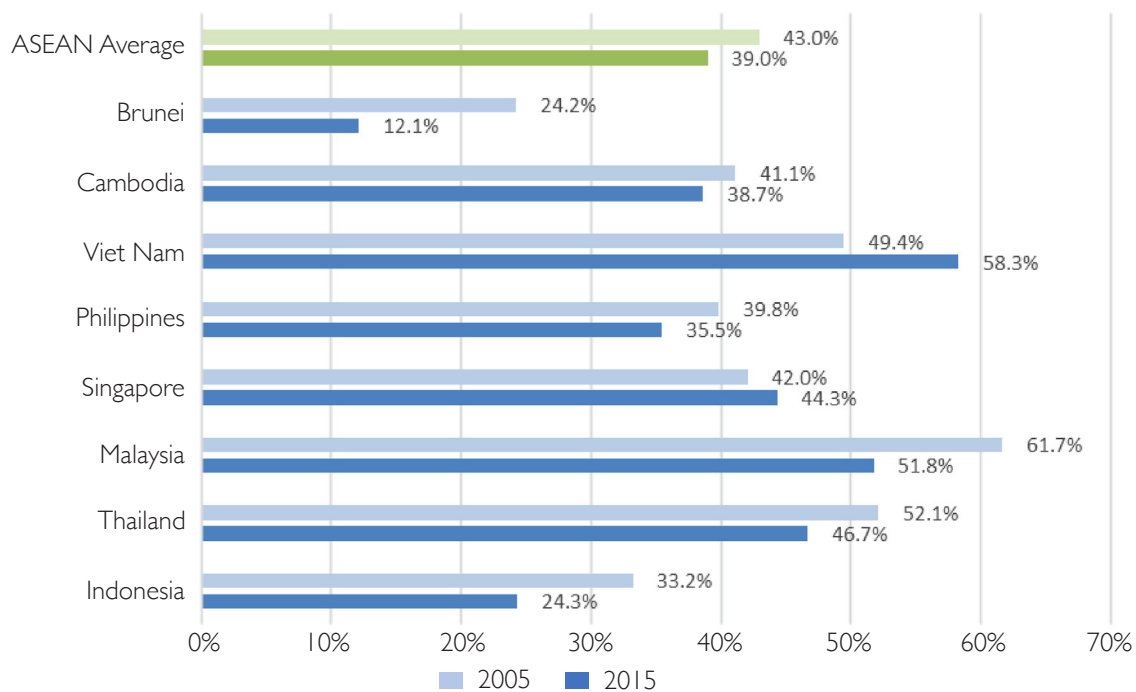
Note: DVA and FVA given as a share of Gross Exports. DVA share + FVA share = 100%.

Sectors classified based on OECD Taxonomy of Economic Activities.

**Chart 5: DVA in “High” R&D Intensity Manufacturing Exports, 2005 & 2015**



**Chart 6: FVA in “High” R&D Intensity Manufacturing Exports, 2005 & 2015**



Source: OECD TiVA database

Note: DVA and FVA given as a share of Gross Exports. DVA share + FVA share = 100%.

Sectors classified based on OECD Taxonomy of Economic Activities.

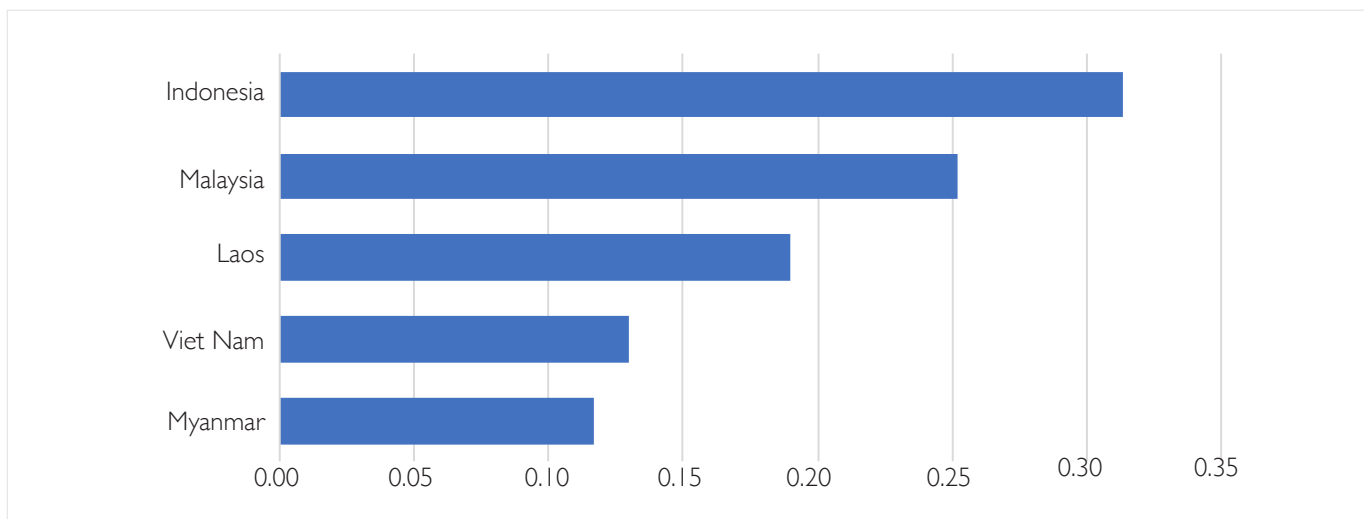
**Overall, ASEAN has been experiencing a rise in the DVA share (or a fall in FVA share) of manufacturing exports** – member states are undertaking a greater share of production processes domestically, as opposed to relying on foreign inputs (Charts 3 and 5). This strongly suggests that ASEAN has reaped the benefits of undertaking the production of high-technology intermediate goods – previous policy decisions to rely on externally-sourced inputs have helped increase domestic production capacity, and subsequently long-run growth. Likewise, this reaffirms the attractiveness and ability of ASEAN to adopt the role of a regional manufacturing hub.

**However, Indonesia’s exceptionally high DVA share, especially in 2015, might be cause for concern.** When considered alongside a high degree of FDI regulatory restrictiveness, as well as falling GVC and RVC participation, it implies that

the economy is undertaking a large share of supply chain production processes to service the domestic market, rather than for global export (Chart 7). MNCs are deterred from investing in Indonesia due to policy constraints surrounding FDI, hindering Indonesia’s GVC participation. Overall, the current regulatory policies are largely targeted at protecting domestic industries, rather than prioritising global and regional integration.

Yet this wave of relocations might prompt Indonesia to leverage its advantage as the largest ASEAN economy, easing its policies to attract FDI. With the intention of establishing a regional, rather than domestic, manufacturing hub, MNC relocation into Indonesia would encourage greater RVC and GVC participation. Greater reliance on regional networks would ease demand for domestic inputs, to levels more comparable to other AMS.

**Chart 7: FDI Regulatory Restrictiveness Index, 2018**



Source: OECD FDI Regulatory Restrictiveness Index

Note: Evaluated on a 0 (open) to 1 (closed) scale. Higher scores indicate more restrictive FDI regulations.



**Viet Nam remains the exception to the rising DVA trend in the region.** Instead, Viet Nam has seen a significant rise in FVA share over the corresponding period, consistent for both low- and high-technology manufacturing exports.<sup>9</sup> Coupled with rising GVC and falling RVC trends, this indicates that Viet Nam has been increasingly relying on extra-ASEAN intermediate goods. On the one hand, it is plausible that Viet Nam’s competitiveness in the manufacturing sector is due to its reliance on high-technology foreign intermediate goods, with the country actively enhancing domestic manufacturing production capacity in pursuit of long-term productivity gains. However, it could also reflect domestic constraints in production compared to other AMS, especially given that Viet Nam had one of the lowest DVA shares in 2015 for both types of manufacturing exports.<sup>10</sup>

Yet even if Viet Nam were to reap the long-term productivity gains, short-term costs are inevitable, especially if the nation is seeking to take on the

role of a regional manufacturing hub. One of the major forces behind regional trade integration is the ASEAN zero-to-low tariff policy, enabling intra-ASEAN exports to benefit from preferential trade tariffs if a minimum 40% of the value added originates from ASEAN (the ASEAN Rules of Origin criteria). It is possible that Viet Nameese exports might no longer qualify under the Rules of Origin (ROO) eligibility criteria particularly in the “high” R&D intensity manufacturing sector,<sup>11</sup> if it continues rely on extra-ASEAN inputs.

However, although the low DVA shares are a consideration for firms, procuring intermediate goods from other AMS will aid in overcoming the ROO issues, providing access to the ASEAN preferential trade tariffs. This will simultaneously promote further RVC participation and regional convergence. Yet structural reforms will likely be needed to expand Viet Nam’s domestic production capacity, to better function as a regional manufacturing hub.

9. FVA shares for “low” and “high” R&D intensity manufacturing exports increased from 40.3% to 44.8% and 49.4% to 58.3% respectively, over the period 2005–2015.

10. Vietnam’s DVA share in 2015 was only higher than Singapore,

which is constrained both geographically and demographically. 11. The DVA share for this sector had fallen to 41.7% in 2015, close to the minimum regional value added criteria.

## ASEAN economic integration as the way forward

**As it stands, it is unlikely that all AMS will benefit equally from this wave of relocation.**

With many economies vying for the role as the primary regional manufacturing base and each having unique structural issues, it is tempting for member states to see each other as rivals, putting up walls to compete for the scarce FDI. However, ASEAN integration remains at the core of the ASEAN Economic Community (AEC) Blueprint 2025, and in the long run, it is not in the best interest of ASEAN leaders to proceed down the route of competing policies. AMS should continue to strive towards the goal of economic integration, deepening their participation in RVCs.

**ASEAN should start by addressing non-tariff barriers (NTBs).** NTBs are likely to continue to remain a challenge, in both a political and economic sense, distorting each economy's comparative advantage and placing restrictions on intra-ASEAN trade. Despite measures outlined in the AEC Blueprint 2025 to liberalise the trade in goods, IDEAS' assessment on the progress of its implementation finds that only 15% of trade liberalisation measures have been fully implemented, with NTBs increasing rapidly within ASEAN.<sup>12</sup> These include quantitative export restrictions, strict domestic quality standards and inspection procedures, customs rules, among others, and remain a major barrier to increasing overall intra-ASEAN trade and RVC participation.

Although the 2020 Hanoi Plan of Action adopted by ASEAN encourages member states to “refrain from imposing unnecessary non-tariff measures during the COVID-19 pandemic”, active efforts need to be made to streamline the NTBs in place. For instance, recent export bans on food and medical

supplies will likely have adverse socio-economic effects on domestic and international communities if sustained over time. These measures should be temporary and not be extended to other goods. Although the recent COVID-19 crisis has created the temptation to promote protectionist policies, the issue of tackling NTBs cannot be placed on the back burner. It is crucial in ensuring that ASEAN is presented as an attractive, cohesive regional hub to MNCs looking to diversify supply chains.

**ASEAN should also focus on the standardisation, liberalisation and stability of investment policies.** As it stands, investment policies between the AMS are not standardised, with different member states having varying degrees of investment liberalisation. Having common, transparent, open FDI policies would facilitate MNCs establishing a regional manufacturing hub, as opposed to a single-country manufacturing hub. Standardisation and liberalisation of investment policies across ASEAN will promote diversification and fragmentation of supply-chains across different member states with much lower costs, better enabling other member states to benefit from FDI inflows.

A concrete, comprehensive implementation timeline has to be formulated and carried out. **Achieving this goal will require changes in domestic policy, particularly for member states with high degrees of FDI restrictiveness.** As such, mutual understanding of domestic challenges across member states is crucial to ensure a realistic timeline and goal. Coordination among ASEAN leaders is also necessary, so that appropriate changes in domestic policy are made to avoid conflict between domestic and ASEAN commitments.

12. See IDEAS API Report No. 3: ASEAN Integration Report 2019.

In addition, ASEAN could consider adopting a regional minimum FDI screening standard. The framework should not necessarily replace individual member states' FDI screening approaches, but should foster cooperation, information exchange and transparency between AMS. **Adopting a regional standard will also strengthen ASEAN's hand in extra-ASEAN negotiations, particularly when forming agreements and building links with other trading partners.**

It is inevitable that this wave of supply chain relocations will create short term inequalities between member states. However, there can be absolute benefits for the region as a whole, and it is crucial that ASEAN makes an active attempt to capture these gains. Presenting a more integrated front will increase the overall attractiveness of ASEAN as an alternative regional manufacturing hub to China, maximising FDI inflow into the region. Deepening RVC participation will also result in much larger spillover benefits for other AMS, facilitating the diversification and fragmentation of supply chains across the region.

In the short term, these spillover benefits will emerge in the form of increased demand for intermediate goods, creating jobs and increasing income in the manufacturing sector. However, in the long-run, the fragmentation of supply chains and MNC investment will help facilitate the diffusion of technological and managerial know-how, contributing to the development of certain sectors and increasing overall productivity.

ASEAN economic integration is key to long-term recovery from the COVID-19 crisis, allowing the region to take on the role as a manufacturing hub for the world. Instigating a vicious cycle of competition between member states will devastate the progress of ASEAN convergence, creating a need to better align domestic policy with the overarching goal of integration. As such, coordination and cooperation should remain at the forefront of regional dialogue, to ensure that we do not waste this window of opportunity to bring our economies closer together.

## Conclusions



High GVC and RVC participation are important considerations for MNCs seeking to establish a regional manufacturing hub, yet there have been diverging trends across AMS in terms of value chain integration;



In general, the DVA share of manufacturing exports have been rising across ASEAN, highlighting a rise in the domestic production capacities;



FDI from relocating firms are unlikely to be distributed equitably across ASEAN, however member states should refrain from enacting competing policies as greater economic integration will increase spillover benefits to the rest of the region;



Active efforts should be made to streamline the NTBs in place, as it remains a long-standing issue hampering regional integration;



There needs to be greater focus on the standardisation, liberalisation and stability of investment policies across ASEAN, such as adopting a regional minimum FDI screening standard, which will likely require adjustments in domestic policies. As such, mutual understanding and coordination between member states is necessary to ensure the success of these commitments.

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## References

The ASEAN Secretariat (2019), ASEAN Integration Report 2019, ASEAN Secretariat, Jakarta.

ERIA (2019), ERIA Discussion Paper Series No. 301: Does Participation in Global Value Chains Increase Productivity? An Analysis of Trade in Value Added Data.

Galindo Rueda, F. and Verger, F. (2016), "OECD Taxonomy of Economic Activities Based on R&D Intensity", OECD Science, Technology and Industry Working Papers, No. 2016/04, OECD Publishing, Paris

Hanoi Plan of Action on Strengthening ASEAN Economic Cooperation and Supply Chain Connectivity in Response to the COVID-19 Pandemic (2020), accessed from <https://asean.org/storage/2020/06/Hanoi-POA.pdf>

IDEAS (2019), API Report No. 3: ASEAN Integration Report 2019.

International Monetary Fund, World Economic Outlook: A Crisis Like No Other, An Uncertain Recovery (June 2020).

OECD (2018), OECD FDI Regulatory Restrictiveness Index, retrieved from <https://stats.oecd.org/Index.aspx?datasetcode=FDIINDEX#>

OECD (2018), OECD Trade in Value Added Indicators, retrieved from [https://stats.oecd.org/Index.aspx?DataSetCode=TIVA\\_2018\\_CI](https://stats.oecd.org/Index.aspx?DataSetCode=TIVA_2018_CI)

OECD (2020), COVID-19 and Global Value Chains: Policy Options to Build More Resilient Production Networks, OECD Publishing, Paris.

PwC Growth Markets Centre (2018), The Future of ASEAN – Time to Act.

UNCTAD (2020), World Investment Report 2020: International Production Beyond the Pandemic, United Nations Publications, New York.

The World Bank (2020), World Development Report 2020: Trading for Development in the Age of Global Value Chains, World Bank Publications, Washington, DC.

## API Publications (2018-2019)

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### API Reports

API Report No.1: ASEAN Integration Report by Jayant Menon, Laurence Todd and Dramashakthini Arjuna (December 2019)

API Report No.2: EU-ASEAN FTA Report by Jayant Menon, Laurence Todd and Dramashakthini Arjuna (December 2019)

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