

# HUMAN CAPITAL DEVELOPMENT AND THE GLOBAL VALUE CHAINS (GVCs)

TVET BRIEF | ISSUE NUMBER 1 | SERIES OF 2019



*What is the Philippines' place in Global Value Chains?  
How can technical vocational training improve the  
country's participation in these Chains?*

## GLOBAL VALUE CHAINS

Contrary to popular belief, 'globalization' is not an entirely new phenomenon. By its basest definition, that of an interdependence among countries for economic and cultural gain across the world, globalization can be said to have already happened as early as the 16<sup>th</sup> century (or even earlier) in limited fashion<sup>1</sup>. What we know as 'globalization' today is a continuation of this trend, but now with an increased focus on exchanging products, ideas, and activities through mutually supporting networks spread throughout various places in the world. These networks are known as global value chains (GVCs), and reflect the fragmented nature of the production of today's goods and services. In simplest terms, GVCs are any network of organizations that are involved in the production and transport of commodities. 'Organizations' in this context pertain to companies and people who all play a role in the production chain, as well as government entities that create environment where production can take place. become, i.e. the production chain occurs within a specified physical space, with the

output being consumed internally or reserved for trade with other consumers. Thanks to the onset of technology, though, organizations have found it more beneficial to situate certain aspects of their production chain in other countries, usually to take advantage of cheaper labor costs, more favorable business laws, and so on. Such benefits are the reason why transnational corporations (TNCs) flourish, whom according to the UN are now responsible for at least 80% all global trade<sup>2</sup>

## THE VALUE CHAIN SYSTEM

GVCs can be seen as simply a scaled up version of a typical value chain (VC), given that they ultimately add value to products or services. The International Labor Organization (ILO) used the description used by Kaplinsky when talking about value chains, thereby defined as simply "...the full range of activities that are required to bring a product or service from conception, through the intermediary phases of production and delivery to final consumers, and final disposal after use..."<sup>1</sup>. In essence, the value chain of any product consists of numerous inputs at each stage of the production

line, with each input incurring costs that should be recouped by the consumer at the end of the line (i.e. when the consumer buys it). While this notion purports that the value chain happens in a single, contiguous location, a *global* value chain has no such limitations to speak of.

In other words, the creation of a product or a service is no longer physically confined to the borders of one country. Thanks to globalization, it is entirely common for them to be created, piece by piece, from one country to another, with all entities involved having a specific role in the entire process. The reduced costs of transportation and the ease of communication has made it entirely possible for one country to produce individual components, then send them to another country to assemble the final product, with each part of the chain adding more and more value to the final output<sup>3</sup>. Thus, GVCs allow poor or developing countries to find their niche in global trade without having to invest much in production facilities, by (for example) specializing in a particular skill or industry subset at lower cost than what more developed countries are willing to pay for.

#### **METHODS TO IMPROVE GVC PARTICIPATION**

The key here is for these countries to identify their strengths and to find where in the chain they can perform best, invariably by upgrading their economies through the following methods<sup>4</sup>:

- a) *Product upgrading* – Shifting current production capabilities to create a higher-quality product or service.
- b) *Process upgrading* – Improving efficiency in current production systems, usually by introducing more advanced production equipment or technology.

- c) *Functional upgrading* – Improving capabilities to reach higher value stages in the production chain, usually by training/retraining in new skills

Once their place in a GVC has been identified through the aforementioned processes, countries can opt to go a step higher with the following:

- d) *Chain upgrading* – Entering into an entirely new GVC within the same industry or market, using knowledge and skills obtained in the current GVC.
- e) *End market upgrading* – Entering into entirely new market segments, which may have their own GVCs.

Actively tracing what part of the production chain happens where, or what organization is responsible for whom, can be difficult. According to USAID, richer and more-developed countries usually opt to upgrade their GVC-driven economy using functional upgrading as it helps stake their claim in the Chain. Developing countries, meanwhile, prefer product and process upgrading, mainly because these are the most attainable given their limited capabilities and infrastructure<sup>3</sup>.

#### **GVCS AND THE PHILIPPINES**

The Philippines is one of the fastest-growing economies in the world<sup>1 3</sup>, with an average annual increase to Gross Domestic Product of 5.4% from 2006 to 2016, therefore giving it great potential in GVCs. This growth has been attributed to several factors: a strong Services industry that favors exports, the sizable dollar remittances provided by migrant workers, and continuous foreign direct investments (FDIs).

But as a developing country, the Philippines's participation in the world's GVCs is generally limited. For instance, its primary end-market trading partners for manufacturing-related products remain to be its nearest neighbors in Asia, i.e. China, Japan, and Hong Kong, due to the country's membership in the Association of South East Asian Nations (ASEAN). Major export markets in the United States and the European Union remain largely untapped, as talks for bilateral trade agreements are still underway (particularly for the latter, which has been on-going since 1989). Compounding matters is the fact that the country has a relatively poor infrastructure that prevents it from reaching out to other markets, and also stifles the growth of TNCs by limiting their ability to upgrade their production facilities in the country<sup>3</sup>.

One way to counteract these drawbacks and to upgrade the country's place in other Value Chains is by focusing its strengths on market segments deemed "high-value"<sup>4</sup>. Studies posit that specializing in a particular task or segment in any GVC is not always a good thing, if the said task or segment ultimately results in low product input (ergo, "low-value") compared to the rest of the segments in the Chain<sup>5</sup>. At least one study used the Philippine electronics manufacturing industry as an example, as the industry has been found to be generally lacking in terms of *functional upgrading* despite the niche it already has carved for itself in the global market (i.e. semiconductors). Put it simply, the country still relies on less sophisticated methods in the production process even as its neighbors have since innovated, therefore risking its own niche being taken over by them. This explains why innovations from Philippine firms in GVCs, if they ever come, tend to be process-

-oriented, as advances in processes are much easier for the country to achieve. To remedy the lack of functional upgrading, workers in the Philippine electronics industry must invest significantly in skills training/retraining.

The study also stated that the capabilities developed by the industry since the 1980s did not translate well in other manufacturing-related industries, such as car production<sup>7</sup>. As such, before this weakness can be overcome, the electronics industry must first find a way to innovate its production process to expand its product line-up and reach other markets. FDIs often prove useful in this regard, as their investments in other market segments (even those not directly related to electronics) can result in a spillover of new talent and innovation into the electronics industry<sup>5</sup>.

It is also important to note that the country's human capital also remains one of its biggest assets in GVC participation<sup>4</sup>, and arguably its key asset to achieve functional upgrading. This is where the country's potential for greater participation in GVCs could be realized, especially if more and more Filipinos are employed in TNCs. TNCs generally like Filipinos for their high English proficiency, commitment, and loyalty. They are also especially receptive to workers who are well-versed in *both* hard skills (i.e. manual labor) and soft skills (i.e. communication, teamwork, etc.), something that Filipino workers can easily remedy with additional training, particularly in technical-vocational skills.

## PH TVET INITIATIVES TOWARDS GVC/VCS

The Philippine government has enacted efforts to improve the country's participation in GVCs, which include the Manufacturing Resurgence Program and the Industrial Development Program. Both of these aim to improve production across all manufacturing segments, as well as creating more jobs to promote inclusive growth. USAID has outlined the specific roles of government agencies through these initiatives<sup>6</sup> in Table 1.

Meanwhile, the Technical Education and Skills Development Authority (TESDA) has taken up the responsibility of training and retraining the sector's workers in order to make them globally competitive. This is in line with the agency's role as the premier authority for technical vocational training in the Philippines. There is also the matter of the National Technical Education and Skills Development Plan (NTESDP) 2018-2022, which TESDA can use to help in the country's participation

in GVCs. As part of the Plan's objectives to ensure the country is supplied with a workforce of appropriate quality *and* quantity, TESDA intends to (among other things) prioritize its scholarship funds to these sectors<sup>8</sup>:

1. Agriculture, Fisheries & Forestry (including agro-processing)
2. Construction
3. Information & Communications Technology (ICT) and IT-BPM
4. Manufacturing
5. Transport, Communication and Storage
6. Tourism

As for other initiatives, of note is the Trade on Value Chains in Employment-Rich Activities (TRAVERA) study currently being undertaken by ILO which is participated by various government agencies including TESDA. TRAVERA is part of a larger ILO project called "Strengthening the Impact Employment of Sector and Trade Policies" that seek to help participating countries harness their potential in international trade and also to bolster its

**TABLE 1. Roles of Government Agencies in Increasing Philippine Participation in GVCs**

<b>Government Agency</b>	<b>Role in Driving Participation in the Global Economy</b>
Department of Trade and Industry (DTI)	<ul style="list-style-type: none"> <li>- Coordinates with the private sector to grow the country's sectors, especially in Manufacturing</li> <li>- Launched the Roadmaps Initiative in 2012</li> </ul>
DTI: Board of Investments (DTI-BOI)	<ul style="list-style-type: none"> <li>- Reviews and approves applications for investment incentives for the industry</li> <li>- Coordinates technical working groups to overcome industry-binding constraints</li> </ul>
Industrial Development Council	<ul style="list-style-type: none"> <li>- Responsible for inter-departmental coordination for industry growth</li> </ul>
Philippine Economic Zone Authority (PEZA)	<ul style="list-style-type: none"> <li>- Manages the granting of export processing zone incentives across the country</li> <li>- Directly engages in the promotion of FDIs in the country</li> </ul>
Commission on Higher Education (CHED)	<ul style="list-style-type: none"> <li>- Oversees higher education in the country.</li> <li>- Formulates policies and programs such as foreign scholarships and training and accreditation of tertiary educational institutions</li> </ul>
Technical Education and Skills Development (TESDA)	<ul style="list-style-type: none"> <li>- Oversees for technical and vocational (tech-voc) training in the country, as well as for other technical institutions in the country.</li> <li>- Directly offers tech-voc courses</li> </ul>
Philippine Chamber of Commerce and Industry (PCCI)	<ul style="list-style-type: none"> <li>- Provides feedback and response to the abovementioned agencies' initiatives</li> </ul>

Source: USAID

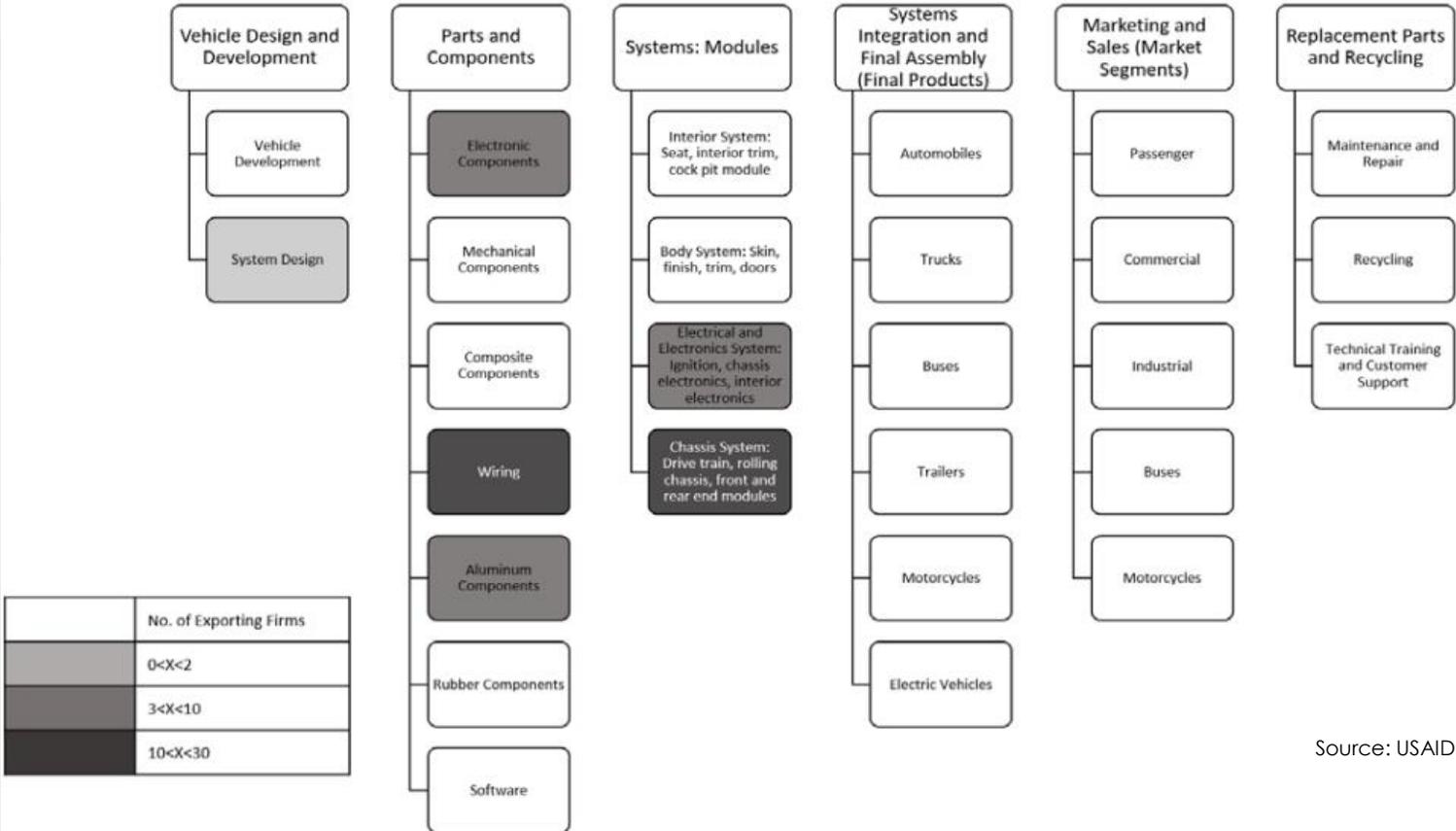
export markets to be more competitive. TRAVERA itself focuses on export value chains and labor issues, in an effort to identify problems posed on the relationship between export and employment. The Philippine perspective of TRAVERA focused primarily on the coconut industry, specifically on its production of 'coco sugar', 'coco coir', and 'virgin coconut oil'. Preliminary study results involving more than 150 small and medium coconut enterprises have revealed that the Philippine coconut VC needs to reform. As TRAVERA is still an ongoing effort, plans have been laid out for smaller studies on other aspects of the coconut industry, such as institutional mapping and skills/trade diversification.

Another project that involves TESDA is the DTI-BOI and the Japan International Cooperation Agency

(JICA) undertaking, called "Project for Elaboration of Industrial Promotions Plan Using Value Chain Analysis" that has been going on since 2015. This joint-effort seeks to, among other things, encourage more FDIs into the industry by enabling car manufacturers to produce a total of one million cars annually. Current metrics suggest that this goal can only be achieved between 2025 and 2028; important for the country to make this happen sooner. The GVC of this industry is shown in Figure 1.

The project has so far discovered that the goal of "one million cars every year" will be easier to achieve if only the local production of auto parts has been up to speed. Citing its findings in Thailand, JICA purports that the availability of such parts in large numbers will likely lead to lower shipping and

**FIGURE 1. Philippine Automotive Global Value Chain**



Source: USAID

production costs, as parts are readily available locally<sup>9</sup>. But even this goal will be a challenge, given that the Philippine automotive industry currently places more premium on imported parts and vehicles rather on its own original equipment manufacturers (OEMs)<sup>9</sup>. Luckily, this is somewhat offset by the increase of automobile sales in the country, which can spur a greater demand for parts. Above all else, the country needs to train more and more numbers of skilled automotive workers, which the Project has acknowledged as a gap in the implementation of TESDA's automotive programs. In addition, the country's automotive OEMs focus on specific auto parts (see Figure 1), such as manual transmission boxes, may be utilized to make the industry more competitive in the larger Automotive GVC<sup>12</sup>.

## GVCs AND HUMAN CAPITAL

To elaborate upon the key priority sectors identified in the NTESDP, these were further subdivided into three segments in the Plan, depending on their employment requirements as gleaned from previous industry consultations by the government, as indicated in Table 2. According to the NTESDP, sectors such as Construction and Transport & Logistics generally have employment requirements that need to be filled as soon as possible, whereas Health, Wellness and other Social

Services will only see such a sizable demand in the future. Agriculture and Manufacturing do not have a high demand for labor in the short-term<sup>8</sup>. All of these sectors are deemed vital for the Philippines's continued economic growth, which only entails that their place in GVCs should be strengthened further if the country wishes to remain competitive.

To leverage these sectors for this purpose, one needs to know how they are interrelated with each other (see Figure 2). Since 2018, Michael Porter has been proposing one such perspective for helping companies to identify their strengths and to know how value chains affect their costs and profits. Using his point of view, it can be affirmed that Sectors all play a role in each other's processes in some way or form<sup>10</sup>.

For example, the Transport & Logistics sector influence the delivery and storage of raw materials, which allow the Construction sector to perform carpentry and masonry works in buildings, which in turn provides the Electrical sector with a demand for installing electrical wires. Porter describes such a relationship as that of support activities, such as procurement and human resource management, influencing primary activities, which are directly related to the creation, sale, and support of products and services.

**TABLE 2. Employment Characteristics of NTESDP Priority Sectors (2018-2022)**

<b>Segment</b>	<b>Sectors</b>
With Large Employment Requirements (Immediate)	Tourism/Hotels/Restaurants
	Construction
	Transport and Logistics
	IT-BPM
With Minimal Employment Requirements	Agriculture/Fisheries/Forestry
	Manufacturing
With Potentially High Employment Requirements	Health, Wellness and other Social Services

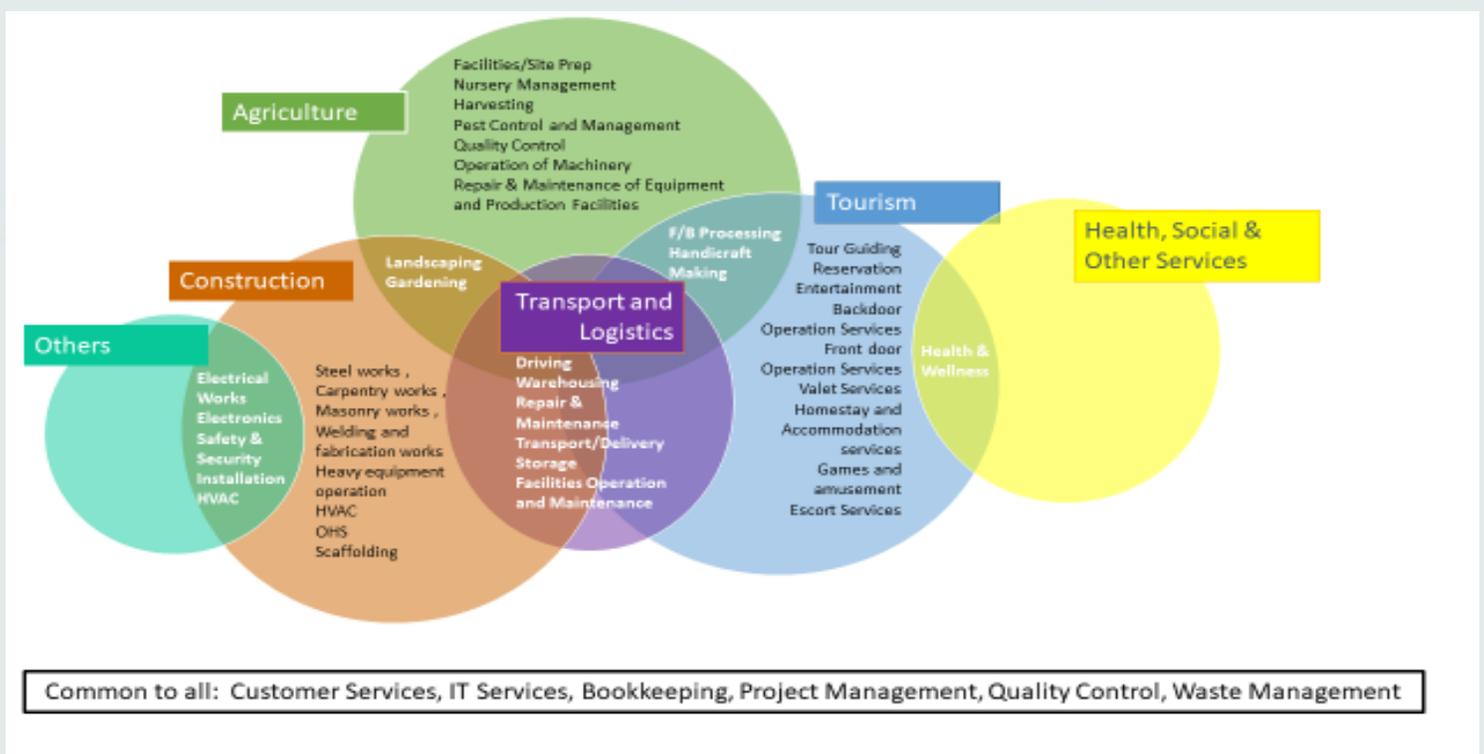
Source: NTESDP 2018-2022

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*primary activities*, which are directly related to the creation, sale, and support of products and services. This interrelation can be described as such by relationships technical-vocational skills and competencies have with each other, given that many of them encompasses numerous sectors. Consider the following example, which shows the value chain system model on three *primary* sectors- Agriculture, Tourism, and Construction –and their *support* sectors- Transport & Logistics, as well as Health, Wellness and other Social Services.

Using this model, TESDA can identify common qualifications provided by the country's technical-vocational education and training (TVET) institutions and then prioritize them according to the employment needs described in Table 2. Even further, TESDA can use this model to inform certain

**FIGURE 2. Value Chain of TVET Qualifications**



Source: "Integrated Delivery System Among the TESDA Technology Institutions Using the Concept of Industry Value Chain" (TESDA, 2018)

TVET institutions that specialize in a particular set or sets of qualifications, and cross-check them with the country's labor demands per priority sector. The key here is to identify which of these skills and competencies play a bigger role across all sectors, and utilize them in the refinement of existing TVET programs. This will demonstrate how the Philippines employs *functional upgrading* to improve its current position in the GVCs.

## WAYS FORWARD

- TESDA already has initiatives and related studies focused on the skills needs of the Filipino workforce and utilizing them to improve the country's participation in GVCs. However, these efforts still require a clear sense of direction, translating such initiatives into a concrete policy that TESDA can use, particularly to assist in the functional upgrading of the country's export industries.
- It is clear that technical vocational competencies are interrelated and can be utilized in various industry. One way that the Philippines can improve its GVC participation is to identify all these interrelated competencies and organize them into a "marketplace of skills", ensuring that TESDA's future graduates are properly equipped for various roles, regardless of what industry they wish to engage in.

- On-going activities to improve the quality of skills must continue, taking into consideration prevailing industry needs and trends. However, it is arguably more important for TESDA to consistently keep itself abreast with such needs and trends, which can only be done if the agency maintains its participation in consultations and inter-agency groups.

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