

# Upgrading Challenges in Global Value Chains

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**Abstract**—Upgrading local companies is one of the key concerns of host government, especially in developing countries, in the age of Global Value Chains (GVC). GVC provide both opportunities and threats for host countries. One side, GVC are the window of opportunities for local companies to catch up with the global leaders. On the other hand, GVC could provide only limited impact on host country economic development by only seeking and exploiting the location advantages of host country. This paper aims to elaborate some common upgrading challenges faced by local companies when they insert in GVC. Four main upgrading challenges are identified, namely: limited value capture, inefficiency, Neoliberal regime, and bad policies and institutions. A country-level and a firm-level case study research are employed as the illustration how these challenges inhibit a country and its leading and potential local company to grow and upgrade its position in GVC. Indonesia and Astra International and its automotive subsidiaries (Astra) are chosen as the case study. Astra is an interesting case for number of reasons. First, Astra is originally from Indonesia. The company was established by Indonesians and locates most of all their businesses and value chain activities in Indonesia. Secondly, Astra is one of the largest Indonesian companies, which has about 200 subsidiaries and employs over 200,000 workers. Thirdly, Astra gives very rich insights for other Indonesian local companies and government how to grow, manage and support businesses in the age of GVC. Several implications for managerial strategy and policy recommendation are also discussed. The analysis is conducted by using mixed methods and triangulation from various previous literature, data sources, interviews, news, and company's historical archives.

**Keywords**—Global value chains, Global production networks, upgrading, automotive, Indonesia, Astra

## I. INTRODUCTION

In mid-May 2019 Forbes released the latest data on ‘the world’s largest public companies’. There are only six out of 2,000 companies in this list from Indonesia. Those companies are (1) Bank Rakyat Indonesia/BRI, rank 363; (2) Bank Mandiri (481); (3) Bank Central Asia/BCA (553); (4) Telkom, (747); (5) Bank Negara Indonesia/BNI (835); and (6) Gudang Garam, (1448) (CNBC Indonesia, 2019/05/20).

Based on this data two key reflections can be drawn. **First**, all these companies are pretty much ‘local’ or not ‘global’ players. Majority of their activities is centralised in Indonesia. They target Indonesian consumers and heavily rely on their home country market, while they engage very little in global market. From a macro point of view, no wonder if then rupiah steadily depreciates in the past few years. From this firm-level perspective, it shows how

Indonesia’s local companies fail to go global and target overseas markets. Consequently, local companies in Indonesia have limited contribution to Indonesia’s foreign reserves. **Secondly**, most of these companies (4 out of 6) are banks, while only two companies operate in real sector. If we look at it into a broader perspective, this phenomenon justifies why Indonesia persistently experiences trade deficits. It shows how there is relatively low number of local companies can produce goods and services for Indonesian consumers. This implies Indonesia needs to import to meet the local demand. In addition, these largest companies also fail to diversify its markets and find other markets, apart from Indonesia. As a result, these companies only play a limited role in boosting Indonesian exports and foreign reserves. In short, this latest Forbes rank is a ‘wake-up’ call for Indonesian authorities to be aware of its national competitiveness. This paper argues the stronger the local companies, the stronger the country will be because as Rugman and Verbeke (2004) show home country is still most important market even for world’s largest multinational enterprises (MNEs).

To strengthen local companies, upgrading is the key mantra to achieve this objective. This paper defines upgrading as ‘the capacity of a firm to innovate and add values of its products and processes’ (Humphrey and Schmitz, 2002). This upgrading is strongly shaped by the governance of the value chain, which is usually orchestrated by a lead firm (Gereffi, Humphrey and Sturgeon, 2005). This paper aims to elaborate challenges faced by local company in developing country to participate in international market and how to design effective strategies to tackle these problems in the age of global value chains (GVC), especially on why local large company struggles to upgrade and compete in international level. Four key challenges are identified. Those challenges are (1) limited value capture; (2) inefficiency; (3) Neoliberal Regime; (4) and bad policies and institutions. Indonesia and Astra International are chosen as the case study to illustrate how these challenges inhibit the country and company to upgrade to higher level of GVC.

This paper is structured as follows. Chapter 1 is introduction, which explains the background and objective of the study. Chapter 2 is about literature review on upgrading in GVC literature. Chapter 3 gives descriptive information of the case study. Chapter 4 are the analysis of the four upgrading challenges. Conclusions are provided in Chapter 5.

## II. UPGRADING IN GLOBAL VALUE CHAINS

There are generally two ways for local firms to insert in GVC and upgrade themselves: ‘high road’ and ‘low road’ (Giuliani, Pietrobelli and Rabelotiti, 2005). High road refers to local company strategies to participate in GVC by improving its internal capability, productivity and competitiveness; while low road mainly focuses on cost-reduction based strategy, usually by squeezing labour costs to keep profits at a certain level. To achieve a long run and sustainable growth, high road strategies is argued more preferable and effective than low road.

In more details, Humphrey and Schmitz (2002) classifies upgrading process of a local company in GVC into four types. **First, process upgrading:** reorganising the current production system in more efficient way or even introducing a new superior technology. **Secondly, product upgrading:** providing a higher value added goods and/or services. **Thirdly, functional upgrading:** adopting new functions to increase productivity level. **Fourth, Inter-sectoral upgrading:** expanding into more productive sectors or activities. The authors suggest that distinguishing these types of upgrading is the first step. The next important step is to understand the nature of GVC governance.

In their seminal work in GVC literature, Gereffi, Humphrey and Sturgeon (2005) emphasise the role of lead firm in orchestrating GVC governance. Different types of governance create different consequences on how local company interact with the lead firms, which are usually the global leader. This inter-firm relation between global leader and local companies then determines upgrading process of the host country, whether the host country can benefit from the insertion of local company into GVC.

This chapter provides literature review on upgrading in GVC. This chapter argues that the governance of inter-firm relation between local company and global leader determines upgrading of company and country. The next chapter, therefore elaborates a leading local company in developing country which has ‘captive’ relation with the global leaders based on Gereffi et. al. (2005)’s typology.

## III. CASE STUDY: ASTRA INTERNATIONAL

Astra International (Astra) is an Indonesian conglomerate and a parent company of 190 subsidiaries. These subsidiaries produce and provide various products and services. The company was established in 1957 by three Chinese-descended Indonesians. This is one of the largest and most influential business groups in Indonesia. Sato (1996) argues Astra is the pioneer of business modernisation in Indonesia. In this work, the author suggests this modernisation has been very successful due to three factors. First, the role of its founder and leader: Mr. Soerjadjaja. This man was capable to create corporate cultures, which are adopted from other values but still strongly rooted from Indonesian cultures. Secondly, strong collaboration with Japanese companies, particularly automotive firms. Automotive is considered as one of the highest value-added and technology-intensive industry. Astra decision to enter automotive and create joint venture with Japanese partners allowed the company to learn and absorb the latest world-class technologies and management system. Thirdly, unlike many other Indonesian conglomerates, Astra do not rely only on a certain individual.

Instead, Astra is able to build good and better corporate governance, which is more professional. Compared to other giant conglomerates, such as Salim and Sinar Mas Group, Astra Group has much less family-related people as well as more ethnically diverse (not only Chinese-descended people) in their management.

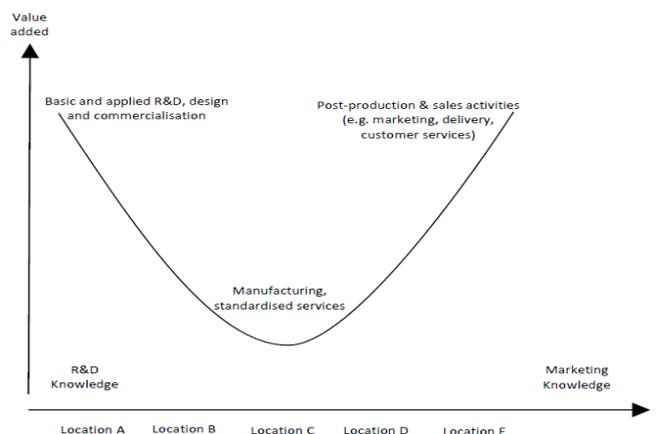
At the early stage, the company exported and imported various low value-added goods. These included toothpastes, frying oil, bulbs, etc. Then, now their businesses do not only operate in these low value-added commodities but also complex and high value-added goods, such as automotive and motorcycle components. Astra started its automotive and motorcycle business since 1969/70 by acting as the official distributor of Toyota and Honda in Indonesia. Since then, Astra diversifies its businesses into much broader goods and services, including heavy machines, agribusiness, financial services, infrastructure & logistics, property, etc. Nevertheless, auto-industry still plays a significant role for the company and Astra has ‘captive’ GVC governance based on Gereffi et. al. (2005)’s typology with its global partners (based on interview with former Astra worker).

## IV. UPGRADING CHALLENGES

This paper elaborates four key upgrading challenges faced by local companies in developing countries. Those challenges are: (A) limited value capture; (B) Inefficiency; (C) Neoliberal regime; (D) and bad policies & institutions. These challenges are elaborated as follows.

### A. Limited Value Capture

If we analyse Indonesian automotive industry by using the smile curve (Mudambi, 2007; 2008), this theory suggests that the country experiences mainly forward linkages, while only limited backward linkages. This theory also argues that manufacturing (including assembling process) has the lowest value-added input compared to other activities, such as R&D knowledge (including basic & applied research and design) and marketing knowledge, such as brand management, advertising and after-sales services (Figure 1).



Source: Mudambi (2007, 2008)

Fig. 1. The Smile Curve of Value-Added Activities

In the global automotive industry landscape, Southeast Asia is located in periphery. The region plays only a role as the assembly (low value-added activity) location of the automotive MNEs. The Southeast Asian countries (except Singapore) suffer a branch plant economy syndrome which

mean the automotive industry activities in this region are externally controlled by corporate's headquarters (HQs) operating somewhere else, typically in developed countries. These Corporate HQs have power to determine the location of their GVC across the globe.

In the case of Indonesia, Aswicahyono, Basri and Hill (2000) argued that lack of local components suppliers made the automotive industry in the country has failed to upgrade. They additionally argue Indonesia would gain more benefits from backward linkages if the country develops its local supplier base before the assemblers set their business up in the country. They called this strategy as 'back to front' industrialisation. Astra is a good example how a local company only can have limited linkages in GVC. Astra business mainly covers about post-production activities. This implies Astra can absorb forward linkages, such as specified logistics, after sales services, etc. On the other hand, Astra only has limited backward linkages, which have a higher value-added contribution to the final value of the product and more important aspect for the company to increase its capability, upgrade to higher rank and compete with global players.

This section elaborates how value capture plays an important role in upgrading local company in GVC. The next main challenge, efficiency, is elaborated in the next section.

### *B. Inefficiency*

From company point of view, inefficiency can be caused by different reasons. In this paper, four aspects are identified. Those aspects are financial pressures, over- and/or mal-investment, opportunistic and short-term relation, and insufficient economy of scale. Matsumoto (2006) shows the dynamics of Indonesian corporates' financial positions in the 1990s from macroeconomic point of view. In this study, the Author explains how Indonesian companies increased significantly its leverage in the 1990s, just before the Asian crisis hit fuelled by private debt. This financial structure, especially the debt problem, was the main source of not only for company fragility and instability but also Indonesia's source of financial crisis in 1998. Similarly, from sectoral view, a study by Doner and Wad (2014) argues how financial crises in Asia, both in 1998 and 2008 have changed and reshaped the landscape of automotive industry in the region.

After the financial crisis in 1998, many Indonesian companies were in trouble even collapsed. Astra, for instance, experienced a major financial problem. One of the main reasons was because of the company's mal-investment to other unrelated sectors. This behaviour was very common at that time because the authority supervision was very weak, while banks had power to give loans to various projects arbitrarily. This overinvestment led to diseconomy of scale, which accumulatively created financial problem to the company. Astra needed to seek financial help from other sources and restructure its debts. A few years after the 1998 crisis, about 30% of Astra stakes was bought by Jardine, a Singaporean-based company, and the Singaporean has over 50% of the Astra ownership.

This section elaborates how inefficiency inhibit a local company to upgrade in GVC. The next main challenge, Neoliberal regime, is elaborated in the next section.

### *C. Neoliberal Regime*

In the late 1970s, the Western economies experienced a severe crisis. High unemployment as well as high inflation or called as 'stagflation' occurred in the West, such as the US, UK and Europe. To solve this stagflation, Neoliberal agenda, such as weakening the labour union, free trade, and privatization, led by Thatcherism in the UK and Reaganomics in the US were implemented since 1980s until now.

Since then, global economy has been globally integrated. This phenomenon is usually called globalization. In the age of globalisation, MNEs have relocated many their activities from the Western world to the East, especially to Asia. However, MNEs keep their key value-added activities in the West, especially in their home country. On the other hand, they locate the manufacturing facilities in cheap labour countries, such as in China and Indonesia.

After Neoliberal regime has been established, a number of free trade agreement among countries across the globe also has been signed. It leads to regionalism of MNEs activities (Rugman and Verbeke, 2004). In this paper, the authors show how a vast number world's largest firms concentrate their sales in their home region. For instance, nearly half of Toyota global sales comes from Asia-Pacific region.

In Asia pacific, MNEs also usually divided the region into three main markets. Those markets are East Asia (China, Japan, Korea), South Asia (India, Pakistan and Bangladesh) and Southeast Asia (including Indonesia). Understanding these sub-regions is important to understand how Neoliberal regime has shaped MNEs operate. To target these sub-regional markets MNEs typically locate their production facilities close to the market. It means that, for instance, to target Southeast Asia market, MNEs will locate their production facilities within the region.

In the case of automotive industry, despite the fact that Indonesia is the largest market in Southeast Asia, MNEs primarily choose Thailand as their production base. Table 1 shows how Thailand is the leader of car production in the Southeast Asia, while Indonesia is only in the second place. This phenomenon occurs because Southeast Asia countries have agreed on free trade on automotive industry. It means that MNEs can locate their value-chain activities anywhere in Southeast Asia, and then send the output to other countries without any barriers, which creates cross-country competition among local companies in the region. From national interest point of view, if a country is not ready for this free trade or premature trade liberalisation, the country local company will be harmed by this competition (Thoburn and Natsuda, 2018).

**TABLE I. CARS PRODUCTION IN SELECTED SOUTHEAST ASIAN COUNTRIES IN 2017**

Country	Total Production (unit)
Thailand	1,944,417
Indonesia	1,216,615
Malaysia	513,445

Source: <http://www.oica.net/category/production-statistics/> (Accessed on 22/07/2019, 10:41 AM GMT +1)

This section elaborates how Neoliberal regime produces the ‘winners’ and the ‘losers’ of globalisation. In the case automotive industry in Southeast Asia, Thailand is the winner, while other countries (including Indonesia) is considered as ‘the losers.’ Bad policies and institutions are one of the main reasons why Indonesia is left-behind than Thailand in the development of automotive industry. This factor is elaborated in the next section.

**D. Bad Policies & Institutions**

In their comparative study series in the development of automotive industry in Southeast Asia (Natsuda and Thoburn, 2013; Natsuda and Thoburn, 2014; Natsuda, Segawa, and Thoburn, 2013; Natsuda, Otsuka, and Thoburn 2015; Natsuda and Thoburn, 2018), Professor Thoburn and Professor Natsuda show how ineffective and bad industrial policy and institutions affect and shape different industrial development paths in the region. Based on these studies, the authors conclude Thailand is the winner of automotive industry globalization for Southeast Asia market, while Indonesia is at the second place.

Bad policies and institutions are the main reasons why Indonesia is left-behind than Thailand in the case of automotive industry. The first bad policy was national car project. ‘Timor Project’ in Indonesia and ‘Proton Project’ in Malaysia discouraged MNEs to invest in those two countries compared to Thailand. From foreign investor’s point of view, these national car projects are a threat for the future of their business in Southeast Asia. Secondly, bad service link or infrastructure is also another reason why Indonesia is less favorable compared to Thailand (Soejachmoen, 2016). This bad infrastructure inhibits Indonesia to participate in the automotive GVC because it creates uncertainty in producing and delivering parts from/to Indonesia.

**V. CONCLUSIONS**

Upgrading is the key notion for a country or a company, especially in developing world to gain benefits in the age of global value chains (GVC). However, there are many factors inhibiting the upgrading process of country and company in GVC. This paper identifies four key upgrading challenges in GVC, which inhibit the promotion of country and company to a higher level of value-added chains. Those challenges are: (1) limited value capture by country and company; (2) inefficiency; (3) Neoliberal regime; (4) and bad policies and institutions.

Limited value capture is mainly triggered by partial linkages of foreign investment. In the case of automotive industry in Indonesia, local company only gains benefit from forward linkages, such as marketing and after-sales services. On the other hand, higher value-added activities and key competitive advantage, such as R&D and headquarter, are still located in the home country.

Developing country is very fragile with a financial crisis shock. When financial crisis occurred, like in 1998 and 2008, local companies in developing country were hit badly. Post-crisis, these companies typically experienced a high level of debt and needed to restructure these debts. Consequently, this financial problem inhibits the upgrading process of company in developing country because company is distorted from its long-term objective in order to meet its short-term goals (e.g. survival and debt restructuring).

Since 1980s, free market fundamentalism or widely known as Neoliberal ideas have dominated economic development across the globe. Weaken labour union, privatisation and free trade are key ideas of these Neoliberal regime. Although it was started in the Western world, the ideas have spread all over the world. Globalisation, a condition where global economy has been integrated globally, is the consequence of this Neoliberal Regime. Globalisation creates both the winners and the losers because it allows MNEs to locate their different activities in different countries. In the case of automotive industry in Southeast Asia, Indonesia is the second-best option in the eyes of foreign investors after Thailand. One of the main reasons is because Indonesia has less favourable industrial policies and institutions compared to Thailand.

All these challenges are elaborated by using Indonesia (country-level analysis) and Astra International (firm-level analysis), one of the country’s largest conglomerates, as the illustration. The analysis is conducted by using mixed methods and triangulation from various previous literature, data sources, interviews, news, and company’s historical archives.

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**TABLE II. UPGRADING CHALLENGES IN GLOBAL VALUE CHAINS**

Factor	Sub-Factor	Examples & References
1 Limited value capture	Forward & backward linkages; Domestic plant/assembly economy; lack of capable local partners	- why Indonesian automotive industry failed to industrialize (Amendyaeni, Brati & Heli, 2000) - dominated by assembly plant, while lack of component suppliers (Natsuda, Otsuka & Thoburn, 2015)
2 Inefficiency	Excessiveness of state; Over- and/or mis-investment; Opportunistic & short-term relation; Financial pressures	- How financial crisis changed the landscape of automotive industry in Southeast Asia (Doser & Wild, 2014); - How financial instability fragility affect Indonesian’s businesses (Matsunaga, 2006).
3 Neoliberal regime	Pressure trade liberalisation; Global competition	- Pressure trade liberalisation (Thoburn & Natsuda, 2013); - discipline-decoupling process of business investment in host country (Yang, 2013; Harner, 2014)
4 Bad policies & institutions	Industrial nationalism & protectionism policy; Fiscal incentives; Production infrastructure; Corruption	- Timor in Indonesia (Thoburn & Natsuda, 2013); Proton in Malaysia (Natsuda, Segawa, & Thoburn, 2013); - Indifferent excise taxes in Philippines (Thoburn & Natsuda, 2010); - bad service link infrastructure & restrictive policies (Soejachmoen, 2016); - Failure of national car projects in Indonesia & Philippines (Thoburn & Natsuda, 2013);

Source: Author’s Compilation

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