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Initiatives to Boost Investment and Address Policy Issues that would Further Develop the Supply Chain and Enhance the Competitiveness of the Logistics Service Providers in the Philippines

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Abstract: The Philippine economy has been experiencing sustained growth for almost a decade. This growth is spearheaded by a robust local consumption, increasing investment in infrastructure, and growing services and manufacturing sector. Central to this growth is the logistics services sector, sometimes referred as the "glue that binds everything". Currently, several gaps and issues exist affecting the logistics services sector. In order to continue reaping the fruits of recent growth, additional investments and implementation of business-oriented policies and regulations are seen are crucial elements that will address the gaps and issues in affecting the logistics services sector. Carried out in synergy, these investments and policies will push further the country's growth trajectory.

Keywords: Logistics Services, Investment, Policy, Technology, Growth

1. INTRODUCTION

This research presents the initiatives being implemented by the private and public sector to address the issues in the logistics services sector to further develop the supply chain. In particular, this research seeks to strengthen the dynamics of the initiatives from the national government and the private firms engaged in the logistics services, wherein a collaborative working program can be formed between the two stakeholders.

The local economy has been growing. In parallel, the logistics services sector is also growing, and is projected to further grow in the next few years as domestic demand for goods and services is expected to keep on increasing due to continuous rise in the demographics (approximately 1.72% population growth rate). The synergy of initiatives from both the private (with additional investment on logistics facilities and equipment) and public sector (provision of infrastructure and implementation of business-friendly policies and regulations) is seen as the crucial element that will enhance the competitiveness of the logistics service providers.

The need to have a synergy among the private and public sectors and working together to further develop the transport and logistics industry is well-documented. In 2001, the Transport and Communications Bulletin states that governments and industry must work together to effectively manage the changes that will facilitate improved performance.[1] These changes are reflected in improved policies and infrastructure by the government, which in turn

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[1] Governments and Industry Working Together to Implement Modern Logistics. Transport and Communications Bulletin for Asia and the Pacific.

is complemented by additional investments from the private sector. In its 2012 policy study, the Asian Development Bank using China as its sample country enumerated several recommendations that involve both the public and private players in the logistics industry.[2] Some of the recommendations include the development of effective institutional mechanisms for integrated infrastructure development, promote the use of information and communications technology in logistics, and improvement of the policy direction and regulatory framework which strengthens the government's strategic role in sector.

The robust local economy is driven by domestic consumption that has been growing for almost 10% for the past five years, supported by increased government spending on infrastructure with the "Build, Build, Build" Program of the Duterte administration. In support of the growth in the local economy, logistics services practitioners have been ramping up their operations for the timely delivery of goods and services. This resembles a virtuous cycle, wherein the economy and the logistics service sector enable each other to grow further. Barring any unexpected financial crisis or bubble, more and more people will continue to demand the timely delivery of goods, capital and services. This paves the way for the current logistics service practitioners to expand their operations, or introduce new players in the sector.

Another contributing factor in the growth of the economy is the continuous use of technology in the delivery of goods and services. Though still evolving in the Philippines, the use of technology has enabled existing players to utilize available solutions to make their operations more efficient and less costly, resulting to an improved customer service. At the same time, new players have tapped the capabilities of the existing technologies to present alternatives to consumers in sending goods and services. Lastly, available technologies have enabled e-commerce to boom, wherein buyers and sellers can easily and conveniently communicate with each other.

The initiatives from the private and public sector are much needed in the face of the existing gaps and issues present in the transport logistics sector. For example, increasing demand for consumer goods and services should be met with appropriate supply of logistics service providers and facilities. And this supply should always be available in the market, which translates into trucks, planes, ships and other support services that should be readily available for the consumers and firms. Some logistics service providers experienced challenges in increasing and/or modernizing their fleet due to policy, technology and infrastructure constraints. In order to entice the logistics practitioners to effectively invest more, the government, spearheaded by DTI, should proactively do the necessary reforms and assistance to insure the investors that the money and effort they put in the country have favorable returns. Another limiting factor in the growth of the logistics service practitioners and development of the supply chain is the availability of skilled and qualified manpower. To address this, the government can implement a public-private partnership wherein it can partner with several private entities in order to increase the manpower base or further train the existing manpower for the sector. By doing so, it will ensure the quality of manpower is at par with the demands of the market, and if possible, at par with world-class standards.

The flow of the paper is as follows. There will be a brief discussion on the factors of growth of the Philippine economy, after which, a more specific discussion on the logistics service sector's growth and dynamics, and how the sector supports the local economy. In the discussion of the logistics services sector, gaps in investment and policy issues are identified, factors that limit the potential of the sector. The next section will discuss the initiatives that will address the gaps in the sector by enumerating the investment and policies needed in the

[2] Transport Efficiency Through Logistics Development. ADB Policy Study 2012.

sector. Some of these investment and policies are already underway, while some are still in the pipeline.

2. CURRENT AND FUTURE OUTLOOK OF THE PHILIPPINE ECONOMY

The good news is that the global economy is growing albeit at a slower pace. The better news is that ASEAN economies are growing at a faster rate of 5%. The best news is that the Philippine economy (at constant prices) is growing more than 6% annually since 2013. The IMF forecasts the Philippines to be the fastest growing economy in Southeast Asia, and second in the world, next to India. This growth is still largely driven by consumer expenditure, with almost 70% share of the total economy in 2017, followed by government spending with an almost 30% share. In current prices, the local economy is worth almost P 16T in 2017. The local economy has been growing at a steady rate of 6.4% from 2010 to 2017, and grew by 6.2% in 2018. It is mainly driven by growth in services (6.7%) and manufacturing (7.6%), while agriculture had minimal growth (1.4%) in the past seven years. The economy is still dominated by the services sector with 60% share, followed by industry with 30% share, and agriculture with 10% share.

In terms of trade, the economy is still a net importer of goods, with a trade imbalance amounting to almost P 700B in 2017. The logistics services providers supported the movement of goods for both exports and imports, with trade value worth USD 176B. However, a report by Association of Executive Search and Leadership Consultants (AESC)[3] states that with the exception of China and maybe Indonesia, none of the Asian economies are large enough to represent a domestic market sufficient for a company to really go big. These same Asian companies have to become international very quickly, which means that export levels should become as big as it could potentially be. This has been achieved by Thailand, and slowly being achieved by Vietnam. As for the Philippines, this has not been the case, as evidenced by the trade imbalance wherein imports still outweigh the exports. If the local firms are to be pushed and promoted to become more international (translating to more exports), sufficient and cost-effective logistics services is crucial.

Current population is estimated at 106M, where 30% are located in Metro Manila. Population annual growth rate is at 1.72% from 2010 to 2015. Going by the numbers, there would be an additional one million people in the country every year, where approximately 300,000 (30%) are expected to be located in Metro Manila, putting more pressure in the already congested area. Annual unemployment rates are estimated at 6%, 5.6% and 4.7% in 2014, 2015 and 2016, respectively. In relation to this, survey data from 2012-2014 shows the direct total employment for transportation and storage establishments at an average of 154,000. Majority of them (90%) are in establishments with total employment of 20 persons or more. 2017 estimates of employment is pegged at 160,000 for the transport and storage establishments. It should be noted here that current logistics service providers (such as Grab, Lalamove and Transportify) has a fleet of employees (using two-wheel and four-wheel) that are not full-time in status. This could mean that the actual numbers for employment could be higher than the survey estimates.

Annual inflation rates are 1.4%, 1.8% and 3.2% from the years 2015, 2016 and 2017, respectively. For the year 2018, it is expected that inflation rate is way higher than the previous years, with the year starting at 3.4% in January, and with an average of almost 5% for the year, as of September. Average for the year is 5.2%, higher than the target range of 2-4%

[3] The Transformation of Business in Asia: Developing Economies, Technologies, and Talent. Association of Executive Search and Leadership Consultants (AESC) Executive Talent Magazine Volume 13.

by the BSP. In addition to this, oil prices have been increasing since the revised income tax law was passed, and its price has been volatile depending on the market. These factors should be a concern to the shippers as these can affect the prices of transporting goods and services, that in effect, could be passed on to consumers, resulting to higher prices in the local market.

With the initiatives from the trade and industry department, the Philippines is experiencing a manufacturing resurgence. A sector that once was growing slowly, it is now has the highest growth rate. Leading the growth in the manufacturing sectors are food manufacturing, electronics and chemicals. Food manufacturing is expected to grow as a result of increasing population, with its 34% share in the manufacturing gross value added in 2017. Some of the fastest growing sectors in the manufacturing are non-metallic mineral products, petroleum and other fuel products, communication equipment, paper and paper product and fabricated metal products.

Despite the overall growth, much is left to be desired. There still exists a regional imbalance in regional economic performance, as most of the GDP share is still highly concentrated in NCR, CALABARZON and Central Luzon, accounting for 63% of the total economic output. This is driven by the presence of numerous production centers located in the three regions. The same concentration is observed in the services sector, as NCR accounts for 52% of the total share, owing to its highly-urbanized setting. Poverty-stricken regions in Mindanao still have the lowest contribution to GDP (ARMM and CARAGA, with 0.7% and 1.2% share, respectively). In addition to the regional imbalance, high levels of inequality have persisted in the country, as the Gini coefficient, the official measure of income inequality, has declined only minimally (from 0.47 in 2012 to 0.44 in 2015 and 0.40 in 2017), and has consistently been the highest in the region.

Investment generation is crucial to create additional employment, boost income, and reduce poverty. However, the Philippines has been slow in attracting and mobilizing investment. While foreign direct investment (FDI) has improved from $1B in 2010 to $10B in 2017, the country still lags behind its ASEAN neighbors (Indonesia, Vietnam, Malaysia and Thailand). Overall, investment as a proportion of GDP has only averaged around 20% in the last 20 years, and it has improved close to 30% in the years 2016 and 2017.

Lastly, another area of improvement would be in the trade and industry in the country. There are many factors that inhibit the further growth of the local trade and industry, and at its root, the country is characterized by a continuing lack of competitiveness. It is the key for the Philippines to attract additional foreign investment and to perform well in the global trading environment. As it stands, foreign investors bypass Philippines as an investment destination since other neighboring countries have better business climate, offering better sets of incentives, while the policies in place are more business-friendly.

3. CURRENT AND FUTURE OUTLOOK OF THE LOGISTICS SERVICES SECTOR

To support the growing Philippine economy, the logistics services sector, dubbed as the “glue that binds everything”, plays a crucial role in the daily movement of goods and services. The chart below shows the share of Transport and Logistics Sector in relation to the Philippine economy. The logistics services sub-sector falls under the “transportation, communication and storage” sector, and in 2017, has a total of 6% share in the local economy (P 962B) and 10% share in the services sector. By further breaking down the subsector, it is shown that Transport and Storage has a 3.6% in the gross value added (GVA) in the 2017 GDP, while the rest (2.4%) falls under Communication. It is to be noted that the Transport and Storage sub-sector contains both the transport of cargo and passengers.

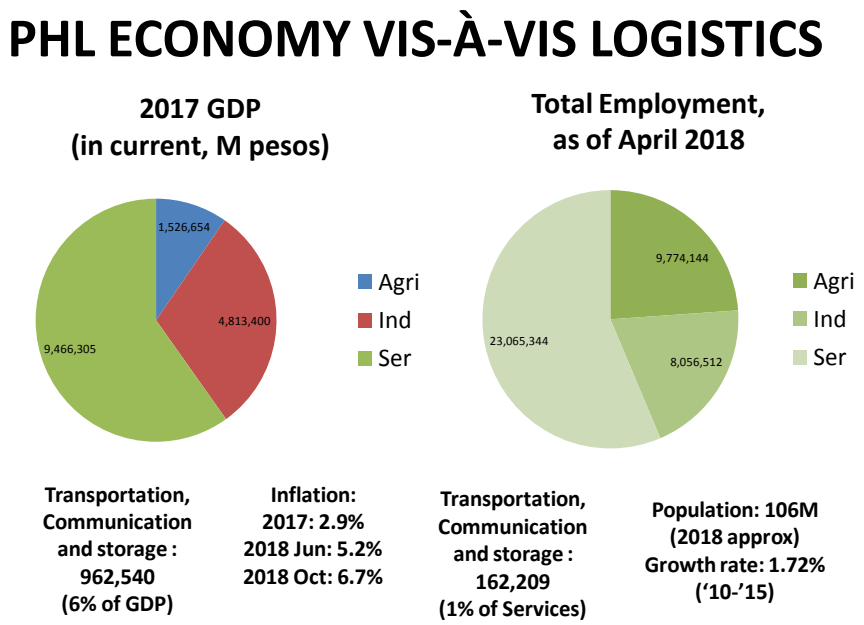
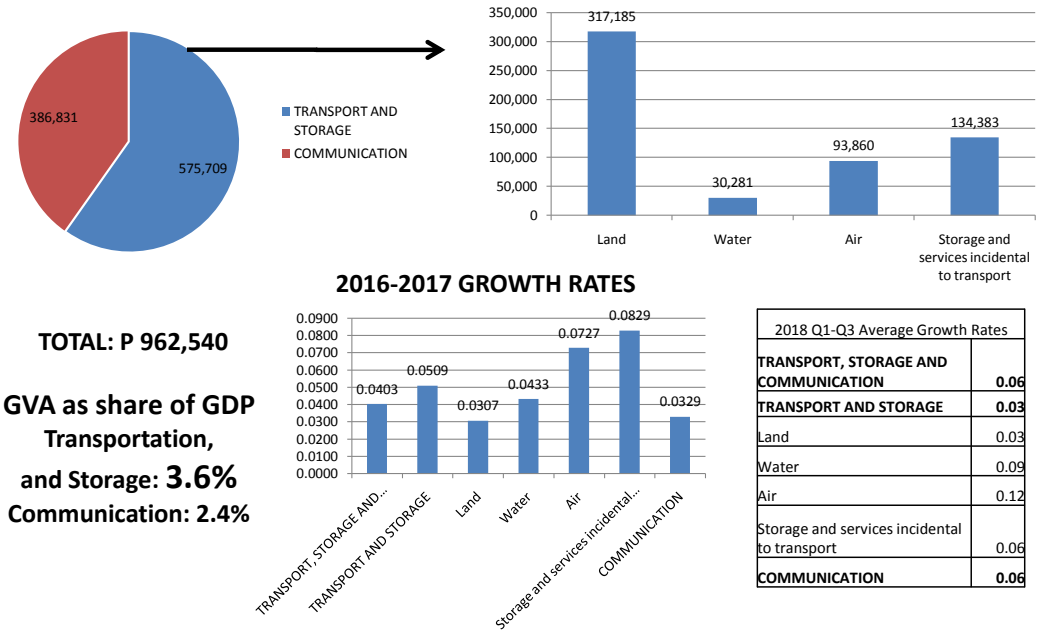


Figure 1 Philippine Economy and the Logistics Services Sector (**S**ource: Philippine Statistics Authority)

The Transport and Storage subsector is a lump of four different modes or elements: land, water, air, and storage and services incidental to transport. The subsector has been enjoying some growth for the past few years. The figure below shows the disaggregated values that contribute to the subsector, wherein land transport dominates in terms of gross value added (GVA), followed by services, air transport, and water. For growth rates, storage and other services experienced the highest growth rate in 2016-2017, followed by air, water and land transport. Overall, the transport and storage subsector experienced a 5% increase in GVA, while communication had a slightly lower growth rate of 3.2%. Looking at the 2018 average year-on-year quarterly growth rates, it can be said that the transport and storage subsector is expected to grow at 3% for the year, wherein the fastest growth is seen with the air transport, followed by water transport, storage and services, and lastly by land transport. It is to be noted that the figures presented are for both cargo and passenger transport.



2018 Q1-Q3 Average Growth Rates	
TRANSPORT, STORAGE AND COMMUNICATION	**0.06**
TRANSPORT AND STORAGE	**0.03**
Land	0.03
Water	0.09
Air	0.12
Storage and services incidental to transport	0.06
COMMUNICATION	**0.06**

Figure 2 Transport, Communication and Storage (GVA, in M Php) and Growth Rates (in percentage) (Sources: Philippine Statistics Authority)

World Bank has been publishing reports comparing the transport and logistics performance across several countries. Based on the 2018 Logistics Performance Index (LPI) report, the country is ranked 60th overall, improving from its previous rank of 71st in 2016, but worse than its 57th rank in 2014. By looking at the different elements considered in the LPI ranking and scoring, the country has better performance in international shipments and tracking/tracing, while it still performs poorly in customs, infrastructure, logistics quality and competence, and timeliness.

Another report reflecting the country's current transport and logistics performance is the Doing Business report, also published by World Bank. The report is based on specific surveys done in several countries. In its 2019 edition, the Philippines is ranked 124th, reflecting a poor climate for doing business locally. The element of the survey very much related to transport and logistics is the topic on trading across borders, wherein the Philippines is ranked 104th. Some of the contributing factors in the low ranking are high costs to export, taking longer time to import (border and documentary compliance), and high costs to import. Unless these shortcomings are properly addressed, trading across borders will continue to be difficult and costly for businesses. Other glaring challenges in the trading across border element are the high road transport rates and warehousing / transloading charges, both of which are way higher compared to our regional neighbors in East Asia and the Pacific.[4] The same goes to the quality of infrastructure, wherein respondents have low quality evaluation of existing infrastructure related to ports, airports, roads, rail and ICT. Very little or none of the respondents believe that the competence and quality of services in the domestic logistics sector are high. And lastly, compared to the 2015 edition of the survey, none of the

[4] https://lpi.worldbank.org/domestic/environment_institutions/2018/C/PHL/R/EAP/I/LMC#chartarea

respondents believe that no improvements or changes in the logistics environment, particularly in the customs clearance procedures, ICT and regulations, while very few believe that changes have occurred in the trade and transport infrastructure, private logistics services, and solicitation of informal payments. Both World Bank reports indicate that the transport and logistics sector in the Philippines still need improvements, most importantly from the government side by issuing the needed policies and infrastructure.

In general terms, the United Nations (UN) refers to logistics as the "*planning, implementing and controlling the efficient and cost-effective flow and storage of raw materials, goods, equipment and personnel from the point of origin until the completion of an activity, in accordance with end-user's requirements*."[5] In other definitions, it is also referred to as the management of the flow of goods, capital and services from a point of origin to a point of destination where the good, capital or service is consumed or used. In a broader sense, logistics is the activity which manages supply chain activities. As mentioned earlier, logistics is referred to as the "glue that binds everything" in the transport of goods, capital and services. Figure 3 below illustrates the linkage that logistics has to the rest of the economy.

Being a "glue that binds" everything puts the logistics service sector in a unique spot in relation to the other sectors of the economy. In relation to tourism, logistics services allow the people to seamlessly go to the different parts of the country, as well as the provision of needed goods and services that will cater to the needs of the tourists. For manufacturing, the concept of just-in-time is very crucial, especially for the high-value goods, and logistics enables firms to function more productively. In the field of agri-business, logistics provides an avenue for farmers and producers to send their goods to the market place, in addition to providing solutions to maintain the quality of goods with the use of warehousing and cold storage facilities. For trade, logistics allows firms, especially small and medium enterprises (SMEs), to import and export goods in cost-effective and timely manners. With the provision of adequate infrastructure, the logistics sector allows both countryside development and regional connectivity possible, widening its reach to more people. The promise of an efficient and economic logistics sector is almost limitless, as long as the gaps and issues are well-addressed.

[5] United Nations Glossary of Customs and Trade Terms

Figure 3: Logistics Sector and the rest of the Economy

Additionally, the effect and reach of logistics to the rest of the economy can be quantified. The table below shows the significance of logistics as a service provider to the economy (or as a *pusher* to economic growth) based on its high forward linkage index (FLI) -- which at 2.70 ranks 10th as a sector above palay, semi-conductor devices and other electronic components, basic iron and steel, basic textiles and telephones, based on the production structure of the entire economy according to the 2006 input-output table from NSCB.

Impact Multipliers	Output from Suppliers per P1 investment[a]	Employment per P1 million investment	Output from Customers per P1 investment[b]	Forward Linkage	
				Index	Rank
LOGISTICS	+2.81	+8	+7.40	2.70	10

a/ Assuming sufficient capacity exists

b/ Assuming sufficient demand exists

(Source of basic data: 2006 Input-Output Table)

The supply chain, on the other hand, refers to the "*activities that encompass the means by which inputs are transformed into outputs, and can sometimes be an iterative process, given that an output of one firm could become an input to another*."[6] Take the example of electronics. A firm in the Philippines based in Laguna could be producing logic boards for a cellular phone that is to be assembled in China. The supply chain covers the activities that follow the movement of inputs and outputs throughout the system. Logistics is the service provided that allows for this movement of goods to occur. Below are some of the activities logistic service providers offer, from the simplest (freight movement), to the more complex (corporate service).

[6] United Nations Glossary of Customs and Trade Terms

Table 1: Freight Service Definitions

TYPE OF SERVICE	DESCRIPTION
Trucking Services	Drayage and long distance truck services for suppliers and customers
Loading / Consolidation	Packing, palletizing, stuffing of cargo into containers or trailers. Cargo consolidation from multiple suppliers. Mostly linked to exports.
Unloading / Deconsolidation	Unpacking, de-palletizing, and de-stuffing of cargo in distribution centers.
Transloading / Crossdocking	Transfer from one cargo unit to another, such as a maritime container into a domestic container (or vice-versa). Crossdocking implies the transfer of truckloads, including changes in the composition of loads of each transport unit with minimal and short duration warehousing.
Warehousing	Standard function protecting the integrity of cargo units (e.g. damage, theft) while waiting to be released to customers.
Bonded Warehousing	Cargo waiting to be released by customs.
Container and Chassis Depot	Empty container storage waiting to be used. Transfer custody of containers between shippers. Consolidation center for containers used by maritime. Chassis pools.
Container and Chassis Maintenance	Container preparation and inspection before usage. Container cleaning and repair. Chassis inspection and repair. Important for the container and chassis location industry.
Equipment Maintenance	Maintenance of vehicles and intermodal equipment.
Cold Chain	Activities maintaining the thermal integrity of cargo. Includes temperature-controlled warehousing but also preparation, transformation and inspection.
Recycling	"Green logistics" activities. Returns of defective or discarded merchandises. Recycling of components used in freight distribution, such as pallets and boxes

The definitions of logistics have evolved over time as service providers and companies have continued to push the boundaries on what services they offer. The Council of Supply Chain Management Practitioners (CSCMP) offers some delineation among the various levels of logistics.

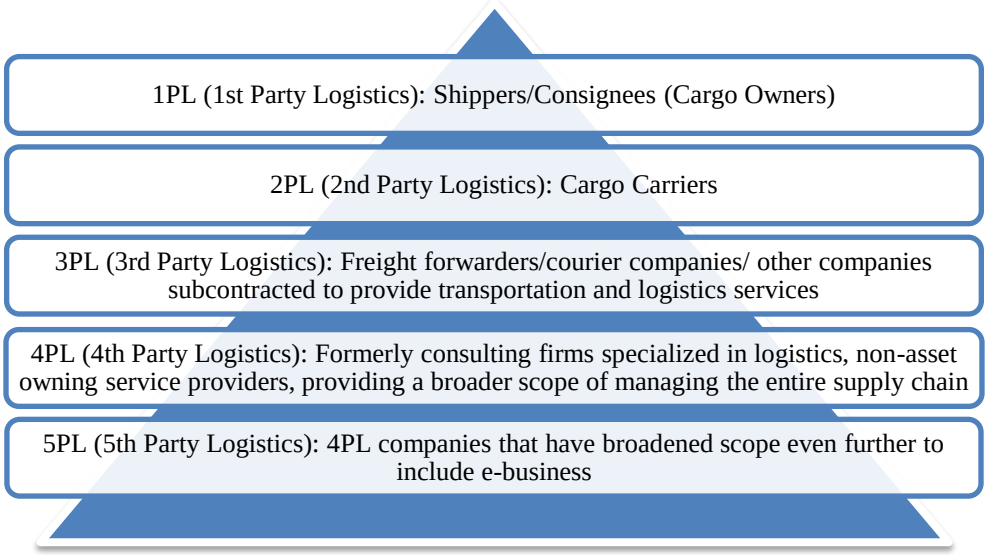


Figure 4: Levels of Supply Chain Service Provision
(Source: Council of Supply Chain Management Practitioners)

The level of sophistication of logistics service providers has shown tremendous growth over the past few years, especially with the focus now being placed on how logistics plays a crucial role in the global production networks. Now, more than ever, we find companies with global reach positioning different parts of the production process across key production sites across the global, leveraging on country specific competitive advantages to drive down the costs of production and maximize profits. Some value-added services include management of warranty support programs, return and repair as well as global logistics services. Some companies offer higher value-added as evidenced in the cases of 3PL and 4PL firms. The former specialize in integrated logistics services where they address logistics needs of their clients by integrating transportation, warehousing, inventory control, order processing, customs brokerage and other logistics activities in a comprehensive and seamless supply chain management system. Firms in the 3PL sub-sector provide a designed set of customized logistics services, tailored to the exact needs and specifications of their clients. The 4PL firms on the other hand go one step further than 3PL and involve the integration of all companies involved in the supply chain. This guarantees that planning, steering and controlling of all logistics procedures will be done by a single service provider with a long-term strategic objective.

For the purposes of this research, the logistics services sector will encompass all service level provision from 2PL onward, noting however that the majority of logistics practitioners in the country cover predominantly 2PL and 3PL service. The table below shows the estimates of Armstrong and Associates on the 3PL sector in the region. The estimate given for the Philippine logistics market (13%) as a share of GDP appears to be almost four times than what is provided in the national accounts (3.6%). This could be due to estimates by Armstrong including other form of logistics that the national accounts didn't include in the computation. Another point of difference would be that Armstrong estimates included the international shipping lines and 3PL/4PL companies in their computations, which are not included in the PSA estimates. Nevertheless, both estimates do not undermine the fact that logistics is an important element in the economy.

Table 2: Logistics Regional Revenue

Region (in billions USD)	Country	2017 GDP	Share of Logistics (GDP %)	2017 Logistics Cost	3PL Revenue share to cost	2017 3PL Revenue
Asia Pacific	Australia	1,379.5	8.6%	118.6	10.3%	12.2
	China	12,014.6	14.5%	1,742.1	10.3%	180.3
	Hong Kong	341.7	8.5%	29.0	11.0%	3.2
	India	2,611.0	13.0%	339.1	7.1%	24.1
	Indonesia	1,015.4	23.0%	233.5	7.4%	17.3
	Japan	4,872.1	8.5%	414.1	10.6%	43.9
	Malaysia	314.5	13.0%	40.9	7.1%	2.9
	Philippines	313.4	13.0%	40.7	7.1%	2.9
	Singapore	323.9	8.5%	27.5	11.6%	3.2
	South Korea	1,538.0	9.0%	138.3	11.2%	15.5
	Taiwan	579.3	9.0%	52.3	11.1%	5.8
	Thailand	455.4	15.0%	68.3	7.5%	5.1
	Vietnam	220.4	20.0%	44.1	7.7%	3.4
	Others[7]	232.4	10.7%	24.9	7.3%	1.8
Region		26,776.4	12.7%	3,406.6	9.7%	329.3

(Source: Armstrong and Associates, Inc. Global 3PL Market Size Estimates)

[7]Others include Bangladesh, Burma, Cambodia, Laos, and Nepal

Based on desk research, industry interviews, and forums, there were several gaps and issues that were identified in relation to the logistics services sector. These gaps and issues can be categorized into two sets: investment and policies/regulations. For investment, several gaps were identified from the private sector, one of which is the provision of additional infrastructure that will benefit the logistics services sector. On the part of the government, this includes additional roads, bridges, expressways, seaports, and airports. In addition to this, there is the need to upgrade the existing capacity and modernize the facilities in several ports and airports. These investments will enable the logistics services practitioners to more efficiently provide services to more customers, as well as expand the scope of their services. The Build, Build, Build Program of the government is a very good way of addressing the investment gap. On the part of the logistics practitioners, this entails increasing their capacity, which means increasing and modernizing their equipments and system.

As regards policy and regulations, some of the limiting factors for logistics practitioners are those that seem to be anti-business. One of which is the presence of conflicted regulators, wherein the same function of development and regulation are bundled in the same agency or bureau, which negatively affects the sector because it inadvertently breeds rent-seeking behavior on the part of the regulators. Another limiting factor is the lack of training programs that promote manpower development. Some of the firms are ready for expansion, with additional equipment purchased, but their problem is the lack of available and skilled manpower than can operate their equipment.

These gaps and issues pose a threat on the continuous growth of the logistics services sector. At the same time, if addressed correctly, they also present opportunities that can further grow and development the sector.

4. INVESTMENT AND POLICY NEEDS OF THE LOGISTICS SERVICES SECTOR

This section will identify possible solutions on the gaps identified in the previous section in relation to the logistics services sector. These solutions come in the form of initiatives by the government to address them, which comes as either investment or policies. Some of these investment and policies are already underway or being implemented, while some are still in the pipeline. Other sets of solutions come in the form of initiatives by the private sector that addresses the investment gap in the logistics services sector.

4.1 Transport Logistics Facilities

The previous sector enumerated the lack of capacities of several facilities that hamper the efficient delivery of goods and services. Worse, the current lack of capacity even causes prices to get higher. Based on industry interviews and estimates, the illustration below shows the additional investment needed to address the current demand in the logistics services.

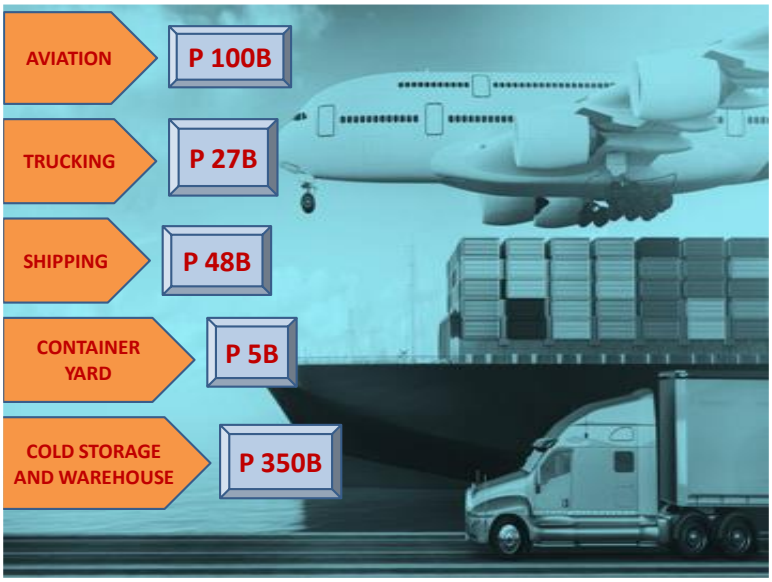


Figure 5: Private Sector Investment for the Next Five Years (Source: Author's estimates)[8]

The investment in the aviation amounting to P 100B is aimed to address the purchase of new airplanes that will be used to new and existing routes for the transport of passenger and especially, cargo. This should be complemented by the expansion of some strategic airports in the country for cargo air freight, as will be discussed in the next part. As for trucking, the P 27B investment is to be used in the modernization of the existing fleet of the trucking companies. It is estimated that 85% of the existing fleet are already 25 years of older, and these are eligible to be replaced with new trucks. In relation to this, modernization is also the theme for the P 488B investment in the shipping industry. This could still go high, as Maritime Industry Authority (MARINA) is embarking on a 10-year shipbuilding, ship repair and ship breaking programs. The program is supported by the Shipyard Association of the Philippines (ShAP), having 97 members (out of 118 total shipyards in the country) in 2016. The program is also in support of MARINA's Domestic Shipping Service (DSS) ship retirement and replacement program. This in turn promotes the modernization of the ships, leading to safer travels for goods and people.

The P 5B investment in the container yard is aimed at increasing the existing capacity to 100,000 TEUs in order to cope up with the demand. As mentioned in the previous chapter, the current capacity of existing container yards are way below the required by the market. By increasing the capacity of container yards, placement of empties will be easier for the truckers and shippers, as they would have more options on where to park the empty containers. Currently, some of the empty containers are being parked at the port area, eating up space that could have been used for laden containers. The challenge here is on identifying what specific locations should new container yards should be established. Some new container yards are being put up in Bulacan and Cavite, but some shippers have reservations to this as these places, especially Bulacan, are farther from the port, which means more costs of bringing and getting the empty containers. Lastly, P 350B investment in the cold storage and warehousing will complement the other investment from the private sector as these new facilities are to be used for the increasing volume of imports and local production that needs refrigeration and distribution. For imports, the Cold Chain Association of the Philippines (CCAP) and Philippine Association of Meat Processors, Inc. (PAMPI) project that there would be approximately 745,000 metric tons of imported raw meat and 850,000 metric tons of finished

[8] Based on previous researches, industry interviews, and available data from logistics practitioners' associations

products in 2018, and most of these require refrigeration, especially during its distribution. In Mindanao, the Mindanao Development Authority (MINDA) also expects an increase in the production of its fisheries produce, which also needs refrigeration.

4.2 Hard Transport Infrastructure

Hard infrastructure, on government's side, is also needed to complement the investment poured in by the private sector discussed briefly above. Most of these infrastructures are anchored on the "Build, Build, Build" Program of the Duterte administration. For the airports, to support increasing air cargo shipments, it is necessary to expand or construct new facilities that will handle these types of cargoes in the airports, especially the principal class airports. Sea cargo has also been increasing, albeit at a lesser degree compared to the air cargoes. Nevertheless, in order to cope up with the increase in sea cargo, a lot of ports need expansion and modernization in order to effectively service the volume of trade in the country, both domestic and foreign. For land transport, the government can speed up the construction and increase the quality of the roads and bridges being rehabilitated or constructed around the country. Aside from this, the logistics services sector will also benefit from the upgrading of new and existing roads, development of more bypass roads and expressways that can be used to speed up the delivery of goods and services. Lastly, development of rail networks that can be used for cargo freight should also be prioritized by the government as this could serve as an alternative to send goods and services in a cheaper manner. All these hard infrastructure projects, estimated at P 6T, could greatly contribute to the development of a more efficient and competitive logistics services sector that businesses, especially MSMEs, can utilize for the transport of their goods and services. For the year 2019, it is very welcome that a good percentage of the budget (24%) is to be used to finance and intensify the infrastructure projects around the country.

4.3 Policy and Regulations

There are several avenues that improved policies and regulations can affect the efficiency and cost of logistics services. First, is on manpower development. Industry practitioners are currently saying that there is a shortage in the available of highly qualified manpower. Aside from this, some government agencies involved in the regulation of the logistics sector (like MMDA), admit that they also need more highly trained manpower in order to enforce the laws on the road. For this, it is imperative that there should be a program to be developed by TESDA/DTI in partnership with private sector that will ensure that there would be a pool of highly-trained and highly-qualified manpower that both the public and private sector can utilize.

Another challenge that has been hounding the logistics services sector is the increasing costs. These costs, though sometimes insignificant to the logistics service practitioners since it will be passed-on to the shippers, is very significant to the end-users. At the same time, increasing shipping rates would make most businesses, especially exporters, less competitive. Current issues include potentially avoidable international shipping costs and other charges. There were multiple associations and organizations that have been discussing and looking for solutions in order to lower these costs. The long term solution for this is to introduce more competition to the current players that will give shippers alternatives that can offer competitive transport costs. Amending the Public Service Act (PSA) provides an avenue for reforms in the transport and logistics, as it will open up the sector to more players, especially the ones coming from abroad, promoting more competition leading to lower costs of logistics

services. Another solution being recommended is to establish a government office that would be tasked to monitor and enforce transparency in sea cost carriage, charges and other associated fees of shipping lines and freight forwarders engaged in international trade. As of this writing, no government agency or bureau exists to carry out that task.

For the trucking sector, it is agreed that there is the need to assess the reasons behind why the anti-overloading law is not being enforced. Initially, the law was passed in order to preserve the roads and bridges from the wear and tear of daily traffic, especially from vehicles used to mass transport goods such as trucks. But its implementation has been suspended several times, and nobody really knows why the implementing agency, DPWH, has been suspending. The parties involved, especially the truckers and importers/exporters, should carry out an empirical and technical assessment of the regulation in order to determine the bases of why the implementation of the anti-overloading should push through or not.

Some agencies in government involved in the transport and logistics sector have conflicting functions. These agencies have functions that get mixed up, especially on its role on development and regulation. These conflicted agencies are prone to becoming inefficient, and sometimes introduce policies that increase the cost of transport, thereby affecting the competitiveness of the local businesses. In this light, there is the need to amend these conflicted agencies' charters in order to separate regulation and developmental function from a single government entity.

Lastly, for policymakers, it is important that the right and exact data and information are observed in order to recommend the right and fit policies. For the logistics services sector, unlike the other sectors, has a paucity of available data. This makes it hard for several policymakers to come up with programs, regulations and policies that will effectively lower the cost, fasten the delivery and efficiently transport the goods and services from one point to another.

4.4 Innovation and Information Technology

The technology available right now has been increasing in terms of its usage among the logistics services practitioners. More and more logistics service providers are using applications or portals that provide easier access to information to the delivery of goods and services. One of the first uses of technology in the sector is in the tracking of shipments, where you can monitor in real-time the current location and status of the shipment. What followed was the introduction of applications and portals where you can book your shipments at the press of a button or single click. Currently, the growth of e-commerce in the country, such as Shopee, Lazada, Zalora, Metrodeal and E-bay Philippines, only emphasizes the importance of "last mile" services. Several new entrants have sprouted that caters this kind of service, servicing the needs of the sellers in bringing the goods and services to the buyers, bringing convenience and swift delivery at the hands of the both players. Some of the existing and new companies are Lalamove, Grab, Honestbee, Transportify, Mober and Entrego. It is estimated that the total number of fleet that they utilize from their partners would be 100,000, counting both the two-wheel motorcycles, four wheel cars/vans, and several larger six- and eight-wheelers. There are current initiatives to introduce more automation in the sector, such as the use of blockchain, integrated shipment monitoring, and artificial intelligence for analytics.

5. CONCLUSION

In summary, the table below shows the amount of investment and total employment to be generated in the next five years. For investment, a total of P 6.5T is needed to support the continuous development of the logistics services sector to meet the current market demand. Of the total, P 530B is to be invested by the private sector through the modernization of its existing fleet, increasing capacities of its facilities, and buying of new units for trucks, planes and ships. For the government, a total of P 6T is expected to be poured in the next five years in order to construct the necessary hard infrastructure that will support the operations of the logistics service practitioners. Lastly, the total employment needed is forecasted to be at more than 200,000 for full time employees for the logistics services providers, and an additional 100,000 for part-time employees, to support the operations of the companies providing logistics services, namely: cargo handlers, storage and warehouses, freight transport agency services, and customs brokerage services. Aside from these, the Build BuildBuild Program of the administration also needs additional manpower in order to fulfill the projects that are laid out in the coming years until 2022.

	Investment	**Employment**
Transport Logistics Facilities	**~P530 B**	**~200,000**
Hard Transport Infrastructure (BBB Program)	**~P6 T**	**~20,000**
TOTAL	**~P6.5 T**	**~220,000**

To conclude, as mentioned in the previous chapter, reforms in the services related to trade are welcome as better services will stimulate further growth by promoting access to the information, skills, technology, funding and markets that are needed. This will eventually enable businesses, especially SMEs, to succeed in an increasingly digital global economy.

Based in the OECD study that tackles Services Trade Restrictiveness Indices (STRI), services trade policies and the global economy show how reforming policies and regulations relating to the trade in the services can strengthen global value chains, boost economic performance, and bring important benefits for consumers as well as producers worldwide. In the case of the Philippines, improved logistics services will allow firms to be globally competitive. On the other hand, this will also improve the investment climate in the country, owing to faster and cheaper modes of transporting goods, resulting to increased manufacturing competitiveness that relies on access to state-of-the-art services suppliers offering the best prices. The improved competitiveness also underlines the links between favorable and transparent regulatory environments.

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