REVIEWING THE PHILIPPINES' TOP INDUSTRIES:

SKILLED LABOR FORCE MADE THE COUNTRY BEST FOR INVESTMENTS

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LABOR MARKET INTELLIGENCE REPORT

Technical Education and Skills Development Authority

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EXECUTIVE SUMMARY

- In early 2018, an American news and media company proclaimed the Philippines as the Best Country to Invest In, prevailing over other, more-developed countries such as Poland and Singapore. The survey that resulted in this proclamation was based on a complex criteria, which included dozens of attributes and more than 20,000 respondents, lending it some weight.

  Comparing the Philippines with the rest of the World:

  - The aforementioned survey is part of a larger "Best Country in the World" survey, the Philippines only ranked #49 in this regard.
  - While other countries are lauded for their large, developed economies, the Philippines was praised for of its skilled and relatively young population (translating to more workers for employers to hire from), its proficiency in English compared to the rest of Asia, and its fast-growing economy.

- To put it succinctly, the Philippines was considered the best country to invest in due to its low-cost, but highly-skilled labor force, as well as its growing Services and Manufacturing Sectors. For years, these two Sectors have been the focus of foreign investments into the country. However, the present Administration's "Build, Build, Build" Program has started to spur growth in the Construction Sector as well.

  Overview of Top Industries in the Philippines for Investments:

  - The Services Sector received the most number of foreign direct investments in 2016 and 2017, and is expected to continue to do so. It is also seen as the primary driver of growth in the country's economy.
  - Specific subsectors that seem more lucrative for investments are Real Estate Activities, Administration Support, and Information Technology-Business Process Outsourcing.
  - The Construction Sector does not receive as many foreign investments, but it is nonetheless expected to grow because of the "Build, Build, Build" Program.
  - The Manufacturing Sector's growth is due to increasing job generation and the rise in demand for manufactured products.
  - Growth in other Sectors such as agriculture, fisheries, and mining is generally stifled due to the relatively lower number of investments they are receiving.
  - The National Capital Region is at the center for growth in these Sectors, followed by Region IV-A and Region III.

Where TESDA fits in:

- TESDA can focus on training and educating workers in the aforementioned Sectors to help with the country meet with the expected demand.
- For the Services Sector, special focus may be given to the Real Estate Activities, and Administration Support subsectors because they are the biggest recipients of foreign investments in 2018.
- However, the Business Process Outsourcing subsector may also be given attention because the Philippines has one of the fastest growing call center industries in the world. In addition, foreign investments to Asia are primarily focused in this industry anyway and the country may expect an increase of investments in this industry in the future.
- Construction might need some special focus because the Sector has not produced enough graduates/prospective workers who can meet the demands of the "Build Build Build" Program. At least a million workers are needed to meet the demands of the Program, according to the National Economic and Development Authority.

I. Background

In early 2018, American news company "US News & World Report" released its annual "Best Countries" list, a survey that evaluates 80 participating countries to (hopefully) encourage more people to travel or invest in them. Historically, the Philippines rarely made the top ranks of this list or any of its sub-categories. As such, it came as a surprise when the country was lauded as "The Best Country to Invest In" for 2018, overshadowing the likes of Indonesia, Poland, Malaysia, and Singapore.

The 2018 Best Countries list was based on a complex criteria that included 65 attributes and 21,000 inputs from respondents across the world, about 6,000 of the latter came from business decision-makers. Thus, the results of this survey should not be taken lightly, considering the credibility of its sources. The "Best Country to Invest In" ranking mentioned the Philippines' low-cost, but highly-skilled labor force as a key factor for its gains. As the agency responsible for training and capacitating the country's workers, the Technical Education and Skills Development Authority (TESDA) must capitalize on this trend by reviewing its training programs to better suit the needs of investors, both foreign (particularly in Southeast Asia) and domestic. These efforts are likely to bear fruit, because they will help prepare the country's labor force to adapt to emerging industry trends (such as the use of artificial intelligence in Manufacturing) and to drastic changes in well-developed countries.

For now, focus needs to be shifted at home. Thus, this Labor Market Industry Report seeks to shed light on the growth of the country's top industries due to foreign investments. This Report also seeks to identify possible programs and interventions that TESDA can conduct to support the country's growing, skilled workforce relative hereto.

II. Comparing the Philippines with the World

The criteria for US News & World Report's "Best Countries" list was developed by The Wharton School of the University of Pennsylvania and the Y&R BAV Group, a brand marketing and consultancy firm. The criteria consisted of nine (9) categories, each given a different weight for an overall score of 100%. These categories are[1]: 'Adventure' (3.24%), 'Citizenship' (16.95%), 'Cultural Influence' (12.93%), 'Entrepreneurship' (17.42%), 'Heritage' (3.17%), 'Movers' (10.00%), 'Open for Business' (11.99%), 'Power' (7.42%), and 'Quality of Life' (16.89%). Out of the 80 countries included in the survey, Switzerland gained the #1 spot in the 2018 rendition of the survey, followed by Canada, Germany, the United Kingdom, and Japan. The Philippines ranked #49, with scores listed in Figure 1.

[1]'Adventure' refers to a country's appeal as a fun vacation destination; 'Citizenship' refers to its respect to individual rights; 'Cultural influence' is its cultural impact to the rest of the world; 'Entrepreneurship' is the country's connectedness with the rest of the world in terms of doing business; 'Heritage' is the country's rich history; 'Movers' is the country's overall uniqueness and capacity to set trends; 'Open for business' is the ease of doing business and establishing new businesses in the country; 'Power' is the country's overall political, economic; and military power; 'Quality of life' is the overall living standards in the country. (https://www.usnews.com/news/best-countries/articles/methodology)

Fig. 1 **The Philippines' Scores in US News & World Report's 2018 "Best Countries" List**

Source: US News & World Report

The "Best Country to Invest In" survey, meanwhile, was derived from this main survey, using a different criteria consisting of eight (8) equally-weighted attributes. These attributes could be scored with a maximum value of 10.0, which were themselves derived from the sub-categories of the main survey. The Philippines scored 8.0 in 'Corrupt', 0.9 in 'Dynamic', 0.3 in 'Economically stable', 1.4 in 'Entrepreneurial', 1.8 in 'Favorable tax environment', 0.8 in 'Innovative', 2.1 'Skilled labor force', and 0.6 in 'Technological expertise'. The Philippines scored #1, followed by Indonesia, Poland, Malaysia, and Singapore.

US News & World Report explained that the Philippines gained the top spot due to the influx of FDIs into the country, despite the overall decline of FDIs coming into the region. Many of these investments are from economic powerhouses such as China who look to the Philippines as a source of low-cost, but highly-skilled labor, which was corroborated by the aforementioned UNCTAD report. The "Best Countries to Invest In" survey also mentioned that this success is quite notable because, generally-speaking, the Philippines receives fewer FDIs compared to other Asian countries due to various factors, such as frequent natural disasters, heavy business taxes, and a (relatively) unstable political climate.

Even more amazing is the context given the Association of Southeast Asian Nations (ASEAN) concurred this information, stating that overall FDI flows to the

ASEAN region have been fallen by 20% in 2016. Developing countries (as a whole) like the Philippines experienced lows of 14%, or around $646 billion from $752 billion worth of investments in 2015. This trend was attributed to a combination of internal factors from member-states, such as the introduction of new tax amnesty programs in Indonesia and repayments of intracompany loans in Singapore, plus divestments caused by the purchase of foreign assets in the said countries.

That said, certain investors remained firm in their belief that the ASEAN region, and therefore the Philippines, is still a solid investment venture. For example, majority of the FDIs received by ASEAN come from the European Union (EU), which grew from $19 billion in 2013 to $30 billion in 2016, unlike the lows previously reported. Within a 16-year period, the EU was responsible for a total of $257 billion, or about 22%, of all FDIs flowing into the ASEAN region- the largest single contributor, followed by Japan and the United States. The overall distribution of EU FDIs had been uneven; while they are mostly more on mining, quarrying, and services, EU FDIs to the ASEAN Services Sector had only been increasing at a steady rate since 2011; growing from 26% between 2005 and 2010, to 59% in 2011 to 2016. These investment flows accumulated to $4.2 billion in 2016 as well. Table 1 gives a more detailed breakdown on FDI flows into ASEAN in 2015 and 2016.

This inclination to invest in Services was also reflected in the Philippines in recent years. Data from Philippine Statistics Authority (PSA) said that during the fourth quarter of 2016, the Administrative and Support Activities subsector received a total of PHP 11.8 billion in FDIs, second only to the *entirety* of the Manufacturing sector, which received PHP 66.8 billion.

The country also has a particularly strong manufacturing scene and a growing information technology (IT) and business process outsourcing (BPO) industry, which cemented the country's position as an economic zone for those subsectors. This significance should not be taken lightly: some 200 IT companies in the Philippines are included in 365 ASEAN economic zones. Many multinational corporations involved in poultry, food processing, automotive, finance, and electronics manufacturing have also started to expand in the country from 2016 to 2017.

Table 1 & 2 2015 and 2016 FDIs into ASEAN, by Country and Industry (in Million US$)

2015	Brunei Darussalam	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam	Total
Agriculture, forestry, and fishing	0.9	-	0.2	0.0	313.6	-	0.0	3,618.6	29.0	163.5	4,125.9
Mining and quarrying	0.3	-	407.3	0.0	429.9	(0.0)	0.9	(36.1)	269.8	17.5	1,089.6
Manufacturing	54.7	3.7	85.3	1.2	955.8	(1.5)	87.1	3,762.6	117.4	1.5	5,072.3
Electricity, gas, steam and air conditioning supply	9.7	-	1.4	0.2	170.4	-	0.3	137.2	26.5	-	345.6
Water supply; sewerage, waste management and remediation activities	0.1	-	0.0	0.0	2.6	-	(0.0)	25.8	0.1	-	28.6
Construction	2.5	-	2.8	0.0	136.3	0.1	(0.1)	144.8	11.6	2.5	301.2
Wholesale and retail trade; repair of motor vehicles and motor cycles	3.3	0.1	(24.0)	0.0	99.3	4.9	(28.2)	912.3	68.5	6.1	1,042.0
Transportation and storage	0.5	0.0	(1.0)	0.0	183.6	0.0	1.1	185.9	51.1	(1.0)	420.4
Accomodation and food service activities	(2.5)	0.0	0.2	0.0	6.9	0.0	0.0	29.4	5.3	2.3	41.7
Information and communication	0.3	(0.0)	(0.9)	(0.1)	180.2	0.0	(0.1)	1,185.0	0.1	43.9	1,408.4
Financial and Insurance activities	(41.3)	39.2	(440.2)	0.0	(368.0)	2.0	723.8	2,306.0	55.3	(9.2)	2,270.4
Real estate activities	9.6	4.1	3.4	0.9	1,432.0	22.4	(20.4)	605.9	15.5	0.5	2,809.6
Professional, scientific and technical activities	(0.5)	0.0	(0.6)	0.0	12.2	0.7	0.4	(45.8)	6.1	0.7	(26.6)
Administrative and support service activities	0.2	-	0.0	0.0	8.8	0.0	0.0	16.9	0.5	0.0	26.4
Education	0.1	-	0.0	0.0	1.3	-	0.0	1.8	2.0	0.0	5.2
Human health and social work activities	0.0	-	0.0	0.0	0.8	-	0.0	20.7	8.7	-	30.3
Arts, entertainment and recreation	0.0	-	0.3	0.0	0.2	-	0.0	(19.1)	0.0	0.1	(18.5)
Other services activities.	0.1	-	15.1	0.0	(70.5)	0.1	53.0	216.0	(3.0)	12.9	244.3
Unspecified	8.3	0.1	0.6	0.0	7.8	0.1	0.0	1,434.7	552.1	119.7	2,123.4
Memorandum											
Unclassified	1.9	-	666.8	-	-	1.9	4.4	-	26.1	47.4	..
Total	**48.2**	**47.3**	**716.8**	**2.3**	**3,503.2**	**30.8**	**822.4**	**14,502.6**	**1,242.8**	**408.6**	**21,340.1**

2016	Brunei Darussalam	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam	Total
Agriculture, forestry, and fishing	0.7	0.0	0.1	0.0	316.3	0.0	0.1	1,380.1	27.3	125.5	1,850.1
Mining and quarrying	(0.2)	0.0	39.6	0.0	287.6	(0.2)	0.1	287.8	545.7	29.3	1,189.8
Manufacturing	111.9	(11.8)	19.4	4.7	(1,002.2)	3.0	49.5	4,840.2	4,157.0	40.5	8,309.3
Electricity, gas, steam and air conditioning supply	0.9	0.0	0.5	0.0	1.3	-	0.2	83.4	15.5	0.0	101.7
Water supply; sewerage, waste management and remediation activities	3.3	0.2	0.2	0.1	14.3	-	0.6	58.2	7.4	0.0	84.3
Construction	4.1	0.2	0.1	0.2	42.3	0.0	3.7	65.3	9.0	1.3	128.5
Wholesale and retail trade; repair of motor vehicles and motor cycles	9.6	0.8	(161.4)	0.6	(130.3)	(0.2)	13.1	816.5	(116.4)	52.0	483.5
Transportation and storage	5.9	0.3	23.5	0.3	171.3	0.0	5.7	100.5	142.5	1.1	450.5
Accomodation and food service activities	(0.3)	0.1	0.2	0.1	8.0	0.0	0.5	157.9	12.0	0.1	178.7
Information and communication	2.5	0.1	(0.3)	0.2	343.8	(0.0)	0.2	169.2	7.5	(44.5)	478.7
Financial and Insurance activities	8.0	0.2	583.6	14.7	3,250.4	34.1	(136.1)	3,955.7	(2,768.6)	(16.1)	4,928.7
Real estate activities	15.3	4.2	4.5	2.3	1,307.9	23.8	(2.5)	774.3	29.1	0.3	2,800.6
Professional, scientific and technical activities	6.8	0.3	(4.7)	0.3	17.8	0.0	1.9	69.1	10.4	(1.4)	100.4
Administrative and support service activities	1.1	0.2	0.1	0.0	6.5	0.0	0.2	36.5	2.6	1.0	48.3
Education	0.4	0.0	0.0	0.0	1.2	-	0.1	12.9	2.1	-	16.8
Human health and social work activities	0.3	0.0	0.0	0.0	1.0	-	0.1	37.7	7.3	-	46.5
Arts, entertainment and recreation	2.2	0.1	0.2	0.1	6.4	-	0.4	(3.8)	4.9	-	10.5
Other services activities.	0.5	0.0	36.1	0.0	(115.2)	0.2	78.0	509.7	111.6	10.6	709.1
Unspecified	16.5	0.5	2.3	0.0	87.5	0.1	0.0	1,817.2	99.6	8.1	2,031.8
Memorandum											
Unclassified	(0.10)	-	531.30	-	-	(7.60)	132.10	-	58.10	73.80	-
Total	**189.3**	**(4.5)**	**1,075.2**	**23.8**	**4,616.0**	**53.4**	**147.8**	**15,168.6**	**2,364.4**	**281.7**	**23,947.9**

Source: ASEAN

III. Top Industries in the Philippines for Investments

A. Overview

The aforementioned statistics only prove the value of the Philippines as an investment destination.

During a 2018 media forum in Manila, United States (US) Ambassador Sung Y. Kim praised the Philippines as a 'very attractive destination for US investments'[2]. This is despite the fact that recent domestic issues like the 2017 Marawi City Siege have made the country less attractive as a business venture for US corporations and other prospective investors. Ambassador Kim pointed out that many of the largest companies in the country are American, and American companies are also some of the biggest employers and taxpayers in the country. He sees no reason for this trend to cease in the near future, meaning that American investments in the country are only foreseen to grow, as with other foreign direct investments, even if the year was hampered by challenges for investments at home and abroad.

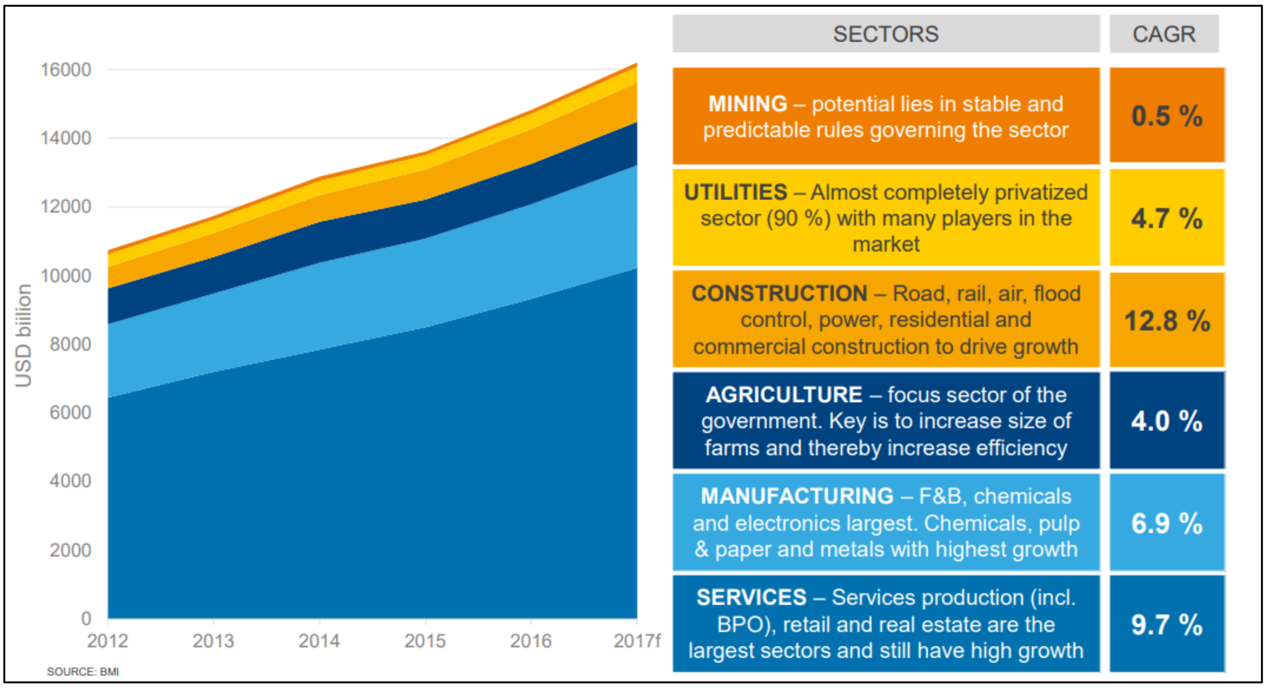
International organizations seem to be on the same mind, thus explaining why the Philippines was lauded as 2018's "Best Country to Invest in" by US News & World Report. Swedish Trade & Invest Council, in particularly, have referred to the Philippines as currently having one of the fastest growing economies in the world, despite its many problems. In terms of the country's overall growth, its compound annual growth rate (CAGR)[3] from 1966 to 2010 sits at 4%, and at 6.6% from 2011 to 2017. Projections for the future are also expected to become higher. Among the factors that positively influence this growth are the relatively young population (24.6 years old), the growing middle-class (expected to reach 50 million by 2020), and the multiple infrastructure projects (i.e. the "Build Build Build" program) being undertaken by the current Administration. These factors also indicate the abundance of investment and employment opportunities in the country (see Figure 2).

That being said, certain Sectors and subsectors are noted to stand out more than others. Swedish Trade & Invest Council asserted that the Services Sector, in particular, is the current driver of growth in the Philippines. This is partly due to the large proportion of English speakers in the country, which surely benefits Service subsectors such business process outsourcing (BPO), and also the aforementioned young age of the population, which translates to a large pool of able-bodied workers for industries to draw from. The Manufacturing industry consistently experiences growth, which reinforces the UNCTAD report's data with regards to the growing number FDIs flowing into the country, like in the utilities and shipbuilding industries. But in terms of CAGR, the Construction Sector showed the most promise, as evidenced by the aforementioned infrastructure programs of the government, in addition to commercial and residential construction projects that also drive growth domestically. Either perspective only mean good prospects for the Philippine economy.

[2] Aguinaldo, C. A. (2018). *Diplomat flags 'caution' on PHL among US firms*. BusinessWorld. Retrieved on May 8, 2018 from: http://bworldonline.com/diplomat-flags-caution-on-phl-among-us-firms/

[3] In simplest terms, CAGR is a rough estimate of an investment's growth in more than a year. (Investopedia)

Fig. 2 Top Industries in the Philippines (2018) by Growth and CAGR

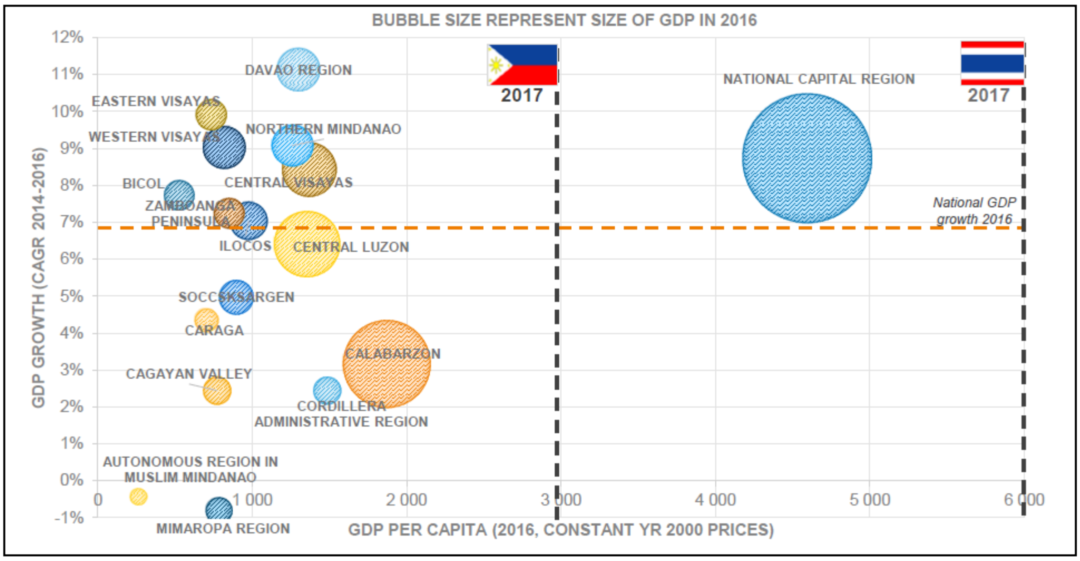


Source: Swedish Trade and Invest Council

More recent data from the PSA provide yet another perspective. Throughout 2017, it was noted that the Manufacturing, Trade, and Real Estate, Renting, and Business Activities sectors were the main drivers of growth in the country. These sectors also saw significant growth for the year: Manufacturing grew by 8.4%, Real Estate, Renting and Business Activities by 7.4%, and Trade by 7.3%. Again, the Services Sector was lauded as the most important component of the country's gross domestic product, contributing 57.5% of the total GDP in 2017. That said, this improvement also brought out slower growth in other subsectors, such as in Transportation, Storage, and Communication (4.0%) and Electricity, Gas and Water Supply (3.4%). Again, Manufacturing and Services played a significant role in growing the economy.

When it comes to regional distribution, an emerging trend has been seen, in that most of the country's economic growth is centered at the National Capital Region (NCR), which was also reflected in the Swedish Trade & Invest Council's data for 2016. This data specifically highlighted the importance of NCR's manufacturing and information technology (IT) industries. Other areas of high concentration for growth are Region IV-A (CALABARZON) and Region III (Central Luzon), all of which are fueled by investments from the private sector and by continued government spending. It is worth noting that the growth experienced in NCR is a little higher relative to the overall growth of the national GDP in 2016. It is thus no surprise to see a significant number of investment pledges get sent to the National Capital Region. Figure 3 provides more details.

Fig. 3 Regional Distribution of Economic Growth in the Philippines (2016)



Source: Swedish Trade and Invest Council

In addition, 2018's data, once made available, may see some dramatic changes due to a new legislation that will undoubtedly affect the flow of FDI's into the country. On May 28, 2018, the President signed Republic Act 11032, or the Ease of Doing Business Act of 2018, that aims to streamline the opening of new businesses and processing FDI flows, among other government functions. As NEDA expects all FDI inflows to reach $12 billion in 2018, this will undoubtedly make it easier for investors to reap the benefits of their ventures and generate more jobs.

C. The Top Industries

The above-mentioned findings are concurrent with what Bayan Academy posited as its employment forecast in the country for 2022 (see Table 4). Though the Agriculture, Fishery, and Forestry Industry is still likely to employ more workers in the future, thanks to the rise of certain subsectors like agribusiness, it is the Construction, Health, Transport, and Tourism subsectors that will see a greater demand.

Table 4 Forecast of Employment by Major Industry Group, 2016 and 2022 (In thousands)

Major Industry Group	2015	2016	2022	2015 to 2022 Increase in Employment
A. Agriculture, Hunting, Forestry and Fisheries	**11, 294**	**11,212**	**10,975**	**319**
B. Industry Sector				
• Construction	2,697	2,855	4,015	1,318
• Manufacturing	3,209	3,220	3,286	77
• Others	422	450	669	247
Sub-total	**6,328**	**6,525**	**7,970**	**1,642**
C. Services				
• Education	1,282	1,320	1,577	295
• Public Administration	2,096	2,180	2,758	662
• Wholesale, Retail, Repair	7,313	7,441	8,251	938
• Financial Intermediation	498	518	660	162
• Real Estate	184	195	274	90
• Health and Social Work	494	510	619	125
• Transport, Storage, Comms	3,871	3,836	4,184	588
• Other Community, Social and Personal Services[4]	3,804 (?)	3,880	4,369	565
• Private Households[3]				
• Extra Territorial Organizations	3	3	3	---
• Hotel and Restaurants	1,716	1,882	3,280	1,564
Sub-Total	**21,171**	**21,765**	**25,975**	**4,804**
Total	**38,793**	**39,502**	**44,920**	**6,127**

Source: Bayan Academy

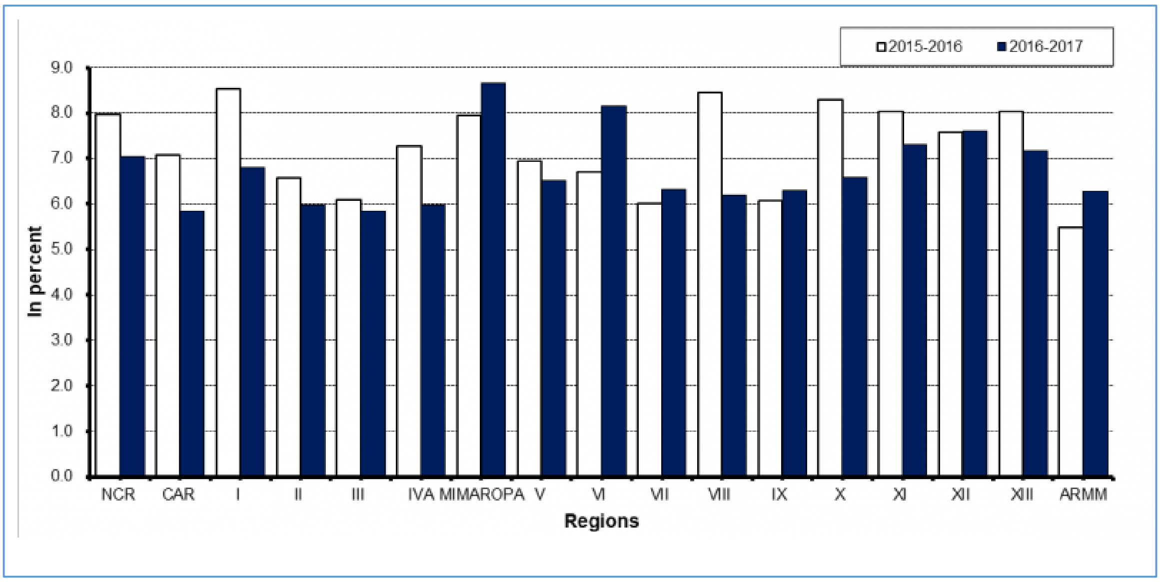
Judging from this information, it is no surprise to see the country's positive employment forecast to veer away from industries such as agriculture, fishery, and forestry, and instead focus more on the recipients of the largest FDIs and domestic investments. This is substantiated by other industry and economy-related publications in the country, which reiterates the importance of Manufacturing, Construction, and Services. It can therefore be concluded that the following are the top industries for investments in the Philippines are the following:

1. **Services Sector (Especially: Real Estate, Administration Support, and IT-BPO)**

According to the PSA, the Services Sector contributed about 57.5% of the Philippines' GDP in 2017, which is the largest out of all the other Sectors, continuing the expectations set forth by international organizations like the Asia Development Bank (ADB) and Swedish Trade & Invest Council. The growth was a bit stifled for the year, however, coming in at only 6.8%, compared to the 7.5% growth that was seen in 2016. Nevertheless, the Services Sector's growth was felt across the board, with all regions seeing an uptick in terms of output and share. In terms of regional output and share, the National Capital Region or NCR still remained the biggest contributor to this Sector. Refer to Figure 4 for a graph of this growth.

[4] Numbers may not be accurate, since these subsectors have been reclassified/combined in 2012 (Bayan Academy)

Fig. 5 **Growth Rates of Regional Economies in Services in 2015-2016 and in 2016-2017 (at Constant 2000 Prices, in Percent)**



Source: Philippine Statistics Authority

The Services Sector is deemed a very important component of the Philippine economy, as it has already overtaken other components such as Industry and Agriculture. In addition to domestic factors, remittances from Overseas Filipino Workers (OFWs) have also contributed to the continued growth of this Sector. ADB has reported that from 2003 to 2012, remittances from OFWs have amounted to about 9% to 10% of the country's GDP.

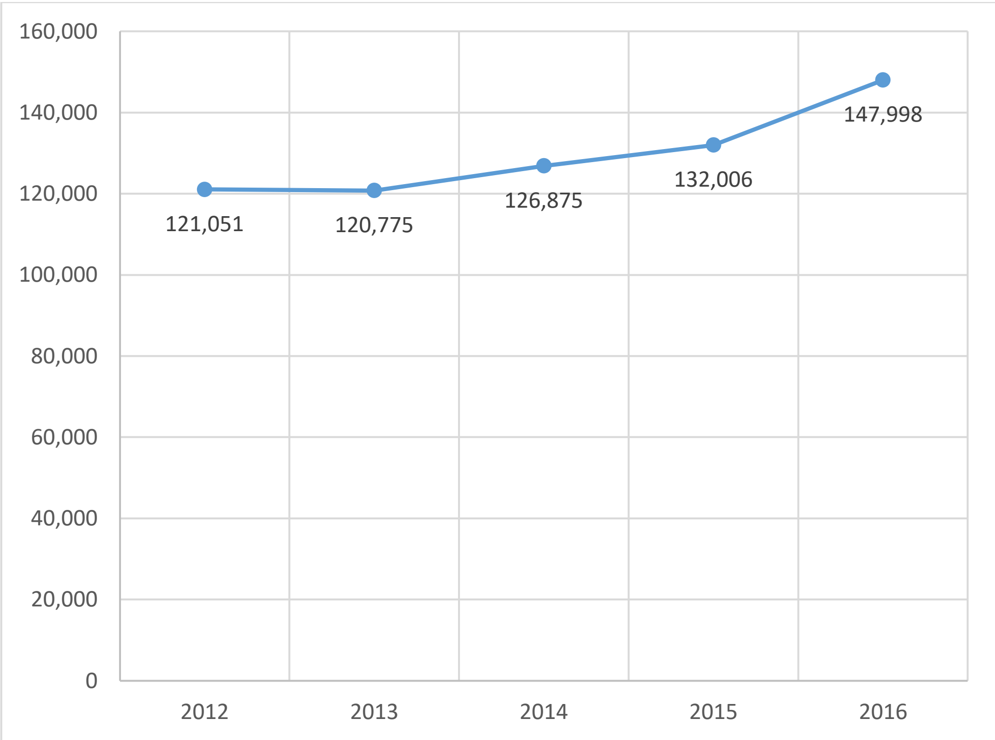
The IT-BPO subsector has also been seen as a major contributor, as it is one of the country's largest employers. It is also one of Asia's fastest growing IT-BPO subsectors. The Contact Center Association of the Philippines even claims that the Philippines is the 'call center capital of the world', citing data from a Texas-based research group that the country currently has taken about 16 to 18 percent of outsourced services in the globe. It is estimated that in 2017, IT services and BPO generated about $23 billion in revenue despite only employing some 1.3 million workers. Much of this success was attributed to the country's large pool of English-speakers, as well as its access to foreign IT infrastructure and equipment. The current roadmap created by the IT & Business Process Association of the Philippines (ITBPAP) has a target of 1.8 million directly-employed workers, plus some $40 billion in revenue, by 2022.

But considering that they are the focus of FDIs in recent years, Real Estate Activities and Administration Support should also be seen as important subsectors. Real Estate, in particular, is expected to see significant growth (alongside the Construction Sector) with the advent of developing New Cities, such as in Clark, Pampanga, in order to support the country's burgeoning IT-BPO industry. It is therefore prudent for the country to invest more in the development of its Services Sector.

2. Construction Sector

TESDA, as the leading provider for TVET in the country, currently has 43 training regulations (TRs) that are implemented across 983 construction-related training programs in the country. However more programs might be needed to further stimulate growth in the Construction Sector, given its slow but steady rise over the years. Data from the PSA has revealed that in 2012, there have been 121,051 building permits granted for residential and commercial construction, which in turn grew to 147,998 in 2016 (Table 5). While the gains are comparatively small, it is worth noting that this trend occurred even before the onset of the BBB Program considering the number of building permits issued between 2012 and 2016 (Figure 6), which points to a potential for the Sector to increase in value in the coming years.

Fig. 6 Number of Constructions from Approved Building Permits, 2012-2016



Source: Philippine Statistics Authority

Bayan Academy, meanwhile, believes that the Construction Sector will drive a greater portion of new employment in the country until 2022, again thanks in part to the BBB Program. Indeed, the National Economic and Development Authority claims that the Program will be a large boon for the Sector in general, since it is expected to produce more than a million new jobs. The projects from this program, which tantamount to some PHP 8.5 trillion in investments, will likely reach 7.4% of the country's gross domestic product or GDP (as capital expenditures) in 2022. Investments to related industries, such as Transportation, Storage, Communications, and IT, will likewise see an increase.

As said earlier, the Construction did not experience any significant growth outside of the BBB Program, but metrics from 2016 still show a positive uptick that is worth mentioning. As cited by Bayan Academy, NCR has seen 13,166 new construction projects worth PHP 157 billion, or about 41.5% of the regional share in nationwide construction value, the highest in the for the year as well. NCR was followed by Region IV-A (CALABARZON) with 34,713 projects worth PHP 62 billion, and Region VII (Central Visayas) with 14,801 projects worth PHP 29 billion (see Table 6 for more).

Table 5 Highest Number of Construction Projects Nationwide in Number and Value (2016)

	Number of Projects	Percentage	Value (Php 000)	Percentage	Value Per Project (Php 000)
National Capital Region	13,166	8.9%	157,425,035	41.5%	11,957
CALABARZON	34,713	23.5%	62,280,840	16.4%	1,794
Central Luzon	14,481	9.8%	28,092,697	7.4%	1,940
Central Visayas	14,801	10.0%	29,020,263	7.7%	1,961
Sub-Total	77,161	52.2%	276,818,835	73%	3,587
Rest of the Philippines	70,797	47.8%	102,077,051	27%	1,442
Total	147,998	100%	378,895,886	100%	2,560

Source: Bayan Academy

The growth has been felt earlier than that. As revealed in the 2015 Annual Survey of Philippine Business and Industry (ASPBI), the Construction Sector has also remained to be one of the largest employment generators in the Philippines. According to ASPBI, the country had about 2.7 million workers in this Sector, or about 7.0% of the total workforce, in 2015, which was a significant improvement over the 2.0 million recorded in 2010 and the 1.7 million in 2005. This translated to an average growth rate of 5.85% over the last decade, resulting in the construction of some 407 new buildings, 291 new roads, and 47 other civil engineering projects in 2015. Table 7 can provide more information.

Table 6 Distribution of Construction Establishments and Persons Employed with Total Employment of 20 or Over (2015); per 2015 ASPBI

Industry Group	Number of Establishments	Percentage	Number Employed	Percentage
Construction of Buildings	407	36.3%	97, 776	35.8%
Construction of Roads & Railways	291	36.0%	94,959	34.8%
Electrical, Plumbing and Other Installation Activities	320	20.5%	36,974	13.2%
Construction of Utilities Projects	60	5.4%	10,558	3.9%
Construction of Other Civil Engineering Projects	47	4.2%	18,604	6.8%
All Other Construction	86	7.7%	15,241	5.6%
Total	1,121	100.0%	273,111	100.0%

Source: Bayan Academy

"New Clark City" deserves special mention, as it is in line with the other "New Cities" initiatives of the BBB Program meant to relieve Metro Manila of many of the pressures of urbanization. This is also part of the Program's initiative of promoting environmental sustainability and economic viability in its urban areas, which entail several construction projects requiring the need for skilled manpower. The New Clark City National Government Administrative Center alone is estimated to cost $235 million, with a significant portion of the funds coming from foreign investors like Malaysia. Other projects include the "Metro Manila Flood Management Project" worth $500 million, the Cebu Smart City project, and the various projects in the Cagayan de Oro City Updated Development Plan (2017-2019) that would cost a total of some $400 million.

3. Manufacturing Subsector (Under the Industry Sector)

Thanks to new power and energy projects, improved infrastructure, real estate, and transportation and logistics outputs from the BBB Program, Manufacturing is now considered the third driver of growth in the Philippines. The World Economic Forum described the Philippines as a 'Legacy' country in its 2018 Readiness for the Future of Production Report. This means the Philippines has a relatively large, strong manufacturing structure, but one that also has plenty of room for improvement if it wishes to remain competitive in the future.

In recent years, Manufacturing provided the bulk of the Industry Sector, which contributed 33.9% of the Philippine Gross Domestic Product in 2016. This Sector typically consists of Automotive and Land Transportation, Electrical and Electronics, Furniture and Fixtures, Furniture and Fixtures, Garments, Processed Food and Beverages, Metals and Engineering, and Utilities. Collectively, they employ 4 million workers, or about 8.6% of the entire Philippine workforce. As gleamed from Bayan Academy's data (Table 8), the number of workers in this Sector consistently fluctuate, but it's only recent that an uptick of employment had been seen, indicating a growing demand for manufactured products.

Table 7 Manufacturing Sector Employment Table 2005-2017 (in Thousands)

Year	Total No. Employed (Philippines)	% Employed in the Sector	Number Employed	% Increase/Decrease
2005	32876	9.3	3057	
2006	33185	9.0	2987	-2.3
2007	33672	9.1	3064	2.6
2008	24533	8.4	2901	-5.3
2009	35477	8.3	2945	1.5
2010	36489	8.4	3065	4.1
2011	38545	8.2	3161	3.1
2012	37668	8.3	3126	-1.1
2013	36286	8.5	3084	-1.3
2014	37310	8.4	3134	1.6
2015	39775	8.1	3222	2.8
2016	40837	8.3	3389	5.2
2017	40335	8.6	3469	2.4

Source: Bayan Academy

This unprecedented growth may be attributed, in part, to the FDIs mentioned before, even though the subsector itself is offset by relative low wages and low value added per employee (at least when compared to the IT-BPO and other subsectors under Services). For projected growth, Bangko Sentral ng Pilipinas (BSP) differed from other sources, saying that the net value of FDIs into the country in 2018 will primarily be concentrated at the Manufacturing subsector, amounting to $227 million (Table 9). This reflects an especially large change of 1,901.2% from $11.4 million in 2017. 2018 FDIs to the Construction Sector are foreseen increase by around 60%, or from $7 million to $12 million, but this can still grow larger as the year progresses. But it is the increase in employment and the rise for demand of manufactured products that are perhaps the reasons why the Manufacturing subsector can expect to have significant gains in FDIs in the near future.

The government must carefully weigh options to capitalize the projected growth of the subsector. For example, the Nomura Research Institute has proposed that the Philippine car industry can become self-sufficient by improving its car manufacturing capabilities, resulting in about 1 million automobiles produced every year (half of which can be exported)[5]. TESDA can contribute by focusing its Automotive Training Regulations more on manufacturing instead of servicing. Though economically-viable, this suggestion can also acerbate the country's problem with urban traffic.

Table 8 Net Foreign Direct Investments from January to February (2017 and 2018) using "Balance of Payments" Concept

By Industry/ Sector**		January-February (in US$ M) p/			By Economy		January-February (in US$ M) p/		
		2017	2018	*% Change*			2017	2018	*% Change*
Rank***	**Equity other than reinvestment of earnings, net**	**120**	**569**	***375.1***	**Rank*****	**Equity other than reinvestment of earnings, net**	**120**	**569**	***375.1***
1	Manufacturing	11.4	227.5	*1,901.2*	1	Singapore	19.2	228.1	*1,085.8*
2	Financial and Insurance Activities	14.8	215.1	*1,353.6*	2	China	0.9	163.0	*19,136.9*
3	Arts, Entertainment and Recreation	2.3	50.0	*2,064.2*	3	Taiwan	3.9	62.4	*1,506.9*
4	Real Estate Activities	15.5	34.0	*119.5*	4	Hong Kong	11.9	54.8	*361.2*
5	Electricity, Gas, Steam and Airconditioning Supply	11.2	21.1	*88.7*	5	Japan	49.3	20.9	*-57.6*
6	Construction	7.6	12.1	*60.1*	6	Netherlands	-	13.7	*35,716.3*
7	Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	28.9	4.3	*-85.3*	7	Luxembourg	-	12.5	*74,656.7*
8	Accommodation and Food Service Activities	1.6	2.2	*36.2*	8	USA	-1.0	10.8	*1,165.9*
9	Administrative and Support Service Activities	4.4	1.2	*-73.1*	9	South Korea	1.5	2.0	*36.0*
10	Information and Communication	12.3	0.8	*-93.5*	10	UK	2.6	1.7	*-35.2*
	Others	10.0	1.3	*-86.9*		Others	31.7	-0.3	*-99.2*
Reinvestment of Earnings		**137**	**130**	***-5.2***	**Reinvestment of Earnings**		**137**	**130**	***-5.2***
Debt Instruments, Net		**722**	**793**	***10.0***	**Debt Instruments, Net**		**722**	**793**	***10.0***
Net FDI		**978**	**1,493**	***52.6***	**Net FDI**		**978**	**1,493**	***52.6***

Source: Bangko Sentral ng Pilipinas

This growth can also be attributed to the Department of Trade and Industry's (DTI) Industry Roadmaps Initiative way back in 2012, which produced programs such as the Comprehensive Automotive Resurgence Strategy (CARS) that

[5] *The Project of "Elaboration of Industrial Promotion Plan Using Value Chain Analysis": Outline of Interim Report (Appendix)*, presented on October 23, 2017 during the 4th Joint Coordination Committee held at the Department of Trade and Industry – Board of Investments

provided time-bound and performance-based fiscal support in order to attract FDIs. Other subsectors in DTI's industrial revitalization plans include electronics and electrical parts, aerospace parts, chemicals, iron and steel, tool and die, and garments, textiles and furniture. On the other hand, data obtained by TESDA for its 2018-2022 National Technical Education and Skills Development Plan (NTESDP) cited food manufacturing and electronics as the agency's priority areas, indicating significant growth in them and foreseeing more extensive labor needs.

Despite on-going efforts by the country to improve the Manufacturing Subsector, progress may be slowed down due to the advent of automation and robotics, which some fear would make human workers obsolete. However, this is a challenge the DTI is optimistic that the country will overcome by building an efficient ecosystem for Manufacturing, as a whole.

IV. Skills Needs

Given the scale of investments received by the aforementioned Sectors and Subsectors, it is important for TESDA to look ahead and ascertain possible skill requirements that would be needed in these areas in the future. They would be the basis for future training regulations and programs that TESDA would have to create in order to support the burgeoning labor markets in Manufacturing, Construction, and Services, thereby introducing more investments in them.

A. Manufacturing Subsector

As said before, the 2018-2022 NTESDP indicated 'food manufacturing' and 'electronic components' as the priority areas for the country's Manufacturing Subsector. Though not apparent in the former, skills for handling automated or digital equipment in various manufacturing jobs are envisioned to be even more necessary in the future due to increased automation and the advent of robotics. TESDA believes that the following competencies in Manufacturing will see greater demand among its subsectors, at least in the short-term:

- Automotive Mechanic
- Automotive Painter
- Automotive Servicing for Hybrid Vehicles (Hybrid Specialist)
- Computer-Aided Design and Manufacturing (CAD/CAM) Operator
- Carpenter
- Computer Numerical Control (CNC) Operator
- Deburring Technician (for deburring operations)
- Dressmaker
- Driver
- Electrician
- Electronics Equipment Assembler
- Food Processor
- Instrumentation and Calibration Technician
- Machine Mechanic
- Machine Operators & Assembler
- Metal Casters
- Molders (for metal products) / CNC Machinist Molders (for plastics)

- Motorcycle Operator
- Motorcycle Technician
- Plant/Machine Operator and Assembler
- Smart Press Machine Operator
- Repairman
- Tailor
- Technician
- Service Technician
- Supervisory Control and Data Acquisition (SCADA) Operator
- Upholsterer
- Weaver
- Welder

Emerging technologies in the Manufacturing Subsector include:

- Advance materials and additive manufacturing
- Artificial intelligence
- "Big Data"
- Cloud Computing
- Cybersecurity
- "Internet of Things"[6]
- Robotics
- Modeling Simulation, Visualization and Immersion

B. Construction Sector

Emerging skills in the Construction Sector were identified during a focus group discussion (FGD) that TESDA conducted[7] with industry leaders regarding the "Build Build Build Program". During this discussion, numerous issues and challenges were brought out that might hinder country's capacity to meet needs in (mostly) short-term construction projects. With the BBB Program in mind, the following competencies were deemed to be hard-to-fill, which TESDA may want to prioritize over other competencies in Construction:

- Earthmoving Heavy Equipment Operation, specifically for:
  - Mixer
  - Bulldozer
  - Paver

- Crane Operation (including Mobile Cranes)
- Sheet Filing Operation (for Bridges)
- Vibro Machine Operation

The FGD also identified the need for more specialized Construction-related training courses for the BBB Program, reflecting recent trends in the industry. Many of these skills/technologies are deemed important by specialized

[6] Refers to the trend of connecting everyday devices to the Internet, resulting in easier use, better access, and greater efficiency (in some technologies). Machines that typically employ this process include smartphones, household appliances, airplane components, and oil rig machinery. (Forbes.com)

[7] Conducted on May 3, 2018 at the 2F Gregoria De Jesus Hall, TESDA Women Center

construction contractors, as they themselves are restricted to a limited pool of workers versed in the aforementioned technologies for the BBB:

- Rubberized asphalt (asphalting)
- Solar energy
- Mechatronic technology of the HE
- Skills for sea-based construction
- Underwater fiber optic cables (installation)
- Tunneling (for subways)
- AAC (autoclaved aerated concrete)
- GFRC (glass fiber reinforce concrete)
- Electronics/programming for green technologies
- Climate change resilient construction
- Green construction

That said, it is still worth nothing that other competencies have been identified by the NTESDP, which may see a significant demand in the future:

- Aluminum and Glass installers
- AutoCAD Operator
- Bookkeeper
- Building Wiring Installation Worker
- Construction Painter
- Driver
- Electrician
- Foreman
- Insulation Worker
- Laborer
- Masons
- Painters
- Pipefitters
- Plumbers
- Pre-cast Fabricator
- Pre-cast Installer
- Production Worker
- Rigger
- Roofer
- Sandblaster
- Scaffold Erector
- Scaffolders
- Steelman
- Tile Setter
- Tinsmith
- Welder

C. Services Sector

Considering that investments to the Services Sector are mostly focused on Real-Estate, Administrative Functions, and IT-BPO, future training regulations might be needed to better suit the needs of these Subsectors. To reiterate, the Services Sector is deemed to be the biggest driver of growth in the country, and would likely to continue to do so for the foreseeable future. Thus, competencies such as front desk personnel and bookkeepers, which transcend all Services Subsectors, would still be needed even if more specialized skills would fall under specific areas.

The IT-BPO Subsector, in particular, would benefit from additional training based on the 2018-2022 top priority employment opportunities for the Services Sector, as predicted by the NTESDP:

- Animators Video
- Bookkeeper
- CAD/CAM Operator
- Call Center Agents (Both voice and non-voice)
- Computer Systems Service Personnel/Technician
- Customer Service Representative
- Encoder
- Graphic Artists (including Video Graphic Artist)
- Marketing Telemarketer
- Medical Transcriptionist
- Programmer
- Software Developers
- Technical Draftsman

Emerging technologies from this Subsector reflect global trends, which lean more towards automation and artificial intelligence, thereby called the "Fourth Industrial Revolution":

- Automation and Artificial intelligence
- Big Data and Analytics
- Cloud Computing
- "Internet of things"

In addition to all of this, future training on soft skills may also need to be looked into to benefit the Services Sector. In 2017, LinkedIn conducted a study called "Recruiting in the Philippines: A Special Report on the Philippines' Skilled Workforce and How to Attract Top Talent." In it, the BPO subsector of the Services Sector presented relatively low employment figures in 2017: 21.90% for Inbound and Customer Service; 14.15% for Outbound Sales, and only 12.25% for IT Helpdesk. This is despite the fact that the BPO subsector is expected to grow in 2022 into a 1.8 million-manpower industry. It is said that these low figures are mainly due to the lower number of hires with high level English-speaking skills. The study noted that 70.44% of 2017 college graduates who have entered this industry lack fluency in English, 48.17% percent lack poor pronunciation, and 58.72% lack basic comprehension of the language.

Linked-In also explained that computer-related skills should be improved among prospective hires in the Services Sector, since the most sought after high-skilled jobs in the country are Sales Professionals, Software Developers, Customer Service Specialists, and Marketing Specialists (Refer to Table 9).

Table 9 Top Ten Most Sought-After High-Skilled Jobs in the Philippines

Rank	Top Ten Occupations	Most In-Demand Skills Requirements
1	Sales Professional	Enterprise Software, Cloud Computing Pre-Sales Client Partnership, Solution Selling
2	Software Developer	Struts, Maven, SOAP, SQL Java Script
3	Customer Service Specialist	Employee Management, Contact Centers, BPO Telesales, Performance Management
4	Marketing Specialist	Customer Marketing, Trade Marketing, Competitors Analyses, Digital Marketing, Brand Management
5	Administrative Managers	Performance Management, Employee Relations, Human Resources, Financial Analysis
6	Recruiter	Employer Branding, Sourcing, Tale, College Recruiting, Vendor Management
7	IT Support Specialist	Customer Service, Technical Support, Software Development, Financial Analysis
8	HR Specialist	Workforce Planning, Outsourcing, Succession Planning, Employer Branding, Referral Compensation
9	IT Consultant	SAP Implementation, Data Migration, Consulting, SAP Networkers, SAP ERP
10	Accountant	External Audit, Sarbanes-Oakley Act Financial Analysis, Variance Analysis, Banking

Source: LinkedIn

D. Socioemotional Skills

According to the World Bank, socioemotional skills, which are another type of soft skills, have a direct, positive impact on the employability of workers in the Philippines. Specifically, urban workers who are open to new experiences and are able to relate positively with their colleagues are more likely to earn higher wages than those who don't. This fact transcends all Sectors of the country's economy, and as such should be considered in future training programs for the benefit of prospective hires.

"Socioemotional skills" specifically refer to an individual's capacity to:

- Recognize and manage their emotions,
- Cope successfully with conflict,
- Solve interpersonal problems,
- Empathize with others,
- Establish and maintain positive relationships,
- Make ethical and safe choices,
- Contribute constructively to their community, and
- Set and achieve positive goals.

V. Opportunities for TESDA

Even if the recent gains in Construction, Manufacturing, and Services are disregarded, these Sectors are still significant contributors to the Philippine economy, given that they are prominently featured in TESDA's 2018 – 2022 National Technical Education and Skills Development Plan (NTESDP). This means that TESDA has the proper mechanisms to provide these Sectors with highly-skilled workers, provided that the number of enrollees and graduates are sufficient to meet with the current demand.

The number of TVET enrollees and graduates that TESDA was able to produce in 2017 seem to mirror this trend. As gleamed by previously mentioned labor studies, the Services Sector accounted for more than half of all graduates and nearly half of all enrollees for that year (see Table 11). The Sector was spearheaded by Tourism and, followed by Social, Community Development and Other Services, and ICT. As for Manufacturing, it accounted for approximately half a million of TVET enrollees and graduates (554,522 and 498,827 respectively), which can benefit the predicted growth of that particular subsector in the future. Interestingly, enrollees and graduates of Construction-related courses are low, despite the expected rise of demand for highly-skilled workers in that Sector due to the BBB Program. Compared to Manufacturing and Services, Construction only had 87,177 enrollees and produced 78,269 graduates in 2017.

These numbers mirror the trends indicated in the aforementioned NTESDP. It is said that from 2010 to 2014, Tourism had 393,353 TVET graduates employed (57% employment rate), ICT had 289,580 (60% employment rate), Health, Social, Community Services had 245,207 (62% employment rate), Electronics had 152,348 (62% employment rate), and Metals and Engineering had 151,646 graduates employed (68% employment rate). Refer to Table 12 to learn more.

It is also worth mentioning that according to recent data, graduates of Manufacturing-related courses are predominately males, whereas the Services Sector is dominated by females. Male-dominated subsectors include Automotive and Transportation (129,293 vs. 14,258), Electrical and Electronics (92,610 vs 34,733), and Metals and Engineering (96,896 vs. 12,886). Female-dominated sectors are Garments (31,801 vs. 4,638), Social, Community Development and Other Services (298,238 vs. 168,055), and Tourism (312,813 vs. 139,646). The Construction Sector, meanwhile, only had 66,278 male and 11,991 female graduates. Regardless of the gender disparity, a more pressing concern is the low numbers of enrollees and graduates into this sector, considering the on-going BBB Program, as well as the number of FDIs flowing into Construction in recent years.

Table 10 2017 TVET Enrollees and Graduates by Sector

CONSTRUCTION	ENROLEES			GRADUATES		
	Male	Female	Total	Male	Female	Total
Construction	74,216	12,961	87,177	66,278	11,991	78,269
TOTAL	**74,216**	**12,961**	**87,177**	**66,278**	**11,991**	**78,269**

MANUFACTURING						
Automotive and Land Transportation	138,165	16,233	154,398	123,293	14,258	137,551
Electrical and Electronics	104,162	38,499	142,661	92,610	34,733	127,343
Furniture and Fixtures	444	223	667	417	237	654
Garments	5,308	35,487	40,795	4,638	31,801	36,439
Heating, Ventilation, Air-conditioning and Refrigeration	7,772	332	8,104	6,494	256	6,750
Printing	-	-	-	-	-	-
Processed Food and Beverages	22,649	67,867	90,516	21,493	65,484	86,977
Metals and Engineering	110,800	14,580	125,380	96,896	12,886	109,782
Utilities	102	3	105	81	0	81
TOTAL	**381,630**	**172,892**	**554,522**	**339,428**	**159,399**	**498,827**

SERVICES						
Human Health / Health Care	34,811	90,951	125,762	31,929	81,783	113,712
Social, Community Development and Other Services	171,219	308,975	480,194	168,055	298,238	466,293
Information and Computer Technology	95,455	107,235	202,690	87,856	97,345	185,201
Tourism (Hotel and Restaurant)	156,452	348,552	505,004	139,646	312,813	452,459
Wholesale and Retail Trading	3,594	2,615	6,209	3,747	2,627	6,374
TOTAL	**461,531**	**858,328**	**1,319,859**	**431,233**	**792,806**	**1,224,039**

Source: TESDA

Table 11 Sectors with Most Employed TVET Graduates (2010-2014 data)

Sector (Ranked from Most to Least)	Total No. Employed	CAGR (5 YRS)	Average Employment Rates	CAGR (5 YRS)	Average Certification Rates
Tourism	393,353	5.3%	57%	1.76%	95%
ICT	289,580	(12%)	60%	0.56%	79.1%
Health, Social, Community Development and Other Services	245,707	7%	69%	2.3%	91.9%
Electronics	152,348	34%	62%	(0.74%)	91.3%
Metals and Engineering	151,646	1.69%	68%	1.54%	93.68%
Land Transport	148,399	12.9%	69%	0.43%	93.35%
Construction	146,789	12.9%	70%	(0.05%)	92.75%
Agriculture and Fishery	75,908	48%	75%	5.86%	94%

Source: TESDA

VI. Demand-Supply Analysis

To recap, areas that are likely to see an increase in employment in the near future are Construction, Manufacturing, and Services (especially Real Estate Activities, Administration Support, and IT-BPM). TESDA currently has training offerings in these areas, with Construction numbering at around 983 registered training programs, Manufacturing at 4,572, and Services at 7,401. Refer to Table 13 for a more specific breakdown:

Table 12 TESDA Training Regulations and Programs in Priority Sectors

CONSTRUCTION	**Training Regulations**	**Registered Training Programs**
Construction	43	983
TOTAL	**43**	**983**
MANUFACTURING		
Automotive and Land Transportation	37	1,199
Electrical and Electronics	18	1,424
Furniture and Fixtures	1	7
Garments	3	243
Heating, Ventilation, Air-conditioning and Refrigeration	6	141
Printing		
Processed Food and Beverages	7	141
Metals and Engineering	28	1,305
Utilities	9	3
TOTAL	**109**	**4,572**
SERVICES		
Human Health / Health Care	14	1,427
Social, Community Development and Other Services	18	1,585
Information and Computer Technology	18	1,041
Tourism (Hotel and Restaurant)	18	4,379
Wholesale and Retail Trading	1	10
TOTAL	**51**	**7,401**

Source: TESDA

Construction-related training programs are fewer than Manufacturing or Services-related ones. This should be seen as a cause for concern, as the onset of the BBB Program means that the Construction Sector will see considerable growth, and therefore more job opportunities, in the near future.

VII. Moving Forward

> ***"In contrast to declining inflows of foreign direct investment, or FDI, to Southeast Asia as a whole, the Philippines continued to perform well, according to United Nations data. In years to come, the country is expected to receive more FDI from within the region from powerhouses like China that are looking to utilize available labor in developing nations."***
>
> \- US News and World Report, 2018 Best Countries to Invest In

Judging by recent trends FDIs and domestic investments, the Philippine economy is mostly dependent on its Services Sector, followed up by the Manufacturing and Construction Sector. It is believed that Construction will experience more growth than other sectors, thanks to the current Administration's "Build Build Build" Program, but FDIs to the Services Sector are sizable enough on their own and are only expected to also grow in the future.

It is important to note that the country attracted FDIs primarily because of its low-cost but highly-skilled labor force. While the Services and Manufacturing Sectors have relatively sizable numbers of workers to support them, the Construction Sector needs a greater of influx of labor to help it keep up with the foreseen demand. As the premier authority for TVET in the Philippines, TESDA needs to find a way to encourage more people to take up Construction-related courses.

But in general, the country has done well in terms of attracting FDIs and driving growth to many Sectors of its economy. TESDA can help further this success by prioritizing the development and improvement of training regulations related to the following Subsectors:

1) Real Estate Activities;
2) Public Administration/Social Services;
3) Information Technology and Communication; and
4) Manufacturing.

TESDA can also:

1) Consult with industry authorities to help develop training regulations on emerging skills in their respective industries (especially in Construction); and
2) Focus on the development of soft skills to give trainees better chances of obtaining high-skilled jobs.

Nevertheless, TESDA must also review training regulations on the aforementioned Sectors/Subsectors that are predicted to receive more investments in the future. This is to ensure that the current training standards are on par with those set by the respective industries themselves.

As seen in the regional distribution of FDIs and domestic investments in the country, TESDA will also need to determine the regional capacity of the country's TVET functions, especially in terms of currently-available programs, trainers, assessors, and accredited assessment centers (to name a few). These factors are *crucial* in achieving quality skills training on prospective workers, which in turn will help attract even more investments to the country's regions in the future.

While it is challenging, TESDA should also continue to engage industries or enterprises in the conduct of effective skills training. The facilities and equipment available in industries will highly contribute in ensuring the quality of training provided for TVET trainees.

Lastly, ASEAN integrations or initiatives should be maintained and strengthened as they provide more opportunities for Philippine TVET providers to learn from the country's neighbors and (hopefully) make their training standards more competitive in the international market.

References:

Acosta, P., Igarashi, K., Olfindo, R., and Rutkowski, J. (2017). *Developing Socioemotional Skills for the Philippines' Labor Market*. World Bank. Retrieved from: https://openknowledge.worldbank.org/bitstream/handle/10986/28381/9781464811913.pdf?sequence=2&isAllowed=y

Association of Southeast Asian Nations (2017). ASEAN Investment Report 2017: Foreign Direct Investment and Economic Zones in ASEAN. Retrieved from: http://asean.org/storage/2017/11/ASEAN-Investment-Report-2017.pdf

Cahiles-Magkilat, B. (2018). *Manufacturing seen as PH next growth driver*. Retrieved from: https://business.mb.com.ph/2018/02/01/manufacturing-seen-as-ph-next-growth-driver/

Gonzales, J. B. (2018). *Approved foreign investment pledges lowest in more than a decade — PSA*. BusinessWorld. Retrieved from: http://bworldonline.com/approved-foreign-investment-pledges-lowest-decade-psa/

LinkedIn (2017). *Recruiting in the Philippines: A Special Report on the Philippines' Skilled Workforce and How to Attract Top Talent*. Retrieved from: https://www.slideshare.net/talentviewph/linkedin-report-recruiting-in-the-philippines

McPhillips, D. *Methodology: How the 2018 Best Countries Were Ranked*. US News & World Report. Retrieved from: https://www.usnews.com/news/best-countries/articles/methodology

Medenilla, S. P. (2018). *Wanted: More skilled workers ahead of 'BBB' implementation*. BusinessMirror. Retrieved from: https://businessmirror.com.ph/wanted-more-skilled-workers-ahead-of-bbb-implementation/

Mercurio, R. (2018). *New law a boon for foreign investments*. B10. The Philippine Star - Business.

Mercurio, R. (2018). *Phl remains world's call center capital - CCAP*. B12. The Philippine Star - Business.

Mitra, J. M. (2013). *Leveraging Service Sector Growth in the Philippines*. Asia Development Bank. Retrieved from: https://www.adb.org/sites/default/files/publication/30385/ewp-366.pdf

Morato Jr., E. A. (2018). *A Compendium of Works on Philippine Employment Trends and Eight Policy Industries*. Bayan Academy. Quezon City.

Philippine Statistics Authority (2018). *Gross Domestic Product of the Philippines Highlights for 2017*. Retrieved from: https://psa.gov.ph/regional-accounts/grdp/highlights

Philippine Statistics Authority (2017). *Approved Foreign Investments in the Philippines – Fourth Quarter of 2016*. Retrieved from: https://psa.gov.ph/sites/default/files/FI%20Q4%202016_0.pdf

Philippine Statistics Authority (2017). *Foreign Investments – Fourth Quarter 2017*. Retrieved from: https://psa.gov.ph/sites/default/files/Fourth%20Quarter%202017%20Foreign%20Investments%20Report.pdf

Philippine Statistics Authority (2017). *Percentage Distribution of Employed Persons by Industry, Occupation, Class of Worker and Hours Worked in a Week, Philippines: 2017*. Retrieved from: https://psa.gov.ph/content/2017-annual-labor-and-employment-status

Swedish Trade and Invest Council (2018). *2018 Philippine Market Outlook*. Retrieved from: https://www.businesssweden.se/contentassets/80e8a3f533084bc098cd44ce905d17de/philippines-market-outlook---jan-2018.pdf

TESDA (2018). *2018 - 2022 National technical Education and Skills Development Plan*

UNCTAD (2017). *2017 World Investment Report: Investment and the Digital Economy*. Retrieved from: http://unctad.org/en/PublicationsLibrary/wir2017_en.pdf

US News & World Report (2018). *Best Countries to Invest In*. Retrieved from: https://www.usnews.com/news/best-countries/best-invest-in

World Economic Forum (2018). *Readiness for the Future of Production Report 2018*. Retrieved from: www3.weforum.org/docs/FOP_Readiness_Report_2018.pdf

Planning Office
Office of the Deputy Director General for Policies and Planning
Technical Education and Skills Development Authority
TESDA Complex, East Service Road, South Superhighway,
Taguig City, Metro Manila
Tel. No. (+632) 888 5652 / 817 2675 / 893 1966
www.tesda.gov.ph

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