



LABOR MARKET INTELLIGENCE REPORT
**MANUFACTURING
INDUSTRY**

Technical Education and Skills Development Authority



Manufacturing Industry¹

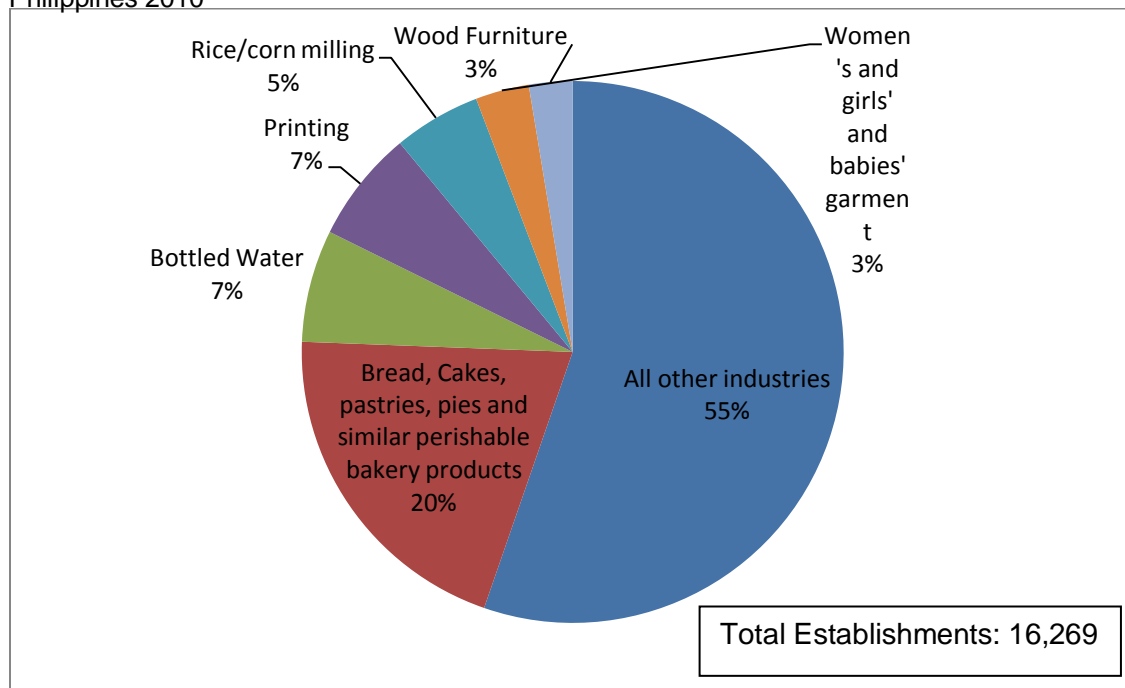
I. The Manufacturing Industry

Composition

The Philippine manufacturing industry is composed of the following sectors: 1) food manufacturers; 2) rubber and plastic products; 3) beverage industries; 4) wood, bamboo, cane and rattan articles; 5) machinery and equipment; 6) electrical machinery and apparatus; 7) furniture and fixtures; 8) textile manufacturers; 9) basic metal industries; 10) fabricated metal products; and 11) radio, television and communication equipment.

Per the 2010 ASPBI² conducted by the National Statistics Office (NSO), there are 16,269 formal manufacturing establishments nationwide. More than half (52.2%) of these belong to the top ten manufacturing industries. Topping the list is bread, cakes, pastries, pies and similar "perishable" bakery products sub-sector which has 3,308 establishments that account for 20.3 percent of the total. Bottled water and printing ranked second with 1,090 establishments each. Other top sub-sectors include rice/corn milling (841 establishments), Women's and girls' and babies' garments (526 establishments), Wood furniture (424 establishments), Repair of machinery (409 establishments), Plastic articles for packing goods (290 establishments), Structural concrete products (267 establishments) and Custom tailoring (260 establishments) (Figure 1).

Figure 1: Percent Distribution of All Manufacturing Establishments by Industry Sub-Class: Philippines 2010

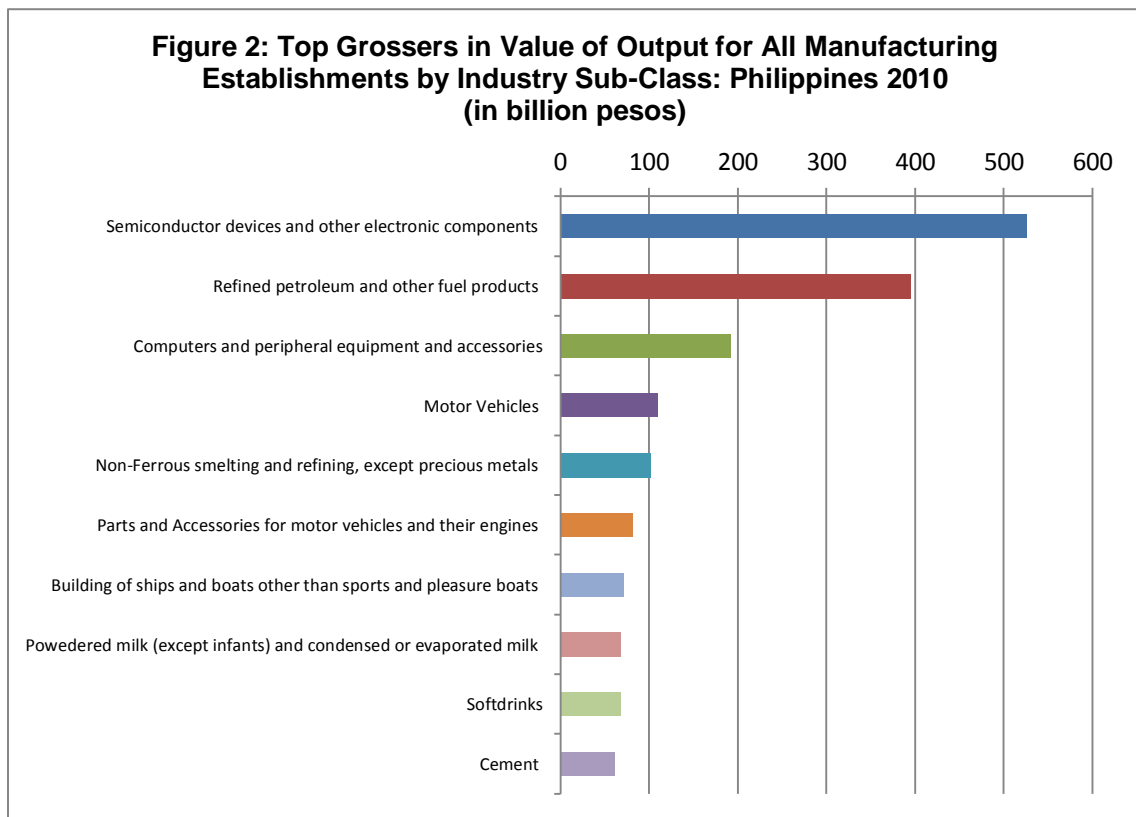


¹ Based on the presentations of Dr. Rafaelita Aldaba, Dr. Josef Yap, Sec. Arsenio Balisacan, Dir. Nikki Tutay and the 2010 ASPBI Report

² Annual Survey of Business and Industry (ASPBI) by the National Statistics Office

Value of Output

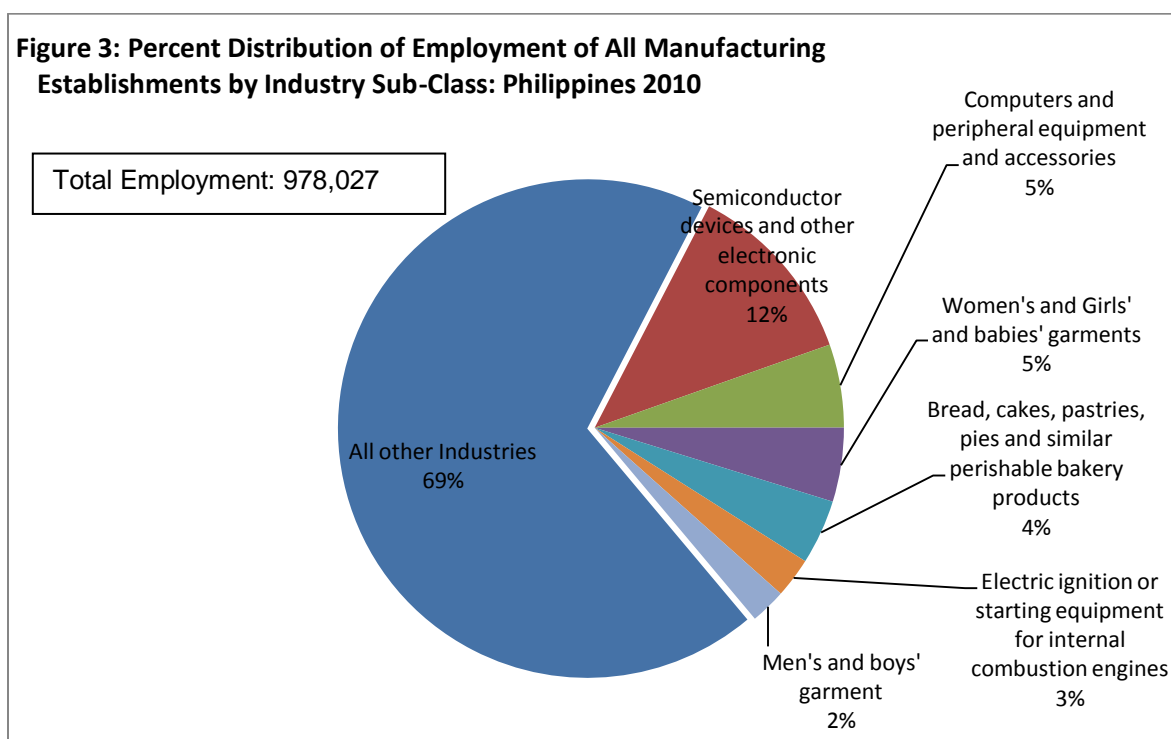
The value of output of all manufacturing establishments was estimated at PHP3.6 trillion in 2010 (Figure 2). More than half (51.4%) of the total value of output of all manufacturing establishments was contributed by 13 industries. Leading is semiconductor devices and other electronic components with an output share of 14.7 percent (PHP525.7 billion). Refined petroleum and other fuel products ranked second in terms of value of output with a combined share of 11.0 percent (PHP394.9 billion). Other big contributors include: Computers and peripheral equipment and accessories (5.4%); Motor vehicles (3.1%); Non-ferrous smelting and refining, except precious metals (2.9%); Parts and accessories for motor vehicles (2.3%); Building of ships and boats other than sports and pleasure boats (2.0%); Powdered milk (except for infants) and condensed or evaporated milk (1.9%); Soft drinks (1.9%); Cement (1.7%); Prepared animal feeds (1.6%); Electric ignition or starting equipment for internal combustion engines (1.5%); and Drugs and medicines including biological products such as bacterial and virus vaccines, sera and plasma (1.4%).



Employment Generation

According to the Bureau of Labor and Employment Statistics, manufacturing employment grew at an annual average of 1.04% from 2000 through 2010. In 2010, total employment generated by all manufacturing establishments reached 978,027³.

A closer look at the ASPBI data shows that the major contributor to manufacturing employment is the semi-conductor devices and other electronic components industry (Figure 3). It was able to employ a total of 117,346 workers. Computers, computer peripheral equipment and accessories industry followed as far second with employment totalling to 53,182 workers. Other industries comprising the top ten slots in terms of employment generation are: Women's and girls' and babies' garments (46,871 workers); Bread, cakes, pastries, pies and similar "perishable" bakery products (41,169 workers); Electric ignition or starting equipment for internal combustion engines (25,605 workers); Men's and boys' garment (22,327 workers); Building of ships and boats other than sports and pleasure boats (21,815 workers); Printing (21,024 workers); Parts and accessories for motor vehicles (19,835 workers); and Plastic articles for packing goods (19,079 workers).



II. Industry Economic Contribution and Growth

The industry sector is the second most critical contributor to gross domestic production. It showed more promise as it exhibited accelerated growth in the first nine months of 2013. From 7.1% last year, it attained an 8.2% growth for the period this year

³ ibid

(Table 1). By quarter, the industry sector outgrew the services sector in the last three quarters of the year (Table 2).

Table 1: Gross National Income and Gross Domestic Product, 3rd Quarter 2012 and 3rd Quarter 2013 (constant prices, in million pesos)⁴

Industry/Industry Group	Q3 2012	Q3 2013	Growth Rate (%)
Agriculture, Hunting, Forestry, and Fishing	158,826	159,271	0.3
Industry	477,887	516,843	8.2
Services	889,910	959,999	7.5
GROSS DOMESTIC PRODUCT	1,526,622	1,633,113	7.0
Net Primary Income	286,249	320,410	
GROSS NATIONAL INCOME	1,812,871	1,953,524	7.8

Table 2: Gross National Income and Gross Domestic Product by Industrial Origin, 1st Quarter 2011 to 2nd Quarter 2013 (at constant 2000 prices)⁵

INDUSTRY	11-12				12-13	
	Q1	Q2	Q3	Q4	Q1	Q2
1. AGRI, HUNTING, FORESTRY AND FISHING	1.1	0.6	4.4	4.9	3.1	-0.3
a. Agriculture and Fishery	2.2	1.3	5.5	5.2	2.5	-1.1
b. Fishing	-3.8	-2.5	0.0	3.4	5.8	3.3
2. INDUSTRY SECTOR	5.3	5.8	7.1	8.9	10.9	10.3
a. Mining & Quarrying	-1.7	6.5	-1.2	2.8	-1.9	-2.7
b. Manufacturing	6.0	4.3	5.8	5.5	9.5	10.3
c. Construction	1.5	11.6	17.8	29.9	29.3	17.4
d. Electricity, Gas and Water Supply	8.5	6.1	2.7	3.4	0.3	5.5
3. SERVICE SECTOR	8.4	7.7	8.0	6.5	6.8	7.4
a. Transport, Storage & Communication	9.7	9.3	9.4	4.4	2.8	3.5
b. Trade and Repair of Motor Vehicles, Motorcycles, Personal and Household Goods	7.8	7.8	8.2	6.6	5.5	7.3
c. Financial Intermediation	8.7	7.0	8.6	8.8	18.0	9.6
d. R. Estate, Renting & Business Activities	7.8	8.1	7.8	6.5	5.8	9.5
e. Public Admin & Defense; Compulsory Social Security	4.5	3.8	8.3	8.2	8.3	5.9
f. Other Services	10.4	8.4	6.5	5.8	5.3	7.4
GROSS DOMESTIC PRODUCT	6.5	6.3	7.3	7.1	7.7	7.5
GROSS NATIONAL INCOME	5.7	6.5	7.3	6.4	7.8	6.8

Under the industry sector are mining and quarrying, manufacturing, construction, and electricity, gas and water supply. Major contributors to the growth of the industry are manufacturing and construction which contributed 6.6 and 0.8 percentage points,

⁴ National Statistical Coordination Board. <http://www.nscb.gov.ph/sna/2013/3rd2013/2013ind3.asp>

⁵ ibid

respectively. It was manufacturing which grew fastest in the first three quarters of the year (Table 3.) Total performance of the manufacturing sector improved by 9.5% in first quarter of 2013 and 10.3% in second quarter of 2013 (Table 2).

Table 3: Gross Value Added in Industry, 3rd Quarter 2012 and 3rd Quarter 2013 (at constant 2000 prices, in million pesos)⁶

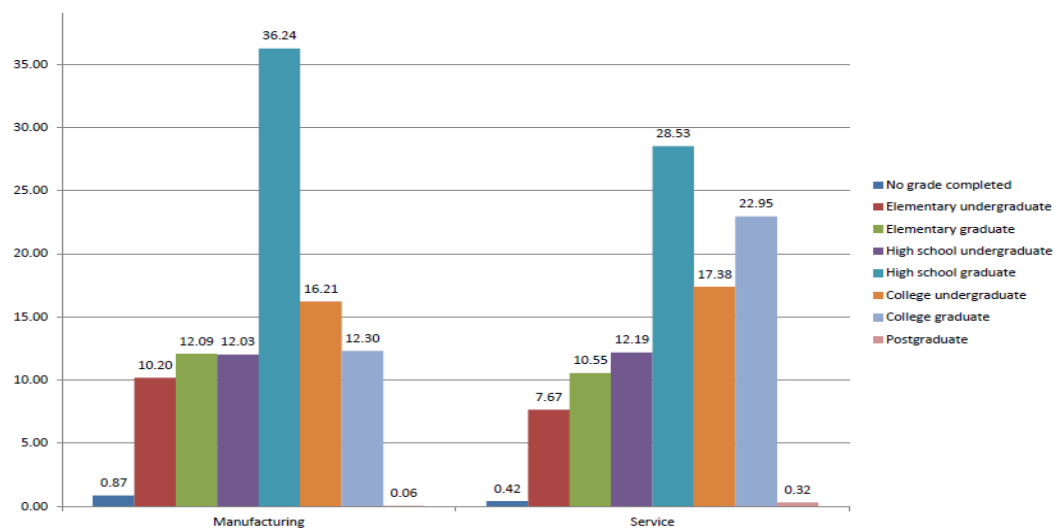
Industry/Industry Group	Q3 2012	Q3 2013	Growth Rate (%)
INDUSTRY SECTOR	477,887	516,843	8.2
a. Mining & Quarrying	13,829	13,714	-0.8
b. Manufacturing	323,524	354,873	9.7
c. Construction	83,158	87,064	4.7
d. Electricity, Gas and Water Supply	57,375	61,192	6.7

III. Inclusive Growth and Manufacturing⁷

Inclusive growth means that economic growth is cascaded down to all sectors in the form of jobs for the minority and less educated who have limited opportunities and choices. The manufacturing sector should figure well in inclusivity as it holds the highest potential to provide long-term and high-paying job opportunities to workers. The labor-intensive nature of the manufacturing industry could translate to more jobs which, in the long term, could result in poverty alleviation.

As shown in Figure 4, education levels of those employed in the manufacturing sector is lower compared to those in the services. Generally, those with lower educational attainment have higher poverty incidences, thus the non-inclusiveness of the manufacturing sector at present.

Figure 4: Educational attainment of those working in the manufacturing and services sectors



⁶ ibid

⁷ The charts and tables in this section were lifted from the Presentation of Dr. Josef T. Yap during the 12th National Convention on Statistics held on 1-2 October 2013 at the EDSA Shangrila Hotel

However, looking at the higher productivity levels (Figure 5) and competitive wage levels (Figure 6) offered by the manufacturing sector, better chances for poverty alleviation are seen. The challenge is for the manufacturing sector to be more dynamic in providing more higher-paying jobs to the less-educated workforce with the end in view of making poverty reduction faster.

Table 4: Average Basic Pay of Wage Workers in 2010 (in pesos)

Educational Level	Manufacturing Sector	Service Sector
Elementary Graduates, Elementary Education	198	164.7
High school graduates, high school education	264.6	209.4

Challenges to Development

In consideration of the impact that manufacturing has on improving the economic condition of many, it is worthwhile to examine why the Philippines should push for the revival of the sector.

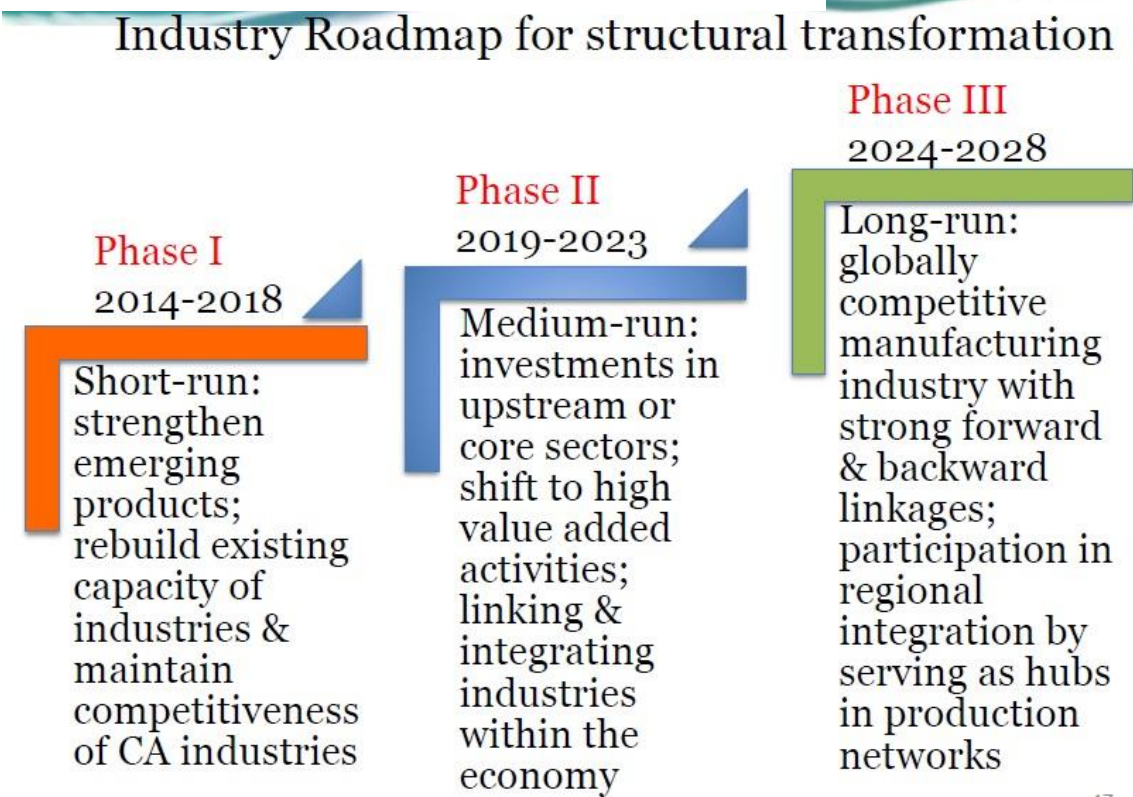
An analysis of the manufacturing sector's strengths, weaknesses, opportunities and threats show that, in addition to the country's competitive workforce and favorable export zone legalities, recent global developments present new opportunities for the Philippines to establish good positioning in global manufacturing. However, before embarking on an active revival campaign, care should be taken to address issues on rising power costs and poor infrastructure that clearly pose as hurdles to development. These challenges need to be overcome if the country is to fully benefit from inclusive economic growth in the manufacturing sector.

IV. The Manufacturing Industry Roadmap

The Manufacturing Industry Roadmap developed by the Philippine Institute for Development Studies and the Board of Investments has outlined the constraints and potential of the industry. It, likewise, provided recommendations on how a new industrial policy can help generate jobs and reduce poverty as well as take advantage of the opportunities that the manufacturing industry is offering. Moreover, the Roadmap provides the direction where to devote government's energies & resources, strategy and priorities. It has outlined short-run, medium term and long-run strategies that will bring the manufacturing industry to its goal of *"a globally competitive manufacturing industry with strong forward and backward linkages"* in 2028. Please refer to figure 5.

In the short-run, 2014-2018, the goal is strengthening and rebuilding existing capacity of industries that have strong potentials to generate employment. The gaps in terms of linkages also need to be addressed in this phase. Moreover, in the medium-term, 2019-2023, the goals would be to have new investments in upstream or core sectors such as iron & steel and other metals; and linking & integrating industries within the economy such as manufacturing, mining, agriculture and services.

Figure 5: Manufacturing Industry Roadmap



V. **Employment Prospects for the Manufacturing Industry**

The Department of Labor and Employment has identified the employment impact or number of potential jobs in some manufacturing sub-sectors. Table 5 shows that electronics has the biggest potential in terms of providing employment by 2016 at 350,000 jobs and this is followed by food processing at 144,000 jobs.

Table 5: Employment Potential by 2016

Manufacturing Industry Sub-Sector	Employment Impact (2016)
Electronics	350,000
Food Processing	144,000
Chemicals	83,000
Iron & Steel	11,000
Automotive	24,000
Garments	36,000
Mineral Processing	2,000

VI. Implications to Technical Education and Skills Development

Some specific strategic actions that should be undertaken by TESDA to take advantage of the gains being offered by the industry include the following:

- Expedite the development of the training regulations for **chemical manufacturing** (Process/Production Operator and the Quality Assurance and Control Technician), **semiconductor and electronics** (Semiconductor and Electronics Production Line Backend Operator, Semiconductor and Electronics Production Line Frontend Operator, Electronics Production Line SMT Operator, Semiconductor and Electronics Manufacturing Process Technician, Semiconductor and Electronics Equipment Repair and Maintenance Technician, Semiconductor and Electronics R&D Technician, Reliability and Failure Analysis Technician) and the **logistics industry** (warehousing services).
- Continue consultations with the sub-industry associations to identify other priority qualifications to help grow the industry.
- Strengthen TESDA-Industry Partnership especially with the manufacturing associations for the development of TRs for the prioritized qualifications and in the implementation of strategic actions to meet the changing demands in the industry. The partnership will also be in terms of policy and planning, labor market intelligence, training delivery, assessment and certification and financing.
- TESDA should look into and pursue enterprise-based trainings like dual training system (DTS) and apprenticeship with the member companies of the industry association.
- Purposely direct scholarships and other training assistance to critical and hard-to-fill skills requirements/qualifications in the manufacturing industry.
- Consistently improve the quality of and provide information and career guidance to students on their career choices and employment opportunities in the industry.