

Indonesian Economic Development towards Global Value Chains

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ABSTRACT

Global Value Chains shows a country's economic integration in global trade. The activity of increasing value added in the GVC scheme can describe competitiveness, industrial progress and economic development. This study aims to analyze the competitiveness of global value chains in Indonesia's economic development. This research was descriptive qualitative along with library research methods. The analysis was conducted by relying on GVC analysis tools submitted by Raphael Kaplinsky and Mike Morris (2000), in the form of rents, governance and upgrading. From the analysis conducted, it was concluded that the aspects of rents that were based on the competitiveness of Indonesian companies were still low. The specialization is still around raw materials and limited manufacturing products, which are mostly upstream with low high-tech. In the governance aspect, the environment to support competitiveness and low production power is due to high logistical costs and price and regulatory distortion. In the upgrading aspect, Indonesia is only able to go up one level at the limited manufacturing stage due to its low R&D costs.

KEYWORDS: *Competitiveness, Economics, GVC, Indonesia*

INTRODUCTION

The world economy continues to develop. Global economic development is taking place more intensely and shows increasingly intense global integration. One of the things that drives changes in various aspects of human life and in global economic is globalization. Globalization affects the production of goods and economic activities (Prokopowicz, Dariusz & Grzegorek, Jan & Matosek, 2018). Global integration led to the emergence of the concept of Global Value Chains (GVCs). The concept of GVCs was first coined by David and Goldberg (1957), then popularized by Porter (1990). In the following years, various studies related to GVCs were increasingly a lot.

GVCs are a concept that signifies the linkages between companies, workers and consumers around the world, enabling participation from various countries in global economic integration. For a country's economic development, GVCs can be an effective step to accelerate economic development. This can be used by developing countries to boost their economic development (Crawford, 2017). Global economic integration is something that cannot be avoided, including for Indonesia. Indonesia is one of the countries with an increasing rate of economic growth. Indonesia's economic integration in the world is also increasing.

Through various global collaborations, Indonesia strives to be able to increase its contribution towards global value chain. GVCs are created because of the relationships between

the various components that make up the global value chain. The interconnection of various economic activities affects the entire value chain of an economic activity. When one component is weak, the economic value chain will also be weak (Christopher Sausman, 2015).

This condition is an interesting thing to study in order to see how the implementation of the GVC in economic development in Indonesia and the extent of Indonesia's participation in this global trade. GVC analysis is important to obtain an overview of changes in economic activity, shifts in production patterns, connectivity between countries and the contribution of each country in the process of forming added value from various economic products. Through the GVC analysis, we can also see the extent to which the specialization policies, the quality of the workforce, and the transfer of technology implemented by a country.

The Global Value Chains framework is very broad. In this study, the framework focuses on Indonesia's economic development efforts towards a global value chain. The research subject limitation is on the paradigm of government and power relations in leading economic development. This research focuses on conceptual studies that look at the implications of policies within the governance framework on economic development related to GVC. Indonesia's interaction in the GVC will show the development of the Indonesian economy and the level of integration of the Indonesian economy in the global economy. The research

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questions raised in this study are related to the policy analysis of Indonesian economic development towards global value chains.

Research Methods

This research uses a qualitative descriptive research approach. Qualitative descriptive research seeks to capture non-standardized meanings, processes, and contexts in numbers. The method used in this research is library research method. Literature study is a research method that focuses on content analysis through literature data or literature studies. The process of collecting primary and secondary data is carried out by relying on library sources, both from official government documents, news, journals and reference books. The data is then processed by qualitative descriptive analysis.

Global Value Chains Concept

The main objective of the GVC study is to explore the interactions that occur between value distribution mechanisms and firms as actors of production and consumption that occur across borders. GVC was first introduced in the Global Value Chains Initiative discussion sponsored by the Rockefeller Foundation. Furthermore, the GVC study continues to be developed and crystallized by other researchers (G. Gerrefi, 2005). In further deepening the GVC concept, the analytical focus will be on the governance structure in managing international production networks.

GVCs play an important role in world economic growth. Based on UNCTAD's 2013 World Investment Report, at least 60% of the world trade that takes place is intermediate products and services as part of the GVCs process. However, the complexity of GVCs raises various concepts and definitions related to the global production paradigm. In this case, (Baldwin, R. and Venables, 2013) introducing a concept known as "spiders", which means that the production process takes place through many parts and components that are inseparable from one another, and "snakes" which means that there is a sequential process from upstream to downstream which always has added value at each stage. This condition shows the complexity of the GVCs concept, thus giving rise to a scheme of "factory less goods producers".

In GVCs, producers of certain goods can officially have a statistical value from their products that are sold to the market. However, the statistical value actually cannot show a single production activity carried out. These producers carry out a series of pre-production activities, such as design, engineering, semi-finished processing, to control over the production of manufactured goods from upstream to downstream by involving many parties who can come from various countries. Each stage provides a certain added value to the product (Amador, 2014).

GVCs are characterized by the fragmentation of ongoing production with support from a wide range of production, investment, human and technology organizations (Irianto & Manullang, 2001). In a complex value chain concept, it is possible that added value occurs only in the domestic sector. Semi-finished products are exported, processed to get added value in one or more other countries, then re-imported, either for added value or for the final consumer (Casella et al., 2019)

The high complexity and different scale of analysis of the production process is what makes it nearly impossible to define, measure and map a GVC in one easy step. GVCs are defined and reviewed in various perspectives and concepts. However, GVCs always show the same thing, namely the existence of an international trade process that encourages the process of generating added value to products ranging from raw products to finished products that are ready for consumption. The value chain, which used to be mostly at the domestic level, has grown to include more than one country (Christopher Sausman, 2015) (Lindic, J., & da Silva, 2011).

The concept of GVCs is different from Porter's value chain, which emphasizes how the company's strategy is in business activities. GVCs cover a broader discussion, including systems developed to optimize production networks, distribution mechanisms, organizational structures and various matters in the international production network scheme (Inomata, 2017). Analysis of GVCs is built on the basis of a value-added oriented policy, with due observance of the production chain and market (Christopher Sausman, 2015).

The implementation and implications of GVCs for a country can vary widely. Several countries can take full advantage of GVCs to provide maximum benefits to the country's economic development. The activities of GVCs in a country can affect the macroeconomics of that country, the implications of which are seen by:

1. Determination of international price and cost competitiveness of a country
2. Effect on export market share
3. Effect on increasing GDP.

In this research, GVC analysis refers to several components that are the core of GVC, as stated by Raphael Kaplinsky and Mike Morris. The GVC analysis tools include (1) rents, (2) governance and (3) upgrading (Raphael Kaplinsky, 2000). Rents, is a form of the ability of companies or chain participants to protect themselves from competition that arises because of certain advantages that are not shared by all countries. Rents are considered a determining factor in helping specialize or differentiate a country's international trade.

In governance indicators, the focus is on the power relations between actors in a value chain. This is illustrated by the relationship between the controllers of the value chain in a production process (G. Gerrefi, 2005). The government is the party that has the power to force or pressure other parties in the value chain. These government policies can be enforced and implemented, so that the direction of industrial development will run according to government policies. Through applied industrial policies, the government can play a role as the party that builds the operational environment.

The government can direct the operational environment towards an environment that supports or on the contrary hinders the development of a commodity's production. This really depends on the supporting policies taken by the government (Widiartanti, 2016). Furthermore, various policies and synergies that occur with the industrial world will give birth to upgrading so as to contribute to the global supply value chain. Through the fulfillment of rents,

governance and upgrading, it can be seen how far GVC has been implemented in Indonesia's economic development.

Analysis of Indonesia's Economic Development towards GVC

Global Value Chains is an important concept for world economic development. This also applies to Indonesia's economic development. This concept has changed the form of world economic interaction. In the process of economic globalization, GVC has dramatically changed how the production process is organized, increasing interdependence between countries, as well as shifting the mercantilist paradigm in viewing the international trade process. Economic interactions in international trade are more complex, both at the level of economic actors to government.

The spread of global value chain production makes the economies of the world's countries increasingly connected to each other. The implication for the world economy is an interdependent economy. Greater economic integration will ultimately reduce a country's political freedom. The involvement and roles of the private, public, national and international sectors are also increasingly complex. The GVC study considers the form of transactions because the way the transactions are carried out reflects the structure of the power relationship between the parties, which ultimately determines the scope and magnitude of the distribution of value in trading.

In terms of rents, the ability of companies in Indonesia can be seen from the vertical integration of GVC. The GVC vertical integration type is based on a hierarchical structure that assumes absolute and unidirectional control of the parent company over its subsidiaries. The activities and performance of the subsidiaries are strictly monitored and assessed in accordance with their head office management strategy. In contrast, outsourcing options tend to result in a relationship between a client (buyer) and a subcontractor (a service supplier). (Inomata, 2017).

The quality of the institution to the level of development is very important. This means that the implementation of GVC for economic development is greatly influenced by the quality of the institution. The World Bank illustrates the important steps that need to be taken to increase the country's contribution to the GVC, namely by improving its institutions, providing fair rights protection, increasing the validity of contracts, requiring more transparency, adopting anti-corruption measures, making the customs process efficient, and encouraging financial deepening. The focus should be on reducing transaction costs so that companies within a country can easily join the GVC (World Bank, n.d.-a).

In this regard, companies in Indonesia have many limitations in managing and upgrading the added value of their products. In fact, upgrading is one of the important elements in GVC. World Development Report 2020 data shows that the majority of Indonesia's export products are still commodities or raw materials and only go to limited manufacturing products. This means that the strength of companies in Indonesia is still very limited. The factor that also influences this limitation lies in the governance aspect.

Government support in creating an environment that supports company development is considered less than

optimal. This is influenced by the high logistics costs that must be borne by companies. Indonesia is a country in the Asian region that has the most expensive logistics costs. The logistics cost figure even reaches around 24 percent of GDP, while Vietnam only reaches 20 percent of GDP, Thailand 15 percent, Malaysia 13 percent, and Japan and Singapore at 8 percent each. (Lingga, 2019). This cost is also a burden for the company so that the optimization of its production is hampered.

GVC relations are also heavily influenced by the strength exercised in the global production network by two actors. The first is the internal actors of the chain, generally the private sector. In some cases, this actor can be played by state-owned companies and communities. To maximize and adapt the value chain, they use their governance strengths to build and protect barriers to entry. When referring to the GVC indicator presented by Raphael Kaplinsky and Mike Morris, it is this first actor who influences the rents indicator.

The second actor is the state, civil society organizations (CSOs) and supranational institutions, which are external to the chain. Meanwhile, governance practices in global supply chains are often targeted at issues beyond revenue sharing, such as in terms of the social and environmental character of the GVC. These actors play a role in governance schemes. Their actions affect the capacity of the internal chain to produce and act on the appropriate chain. In this external chain, the state plays a facilitative role in assisting the corporate sector, although each has different interests in the distribution of the chain chain.

In discussing the governance roles played by these different stakeholders, one can use constitutional legal constructs and distinguish between three areas of chain governance: establishing rules governing the performance of chain participants ("legislative governance"), helping chain participants to act in ways - a way that supports the goals of the main actors in allocating chain rent ("executive governance"), and monitors and sanctions the performance of various parties in the chain ("judicial governance").

GVC governance is much influenced by standards and regulations are a form of governance. The government is the party that has a lot to influence the formation of this standard. These standards can be divided into three types, namely private standards, public standards and third chain standards (Davis et al., 2018). The first standard refers to some of the standards set by the leading companies in their chain. This is a personal standard but mandatory to ensure compliance with behaviors by supply companies and customers that affect the overall competitiveness of the chain. Examples of these efficiency standards are those that govern supply and quality.

The second type are public standards promoted by external agencies (especially CSOs) that are designed to influence the nature of the GVC. These standards exist but are not mandatory for market entry. Examples of these standards are the ecolabelling, fair trade and child labor standards. Meanwhile, the third chain standards are those set by external parties, especially nation states and supranational institutions such as the EU. This standard is public in nature and is legally obligatory in regulating market management.

Examples of these standards are those related to product safety. In this case, the government has full control in governance and determines the environment to support increased participation in the GVC.

There are many positions that can be exploited in global value chains, but it is also necessary to look at the analysis of the relationship between value chains and current account balances. Brumm, Johannes, Georgios Georgiadis, Johannes Grab (2018) suggests that participation in global value chains should have a positive effect on a country's current account balance. This is because the GVC process definitely involves adding import value and then exporting it. That is, mathematically will increase the trade balance. However, a country whose main role is to export intermediaries for further processing in other countries, will not be able to see the optimal effect on its trading country.

The relationship between participation in global value chains and its impact on the trade balance cannot be clearly stated. However, at least it can be seen that a better position of a country in the GVC will also result in a higher profit value. In this condition, the current account balances of downstream countries tend to benefit more from the participation of countries further upstream. This is because the functions taken by downstream countries involve adding value to imports, are high-tech and they also tend to be less vulnerable to exchange rate appreciation (Haltmaier, 2015).

In world production and trade, there are various stages of the supply chain spanning many countries around the world. This condition encourages countries to specialize in GVC 'slices' which can be at the beginning (upstream), middle or end (downstream) of the chain. However, it is unclear how countries and industry specialize along this slice. What types of policies determine where countries and industries are placed on the GVC map is also not quite clear. Van Der Marel and Erik's research found that the position of a country in the GVC depends on where the countries specialize. In addition, domestic economic policies also correlate with a country's position on the GVC map (Marel, 2015).

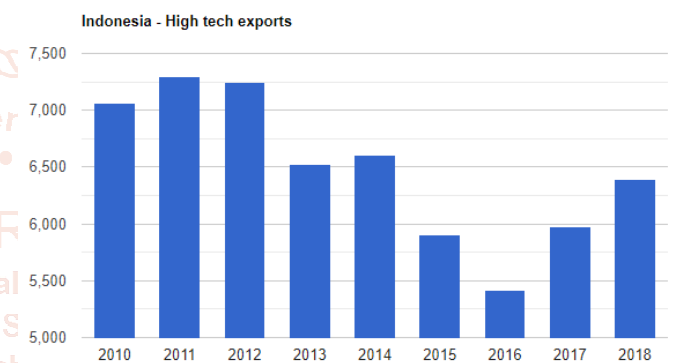
Indonesia's participation in the GVC and its role in the fragmented structure can be seen from the international input-output database. Research conducted by Esquivias, miguel angel & Wulan Sari, Dyah & Handoyo (2017) looking at Indonesia's interactions in global value chains to measure Indonesia's specialization. The results show that Indonesia has significantly gained integration with the Asian value chains, both East Asia and ASEAN. Indonesia's role in all GVCs has undergone structural changes, moving from 50% of value added exports through finished goods in 1997, to intermediary suppliers (59%) in 2012. However, most of the added value is local (88%) so that it is less integrated global. In addition, Indonesia has fewer high-tech exports (Esquivias, miguel angel & Wulan Sari, Dyah & Handoyo, 2017).

Hummels, David & Ishii, Jun & Yi (2001) states that the process of forming added value in GVC involves three things, namely: (1) the process of producing goods in stages, (2) there are two or more countries that provide added value, and (3) there is a process of exporting and importing semi-finished goods towards the process subsequent production. The involvement of a country in this GVC can be seen from

its participation index. There are two forms of participation index, namely backward participation, which means the added value content of other countries in Indonesia's export commodities.

In addition, there is forward participation, which is how much added value Indonesia contains in the exports of a country. In this case, Indonesia has a high enough advanced participation. This condition illustrates that Indonesia exports a lot of semi-finished materials for further processing abroad. On the other hand, Indonesia's backward participation is still very low because Indonesia's export commodities are not linked to other countries' inputs.

For example, this can be seen from the low exports of high-tech products from Indonesia compared to other ASEAN countries. High-tech products are defined by the World Bank as commodities with a high R&D content including computers, electronic machinery and pharmaceuticals. Indonesia has the export value of high tech products which tends to decline from 2010, as seen in the following diagram:



Source: (The Global Economy, n.d.)

Compared to other ASEAN countries, Indonesia is the country with the lowest high-tech exports. Indonesia's high tech export portion is only 5.8% of total manufacturing exports. In fact, the high-tech industry is the industry with the greatest potential in building global value chains. In fact, the Philippines has a high GVC due to electronic manufacturing services (EMS) and semiconductor manufacturing (SMS) which are able to contribute 51% of the country's export revenue.

Research conducted by (Nurdiati, R. P., Oktaviani, R., & Sahara, 2018) also shows that Indonesia has low participation in the global value chain for high-tech products, particularly in electronic products. It states that Indonesia's share of output is the lowest among all countries resulting in low value-added acquisitions. In the GVC, Indonesia acts as a user of input from various sectors (Nurdiati, R. P., Oktaviani, R., & Sahara, 2018).

Indonesia's participation in GVC is less than optimal because high exports lie in exports of raw commodities. Meanwhile, Indonesia's participation in the manufacturing industry globally is very low. This means that Indonesia's specialization is still on natural resources and raw products, so that it does not involve much high-tech products. From OECD data, for every US \$ 10 of Indonesian export value, it affects around US \$ 8.8 (88%) of domestic added value. This proportion is very high when compared to other countries. Such as China (71%), India (79%), Malaysia (61%), Thailand (62%), and Vietnam (63%). But this is contradictory due to

the low role of Indonesia in the formation of the global value added chain or the Global Value Chain itself.

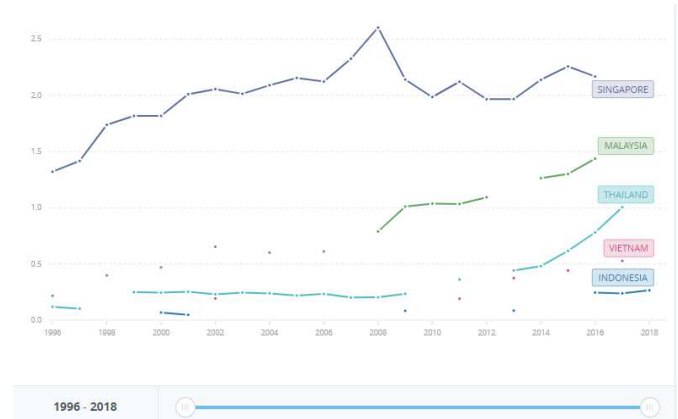
Indonesia's economic development towards the GVC is also still limited by its regional reach. From a regional perspective, Indonesia's participation is still largely in the Asian region. Globally, Indonesia is not much involved in GVC in global trade in Europe and America. Indonesia's weakness in utilizing global value chains is also getting heavier due to the high cost of transportation in Indonesia. From a regulatory perspective, this is due to burdensome regulations and distortions in port pricing.

Weak backward participation in the manufacturing or high-tech industry reflects that governance indicators have not been effective in supporting the transition of the manufacturing and service industries to a more advanced stage. This is at the same time related to the GVC upgrading indicator, which is still not optimal, thus placing Indonesia at a very low level of upgrading. Until now, Indonesia was only able to upgrade from the commodities stage to limited manufacture, or only jumped one level. In fact, there are still two more stages of upgrading that need to be achieved to optimize participation in the GVC, namely the advanced manufacturing and services stage and the innovative activities stage.

In the GVC analysis, we also need to look at two things related to the process pattern of product use and product production. This can illustrate how the upgrading process was carried out and the extent to which it has been achieved. The first process pattern is the position of the production process and the technology applied in other countries, especially for intermediates products. The second is the trade back and forth of intermediate goods and services, which is the main marker of GVC activity (Wang, Z., S. Wei, 2018).

This analysis also needs to look at Indonesia's role as a global intermediary buyer and supplier. This affects the prospects for national economic development. This can show how strong Indonesia's economic development is in its influence as a player in the global production network. Data from ADB MRIOTs shows that the total nominal value of Indonesian production and use in intermediate products generally increased from 2000 to 2017 (Casella et al., 2019). This shows that Indonesia's participation is increasing in the formation of global production networks. However, this increase is not optimal.

Optimization of the global production network needs support from R&D. However, the share of research and development (R&D) carried out in Indonesia is low. This hampers the slow pace of Indonesia's participation in the GVC (World Bank, n.d.-a) shows that Indonesia's Research and Development Expenditure (% of GDP) is only 0.238. This figure is far below Vietnam (0.527%), Thailand (1.004%), Singapore (2.166%) and Malaysia (1.37%).



Source: (World Bank, n.d.-b)

Low R&D indicates that the implementation of the GVC cannot be optimal, both in the aspects of rents, governance and upgrading. In fact, R&D becomes a tool for companies to be able to increase competitiveness and reach a higher level while simultaneously increasing GVC participation more optimally. The higher the added value obtained for an export product, the higher the economic development that the country can enjoy. Economic development towards the GVC will also be heavily influenced by a country's R&D level. R&D can open up various opportunities for countries to evaluate and rearrange targets in their economic development.

Conclusion

The characteristic of GVC is seen from the activity of increasing the added value of a product which symbolizes industrial progress and economic development. Indonesia is a country that has made efforts to increase its role or participation in the formation of global value chains. Indonesia's economic development towards the GVC shows various dynamics. In the rents aspect, which shows the company's ability to specialize and compete in global trade, Indonesia still specializes in raw materials and limited manufacturing products. Indonesia is superior in forward participation but not backward participation, which means taking more roles in the upstream part with low high-tech.

In the governance aspect, the government is not optimal in creating an environment that supports business competitiveness and production power. This can be seen from the high cost of logistics, as well as the burdensome regulations and distortions in port pricing. In the aspect of upgrading, Indonesia is only able to go up one level at the limited manufacturing stage. One of the contributing factors is the low R&D cost. Indonesia has generally experienced an increase in the last two decades, but this increase is not optimal. Therefore, in order to optimize GVC participation as well as Indonesia's economic development, it is necessary to optimize company competitiveness, with regulations that further support cost efficiency and increase R&D.

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