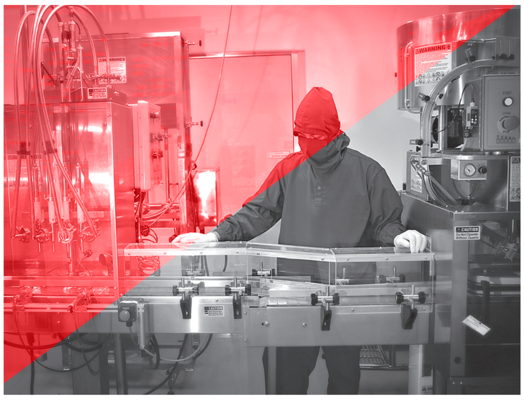
DEPARTMENT OF TRADE AND INDUSTRY

Policy Briefs

Series No. 2017-01

DEPARTMENT OF TRADE & INDUSTRY PHILIPPINES



The Philippines and Global Manufacturing Value Chains

Highlights

- *Over the last decades, the global production landscape has witnessed significant changes with global value chains or GVCs becoming a dominant feature of international trade.*
- *The Philippines is a relative newcomer to GVCs compared to other countries in the ASEAN region.*
- *PEZA EPZs have played a key role in supporting the country's GVC participation.*
- *The Philippine labor force is considered by firms as one of the country's most important assets.*
- *Broad policy recommendations to further drive Philippine integration in GVCs include expanding stakeholder engagement; proactively targeting foreign companies in key niche areas with focus on higher value activities in which the Philippines has potential to compete globally; further developing human capital; increasing participation of local companies, particularly small- and medium-sized businesses, in export markets; improving the business environment; and, improving transportation and energy infrastructure.*

The Philippines and GVC

The Philippines is among the fastest-growing economies in the world, with an average annual GDP growth of 5.4% from 2006 to 2015. This steady and strong growth is sustained by a growing population, strong export-oriented services sector, substantial upswing in Foreign Direct Investments (FDIs), and large and active diaspora.

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Over the past five years, the Department of Trade and Industry (DTI) has focused on developing sound and rational policies to support a stable trade and industry environment. The strategies, which aim to contribute to the overall goal of sustainable and inclusive growth, include increasing manufacturing growth through global value chains (GVCs).

In 2012, the government launched the Industrial Development Program (IDP) aimed to consolidate and harmonize government initiatives and formulate a National Industry Policy. The IDP's first phase was the Industry Roadmap Initiative where the DTI, Board of Investments (BOI) and the Philippine Chamber of Commerce and Industry (PCCI) collaborated to develop industry roadmaps for a wide range of sectors which stated industry goals for growth, detailed existing capabilities in the country, and identified policy reforms and interventions. By 2015, industry roadmaps for 32 sectors had been completed, with 22 more industries indicating a strong interest to participate in the project.

The roadmaps revealed that a strong manufacturing industry will create more stable and decent jobs, encourage innovation, improve efficiency and quality, and enhance human resource development. Consistent with the goals of inclusive growth and guided by rigorous research and empirical data, the DTI-BOI formulated the Manufacturing Resurgence Program to restore and revitalize the manufacturing sector, which has been lagging behind its explosive services sector development. Specifically, its goal is to increase manufacturing's contribution to the economy to 30% of total value added (up from 22.8%) and generate 15% of the country's total employment by 2025 compared to the current 10% (DTI, 2016b).

To further understand the potential competitiveness of the manufacturing sector in the global and regional economy, the DTI-BOI, with the assistance of USAID/ Philippines STRIDE program, commissioned the Duke Global Value Chains Center to conduct a series of Global Value Chain (GVC) analyses.

The studies focused on five manufacturing sectors - Aerospace, Automotive, Chemicals, Electronics & Electrical Equipment, and Paper - which represented a range of the country's capabilities, and varied in their importance with respect to foreign exchange earners, employment, and spillover potential. The studies analyzed each sector and provided a detailed outline of each industry's GVC resulting to: (1) a set of recommendations to policy makers with guidance on moving up in the selected value chains, and (2) broader insights into binding constraints that impede the country's insertion in manufacturing chains in general. Moreover, the results of these studies will be used by government in further identifying potential for the Philippines to expand its position in global manufacturing production networks.

The Global Value Chain (GVC) Framework

Over the last decades, the global production landscape has gone through significant changes with global value chains or GVCs emerging as a dominant feature of international trade. The GVC is the full range of activities that firms, workers and supporting institutions around the world carry out to bring a product from conception through production, and end use. This entails the process of producing goods from raw materials to finished products being carried out wherever the necessary skills and materials are available at competitive cost and quality. With the emergence of GVCs, goods must now cross borders several times, first as inputs and then as final products. Most products are now actually "Made in the World."

Understanding how GVCs operate is essential for a country such as the Philippines as it seeks to use increased integration in the global economy to promote inclusive development, increase employment, add value to its domestic industries, and further diversify its export basket.

Understanding how GVCs operate is essential for a country such as the Philippines as it seeks to use increased integration in the global economy to promote inclusive development, increase employment, add value to its domestic industries, and further diversify its export basket. Examining the labor inputs, technologies, standards, regulations, products, processes and markets in specific industries and locations provides a holistic view of industries both from the top down and bottom up (Gereffi & Fernandez-Stark, 2011). Moreover, by adding value to production or moving into higher value activities, different actors can increase the benefits derived from participating in these global industries; this is referred to as "economic upgrading" in the GVC literature (Gereffi et al., 2005).

Upgrading depends considerably on how firm strategy leverages local competitive advantages such as qualified labor, presence of suppliers, geographic location and regulatory conditions. Economic upgrading includes six distinct changes in the firm's participation in a production model: (1) *entry into the value chain,* when a new actor begins to participate in the value chain; (2) *product upgrading,* which describes the shift into the production of a higher value product/service; (3) *process upgrading* describes improvements in efficiency in the production systems, such as the incorporation of more sophisticated technology;

(4) *functional upgrading,* describes the movement to higher value stages in the chain that require additional skills; (5) *chain upgrading*, which describes the entry into a new GVC by leveraging the knowledge and skills acquired in the current chain; and, (6) *end market upgrading,* which describes the incursion into new market segments (Gereffi, 2005; Gereffi, Fernandez-Stark, et al., 2011; Humphrey & Schmitz, 2002).

Philippine Foundations for GVC Participation

The country's stable macroeconomic fundamentals, young, highly skilled and widely English speaking population dividend, and improving infrastructure and ease of doing business serve as building blocks for GVC participation. Six key competitiveness factors were identified for the Philippines' participation in manufacturing GVCs. These competitiveness factors relate to trade and investment policies, human capital, development of local firms, business environment, infrastructure & services, as well as coordination within and across industries and with a wide range of public and non-governmental stakeholders.

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Trade

The Philippines trades mostly with its regional partners, including Japan, China/Hong Kong and Singapore (UNComtrade, 2015; UNCTAD, 2016b), partly a result of strong regional trade agreements and its close economic links with its Southeast Asian neighbors. Its membership in the Association of Southeast Asian Nations (ASEAN) has sustained open trade links, opened access to new end markets, and afforded the Philippines a greater degree of political influence on the regional stage (IHS Connect, 2016).

In 2014, total exports reached US$87 billion with services exports accounting for approximately 28.5% or roughly US$25 billion, growing four times since 2005 (UNCTAD, 2016a). During the same period, goods exports grew by less than 100%, from US$37 billion to US$62 billion. Today, services represent as much as half of goods exports.

Investments

The country continues to generate considerable foreign direct investments, which have increased by approximately five times since 2010. This growth is driven to a large extent by services and manufacturing investments, the latter with the resurgence of the manufacturing industry and its operations.

A considerable share of foreign and domestic investments related to GVC participation in the manufacturing sector is located in Philippine Economic Zone Authority (PEZA)-managed export processing zones (EPZs). EPZs provide incentives to locators, which include income tax holidays, tax and duty free imports, reduced bureaucracy - such as simplified import and export procedures, and access to special non-immigrant visas for employees. PEZA has been fully supportive of Philippine GVC participation.

Human Capital

The Philippine labor force is considered by firms as one of the country's most important assets. English speaking workers with strong soft skills are deemed an advantage in each of the five industries. Foreign investors have observed that Filipinos are committed to work, responsible and loyal (Field Research, 2016).

In addition, the country is in the cusp of a demographic sweet spot - a period during which youth accounts for an increasing larger proportion of the population. This is significant because the aging population in many developed countries is encouraging them to look toward countries with young populations as destinations for investments or sources of manpower.

Infrastructure, Energy, & Ease of Doing Business
Participation and upgrading in manufacturing GVCs also require an environment conducive to trade and investment. In particular, transportation and energy infrastructure are critical factors for GVC engagement in production, while a stable and sound business environment helps reduce the overall cost of participation and enables countries to be more competitive. The Philippines has made efforts to improve these areas. However, they remain constraining factors for GVC growth.

Constraining Factors and Government Response

In the short to medium term, progress has been increasingly evident, particularly for ease of doing business and the country's intellectual property regime.

Government efforts in recent years have made broad improvements in addressing factors that hamper GVC participation, although many of these programs are projected to bear fruit in the long term. In the short to medium term, progress has been increasingly evident, particularly for ease of doing business and the country's intellectual property regime.

Infrastructure and related services
Table 1 illustrates the Philippines ranking very poorly in the majority of the infrastructure indicators compared to neighboring countries. This is a serious challenge for investors seeking to establish production facilities in the country (IHS Connect, 2016), particularly as alternative destinations in the region seek to further increase connectivity (UNCTAD, 2016a). It is estimated that the economic cost of congestion in Metro Manila alone is about US$27 billion per year (JICA, 2014; KPMG, 2015).

Table 1. General Infrastructure Rankings in ASEAN

Categories (Ranks out of 140)	Philippines	China	Indonesia	Malaysia	Thailand	Vietnam
Infrastructure (2nd Pillar Rank)	90	39	62	24	44	76
Overall (transport, comm., energy)	106	51	81	16	71	99
Roads	97	42	80	15	51	93
Railroads	84	16	43	13	78	48
Ports	103	50	82	16	52	76
Air Transport	98	51	66	21	38	75
Availability of Airline Seats	27	2	15	22	14	30
Electricity Supply	89	53	86	36	56	87
Mobile Phone Subscriptions	76	107	49	24	31	28
Fixed Telephone Lines	108	63	80	73	88	100

Source: World Economic Forum (2016a); includes all nine areas related to infrastructure (index numbers 2.01-2.09)

In response to infrastructure constraints, the government has increased infrastructure spending from roughly US$4.4 billion in 2011 to more than US$8.5 billion in 2014 with a number of new public and private partnerships projects (World Economic Forum, 2014). The government has developed a "Dream Plan" for Metro Manila with a total investment of US$65 billion in infrastructure to be completed by 2030, focusing on railways, roads, airports and seaports.

Energy
Energy deficiencies remain a limiting factor for growth in the manufacturing sector in the near term, as the sector depends heavily on power inputs. Electricity prices are amongst the highest in Asia (Enerdata, 2014). In the recent past, tight and, at times,

unreliable supply has required many new investors to build their own power plants or invest in back-up generators, increasing the cost of operating in the country and eroding the advantages of cheaper labor (Field Research, 2016).

Intellectual Property (IP) Protection

The Philippines has made impressive gains in improving its Intellectual Property (IP) protection framework in recent years. In 2015, it was ranked 71st out of 140 countries by the World Economic Forum's Global Competitiveness Ranking for IP protection, up some 29 spots since 2011 (World Economic Forum, 2016b).

However, the country still needs to overcome its poor reputation in this area before foreign companies will be willing to locate sensitive technologies and product operations within its borders. In addition, local tax regimes are not conducive to promoting R&D relationships between firms and universities as income from these are highly taxed (USAID, 2014).

General Business Environment

The Philippines has also made progress in improving its general business environment. Government has aggressively pursued measures and policies to facilitate ease of doing business, making significant progress to reduce the process from 16 steps and 29 days in 2015, down to 6 steps and 8 days in 2016, and further to 3 steps and 3 days. However, problems remain particularly with respect to high levels of bureaucracy and corruption. The country is ranked 95th out of 167 in Transparency International's Corruption Perception Index (Transparency International, 2015). In 2016, the World Bank Doing Business report ranked the country 103 out of 189 economies, up from 144 in 2010 (World Bank, 2016a). Some of the major problems highlighted are: difficulties in starting a business, enforcement of contracts, high levels of corruption, poor infrastructure, tax regulations, and government bureaucracy (Field Research, 2016; The World Bank, 2016a).

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Key Stakeholders Driving Participation in Global Economy

A key outcome of the various DTI-BOI initiatives is government's productive engagement with the private sector in matters relating to trade policy reforms and trade engagements/ agreements. Through the course of policy formulation and proposed trade agreements, the DTI has consistently consulted with its counterparts and stakeholders to ensure that all ideas, observations and insights are surfaced and considered. This exercise ensures sound and balanced policies and trade agreements.

In general, the private sector has assumed a proactive stance vis-à-vis industry development, and the new coordination mechanisms have opened up more channels of communication between industry players and the government. Table 2 illustrates private sector participation in working towards Philippine integration in Manufacturing GVCs.

Table 2. Key Stakeholders in Driving Participation in the Global Economy

Organization	Role in Manufacturing GVCs
Department of Trade and Industry (DTI)	Tasked with coordinating with the private sector to grow the manufacturing sector in the country; launched the Roadmaps Initiative in 2012.
DTI-Board of Investments (BOI)	The Board of Investments reviews and approves applications for investment incentives for the industry. Coordinating agency of technical working groups to overcome industry-binding constraints.
Industrial Development Council (IDC)	Initially established in 1996, the IDC was re-convened in April and October 2014. The council is responsible for inter-departmental coordination for industry growth

Philippine Economic Zone Authority (PEZA)	PEZA serves a dual role, managing both the granting of EPZ incentives across the country, as well as directly engaging in the promotion of FDI in the country. The organization provides a one-stop-shop for all issues regarding investments and exports. PEZA's leadership under Dr. Lilia De Lima has provided important continuity to the investment regime in the country.
Commission on Higher Education (CHED)	CHED is responsible for overseeing higher education in the country. Responsibilities include formulation of policy and programming such as foreign scholarships and training and accreditation of tertiary educational institutions.
Technical Education and Skills Development (TESDA)	TESDA is responsible for technical and vocational training, both offering courses and overseeing other technical institutions in the country.
Philippine Chamber of Commerce and Industry (PCCI)	The Chamber has led the private sector response to the manufacturing roadmap initiatives.

Source: Authors.

Broad Policy Recommendations to upgrade in GVCs

To further drive growth and increase integration in GVCs, below are broad policy recommendations that the Philippines may consider to support increased integration in the manufacturing GVCs:

To further develop the country's large pool of workers, the focus should be on increasing specialized skills while anticipating skills requirements for future upgrading trajectories in collaboration with key stakeholders.

Industry Institutionalization
While the DTI-BOI, successfully fostered dialogue among industry stakeholders, the main focus of the recommendations is to expand stakeholder engagement to include associations from subsectors, which were absent in the roadmap exercise. A comprehensive approach is further recommended with the enhancement of coordination among stakeholders to include the establishment of Industry Councils and designation of industry or policy champions who will work alongside government in the long term.

Foreign Direct Investments
A proactive FDI strategy is needed, which will target foreign companies in key niche areas where the Philippines could potentially compete globally. Incentives should attract companies in industry upgrading and cover tax benefits while leveraging on the country's human capital and supplier development. In addition, conditions must be established to ensure that positive spillovers can be absorbed by the local economy. This requires a clear set of criteria to attract foreign firms based on the strategic industry plan and prioritize recruitment of investments in high potential areas. Moreover, it is recommended to develop a simple and clear manual that contains information on the conditions and benefits for foreign investors, government priorities for development, and a menu of options offered by PEZA and DTI-BOI.

Human Capital Development
To further develop the country's large pool of workers, the focus should be on increasing specialized skills while anticipating skills requirements for future upgrading trajectories in collaboration with key stakeholders. It is recommended to establish and maintain an online national information system about needed skills, salaries, key skills gaps or other relevant information regarding workforce development, which can complement existing Career Guidance Advocacy Program efforts by the Department of Labor and Employment.

Local Firm Development
Increasing the participation of local companies, particularly small- and medium-sized businesses, in export markets should be a key focus for policy makers. The strategy should include special programs to help domestics firms internationalize their activities,

business matching activities, and updated online information to provide potential investors and current companies a list of suppliers from where they can select their choices. Further, policies should support initiatives that encourage coordination and collaboration for local firms to engage with each other through an industry association and through joint ventures with global firms. This will support the economies of scale required to become approved suppliers for global MNCs.

Government's initiatives to improve transportation and energy infrastructure through the "Dream Plan" and other public-private partnership initiatives should produce results in the medium to long term.

Business Environment

Under PEZA's management, export oriented companies expressed satisfaction with the PEZA regime but mentioned that corruption, bureaucracy, and smuggling issues still beset the system. These problems are amplified for domestic firms or those outside of the PEZA regime. Although the government continues to make progress in improving the country's business environment, it will take time to yield substantial results.

Approaches to mitigating these prevailing issues include the development of a coherent and consistent communications strategy with respect to the EPZ regulations; the availability of a comprehensive and updated investors guide that contains all relevant information needed to establish operations in the country with a directory of legal and related services experienced in establishing new operations sites in the country; monitoring the progress of investors throughout the establishment process to help them navigate the particularities of the Philippine system; and, providing assistance to expedite key procedures through 'after-care' services following establishment in the country.

Infrastructure and Related Services

Infrastructure, high domestic shipping costs, port and road congestion, and unreliable and expensive energy supply, are some of the constraints to Philippine participation in GVCs. Government's initiatives to improve transportation and energy infrastructure through the "Dream Plan" and other public-private partnership initiatives should produce results in the medium to long term.

Meantime, interventions to alleviate these constraints focus on soft infrastructure issues, producing results in the short term. These include the implementation of industry clustering around relevant geographic locations, such as the aerospace sector in Clark; offering incentives to attract global logistics firms to establish operations in the country, with traffic from the Port of Manila to Batangas and Subic and offering initiatives such as potential discounts, volume restrictions, tax incentives, and enhance personnel staffing in these ports to process increased trade; harness the potential of information technology by expediting the implementation of the National Single Window and its integration in the ASEAN Single Window, expanding digital and online operations in key agencies - including the Bureau of Customs - and implementing stakeholder IEC and relations programs so firms know how to utilize these IT systems; maintain efforts to reduce domestic shipping costs by expanding amendments to the Cabotage Law, granting all transportation permission to domestically transport products for increased efficiency; and, continue to explore renewable energy sources as a means of supporting a green manufacturing strategy, including geothermal, wind and wave energy.

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This policy brief highlights specific issues and policy implications cited in the study submitted to the Department of Trade and Industry (DTI) by the Duke University Global Value Chains Center with support from the USAID through the Science, Technology, Research and Innovation for Development (STRIDE) Program. The full study may be downloaded at www.industry.gov.ph.

The views and opinions expressed in this policy brief are of the author/s and do not necessarily reflect Philippine government policy.

The DTI Policy Briefs is published by the Department of Trade and Industry – Bureau of Trade and Industrial Policy Research (BTIPR), with email address at BTIPR@dti.gov.ph.