

A STRUCTURAL ANALYSES OF TEN ECONOMIES IN ASEAN ECONOMIC COMMUNITY

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Abstract

This paper focuses on a structural analyses in agriculture, manufacturing, and the service sectors of ten ASEAN economies. Their relative importance is examined by using their output shares in GDP, shares of exports in total exports, labor employment shares in total employment, and labor productivity. The study founds Myanmar, Cambodia, and Laos PDR as highly dependent on agriculture. Manufacturing is very important for all AEC economies, especially for Brunei. The service sector is important for all economies, especially for Singapore and Philippines. Singapore, Brunei, and Malaysia have very low employment in agriculture. Manufacturing and the service sector provide more employment opportunities for all economies. All economies have high employment in agriculture, except Singapore, Brunei, and Malaysia. Productivity is relatively low in agriculture for all economies, but higher in manufacturing, compared to the service sector for all economies. Generally, the export sector is crucial for all economies, especially for Singapore. Manufacturing exports in total exports are higher than agriculture and service exports, for all economies.

Keywords: ASEAN Economic Community, economy, GDP, exports, employment

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1. INTRODUCTION

ASEAN Economic Community (AEC) was fully integrated as agreed by the ten member ASEAN countries at the end of 2015. The region with a GDP of USD3.57 trillion and with a population of approximately 668 million in 2016 [1] is expected to be more vibrant and more rigorous in all economic activities. Integration enables the free flow of capital, goods, services, and labor. There will be quicker and more mobility of investment and labor among country members. Labor can move freely to a country that offers far better job opportunities or higher wages; businesses can choose to invest or expand in a market that is favorable and profitable. More trade and more flow of goods and services are expected among the member countries. Customers would enjoy high quality products, more choices, and lower prices. These are some positive outcomes of the ASEAN integration. However, to gain benefit from these expected favorable outcomes, businessmen and governments should understand the ten member economies well. They are different in various fronts. Thus, it is imperative to know their economic differences which are crucial for success for any endeavor in any economic activity in these markets.

The issue is what economic differences should government officers, businessmen, workers, and consumers must know. Which issues should be learned first? These are various unknowns that should be known and anticipated. They are crucial and prerequisite to understand other related information. Therefore, this paper attempts to propose, discuss, and explain some very important macroeconomic factors that would give a bird's eye view of each of the ten economies

in the AEC.

The study used economic data in 2012, the most recent statistics available for the comparative analyses. It covers the ten countries in AEC, and will begin with the largest economy in terms of GDP to the smallest. The order is as follows: Indonesia, Thailand, Malaysia, Singapore, Philippines, Myanmar, Vietnam, Brunei, Cambodia, and Laos. For each economy, the study will discuss the most important sectors first.

2. STRUCTURAL ANALYSES OF TEN ECONOMIES IN AEC

Indonesia is the largest economy of the AEC countries, both in terms of population and GDP. The country's approximate population is 260.6 million. Its GDP is USD941 billion and per capita GDP in 2016 is USD3,362 [1]. The export of goods and services is very important to Indonesia's GDP, accounted to 24.29% of its GDP in 2012, with a value of USD187.3 billion.

Manufacturing is the most important sector for Indonesia in terms of output and exports. It has the largest share in its GDP, accounted to 46.6%. The main products contributing to this sector are coal, footwear, oil, textile products, gold, paper products, automobiles, furniture, and electronics. The manufacturing exports accounted to 65.51% of total exports in 2012. The labors employed in this sector is the smallest, compared to labors employed in the service and agricultural sectors, only 13.2% of total employment. Given the above output and the labors employed, the productivity of labor in manufacturing is 3.53, which means 1% of labors employed in manufacturing can approximately produce 3.53% of GDP. It is the highest productivity of the three

sectors, namely manufacturing, service, and agriculture.

The service sector is the second most important sector in Indonesian economy in terms of output contribution to its GDP. However, export of the service sector has the smallest share in its total exports. It is only 14.1% in 2012. The service sector accounted to 39.1% of GDP. However, most of the labors employed worked in this sector, accounted to 47.9% of total employment. Given this output contribution and percentage of labors employed, labor productivity in the service sector is relatively low compared to labor productivity in the manufacturing, only 0.82, which means that 1% of labors employed in the service sector can produce only 0.82% of GDP. The main services are tourism, retail, transport, media, telecommunications, finance, and hospitality.

The agricultural sector is the smallest in terms of its output contribution to total output, accounted to only 14.3% of GDP. However, agricultural exports share in total exports is higher than the service exports, accounted to 20.39% of total exports in 2012. The labors employed in this sector is 38.9%. Given these shares, the labor productivity in agriculture is only 0.37, which is the lowest compared to manufacturing and the service sectors. The main products contributing to the agricultural output are palm oil, rubber, cocoa, coffee, tea, cassava, and rice.

Thailand is a country with a population of approximately 68.1 million. Its GDP is USD390.1 billion and per capita GDP in 2016 is valued at USD5,742 [1]. Export of goods and services is the major contributor to its GDP. Export of goods and services accounted to 74.98% of GDP in 2012, valued at USD225.8 billion.

The service sector's output has the largest share in GDP, accounted to 44.2% of GDP. The main services are tourism, health care, wholesale, retail, hotels, restaurants, and real estate. The labors employed in this sector is 48.2% of the total employment. Given these data, the labor productivity in the service sector is 0.92, which means that 1% of labors employed in this sector can produce 0.92% of GDP. The export of the service sector accounted to 10.05% of total exports.

The manufacturing output is the second largest contributor to GDP, accounted to 43.6% of GDP. The main manufacturing outputs are food, electronic appliances, automobiles and parts, textiles, plastic, cement, and garments. The labors employed in this sector is 13.6% of total employment. Given these data, the labor productivity of this sector is 3.21, which is higher than the service and manufacturing sectors. The export of manufactured goods accounted to 62.79% of total exports, the most important for Thailand's exports.

The agricultural output is the smallest, accounted to only 12.10% of GDP. The main products contributing to agricultural output are rice, sugar, rubber, and black tiger prawns. The labors employed in this sector is 38.2%. Given these figures, the labor productivity in this sector is 0.32, lower than the service and manufacturing sectors. The export of agricultural products accounted to 27.16% of total exports, second to manufactured exports, accounted to 62.79% of total exports.

Malaysia is a country with a population of approximately 32 million. Its GDP is USD302 billion and its per capita GDP in 2016 is USD9,501 [1]. The service sector is the most important sector for the Malaysian economy in both output contribution to its

GDP and percentage share of revenue in total exports. Its total export of goods and services is the major contributor to GDP, accounted to 87.14% of GDP in 2012, valued at USD227.7 billion.

The service sector is the largest contributor to GDP, accounted to 48.1%. The main services contributing to Malaysia's GDP are tourism, health care, education, Islamic finance, and information technology. The labors employed in this sector is 53.5%. Given the shares of output and labors employed, labor productivity in this sector is only 0.9, which means that 1% of labors employed in the service sector can produce 0.9% of GDP. The export of services accounted to 10.45% of total exports in 2012.

The second largest contributor to GDP is manufacturing, accounted to 40.6% of GDP. The main products of this sector are petroleum refineries, petroleum and coal products, industrial chemicals, beverages, tobacco, and nonmetallic minerals. The labors employed in this sector is 36%. Given the output contribution and the share of labors employed, the labor productivity in the manufacturing sector is 1.13, which means that 1% of labors employed can produce 1.13% of GDP. The labor productivity in this sector is higher than the service sector. The export of manufactured goods accounted to 55.86% of the total exports, the most important exports.

The agricultural output is the smallest, accounted to only 11.20% of GDP. The main products contributing to the agricultural output are palm oil, cocoa, and pineapple. The labors employed in this sector is 11.1%. Given the output contribution to its GDP and the labors employed, the labor productivity of the agricultural sector is 1.0, which means that 1% of labors employed in agriculture can produce

1% of GDP. Labor productivity in the agricultural sector is relatively lower than manufacturing. Labor productivity in the service sector is the lowest. The export of agricultural goods accounted to 33.69% of total exports, much higher than the service exports.

Singapore is a country with a population of approximately 5.61 million. Its GDP is USD296.6 billion and per capita GDP in 2016 is USD52,888 [1], the highest in AEC countries. Singapore has many important ports and the economy depends much on the export sector. The export of goods and services accounted to 191 % of its GDP, with a total value of USD408.4 billion in 2012.

The service sector is the largest contributor to Singapore's GDP, accounted to 70.6% of GDP. The main services contributing to this sector are financial services, trading, ship repair, information technology of products and services. The labors employed in this sector is 80.1% of total labors employed. Given these data, the labor productivity in this sector is 0.88, which means that 1% of labors employed in the service sector can produce 0.88% of Singapore GDP. It is relatively low compared to manufacturing. The export of services is 17.02% of the total exports.

The manufacturing output is the second largest contributor to Singapore GDP, accounted to 29.4% of GDP. The main products are oil drilling equipment, petroleum refining, rubber processing and rubber products, processed foods, and beverages. The labors employed in this sector is 18.6% of total labors employed. Given these data, the labor productivity in the manufacturing is 1.58, which means that 1% of labors employed in the manufacturing can produce 1.58% of Singapore GDP. The export of

manufacturing goods accounted to 82.80% of the total exports. Manufacturing exports are very important for Singapore's total exports. The agricultural output is the smallest, negligible in terms of contribution to Singapore GDP. The labors employed in this sector is 1.3% of total employment. Singapore has no export of agricultural goods.

Philippines is a country with a population of approximately 103.7 million. Its GDP in 2016 is USD311.7 billion and per capita GDP is USD3,002 [1]. The export of goods and services accounted to 30.8% of its GDP, valued at USD46.28 billion.

The service sector is the largest contributor to GDP, accounted to 57.2% of GDP. The main services are transportation, communications, wholesale, retail, finance, ownership dwelling, real estate, private services, education, health care, hotels, and restaurants. The labors employed in this sector is 53% of total employment. Given these data, the labor productivity of the service sector is 1.08, which means that 1% of labors employed in the service sector can produce 1.08% of Philippines GDP. The export of service sector accounted to 14.85% of total exports.

Manufacturing output is the second largest contributor to GDP, accounted to 31.6% of GDP. The main manufactured products are food, beverage, clothing apparel, footwear, tobacco, petroleum products, coal for power generation, chemicals for drug, personal care products, electronics, iron and steel. The labors employed in this sector is 15% of total employment. Given these statistics, the labor productivity in this sector is 2.11, the highest of the three sectors. The export of manufactured goods accounted to 51.63% of total exports.

The agriculture sector is the smallest, accounted to 11.2% of the GDP. The main agricultural products contributing to this sector are rice, corn, coconut, and sugar. The labors employed in this sector is 32% of total employment. Given these data, the labor productivity of the agricultural sector is 0.35, the lowest of the three sectors. The export of agriculture goods accounted to 33.52% of total exports.

Myanmar is a country with a population of approximately 54.4 million. Its GDP is USD 68.3 billion and per capita in 2016 is USD1,212 [1]. The service sector is very important for Myanmar's economy. The output from services accounted to 41.7% of GDP. The main services are telecommunications, mobile phone, television, radio, internet, hotel, and tourism. The labors employed in this sector accounted to 23% of total employment. Given these data, the labor productivity in the service sector is 1.81, which means that 1% of labors employed in the service sector can produce 1.81% of Myanmar's GDP.

Agriculture output is the second largest contributor to Myanmar's GDP, accounted to 38%. The main products contributing to this sector are pulses, beans, fish, and rice. The labors employed in this sector is 70% of total employment. Given these data, the labor productivity of this sector is 0.54, which means that 1% of labors employed in this sector can produce 0.54% of Myanmar's GDP, the lowest of the three sectors.

The manufacturing output is the smallest, accounted to only 20.3% of Myanmar's GDP. The main products contributing to agriculture output are wood and wood products, copper, iron, cement, and construction materials. The labors employed in this sector is 7%. From these data, labor productivity in the

manufacturing sector is 2.9, which means that 1% of labors employed in the manufacturing can produce 2.9% of GDP, the most productive of the three sectors.

Vietnam is a country with a population of approximately 92.7 million. Its GDP is USD205.7 billion and per capita in 2016 is USD2,088.81 [1]. The export of goods and services is very important to its GDP, accounted to 80.03% in 2012, valued at USD114.6 billion.

The service sector is the largest contributor to Vietnam's GDP, accounted to 42.2% of GDP. The main services are hotel and restaurants, education, and training. The labors employed in this sector accounted to 31% of total employment. Given these data, the labor productivity in the service sector is 1.36, which means that 1% of labors employed in the service sector can produce 1.36% of Vietnam's GDP. The export of services is only 1.88% of total exports.

The manufacturing sector is the second largest contributor to GDP, accounted to 38.5% of GDP. The main products contributing to this sector are food processing, garments, shoes, machine building, mining, coal, cement, glass, and tires. The labors employed in this sector is 21% of total employment. Given these data, the labor productivity in manufacturing is 1.83, which means that 1% of labors employed in manufacturing can produce 1.83% of Vietnam's GDP. The export of manufactured goods accounted to 33.09% of total exports.

The agricultural output is the smallest, accounted to only 19.3% of GDP. The main products contributing to agricultural output are rice, coffee, rubber, tea, pepper, soybeans, cashews, sugar cane, peanuts, bananas, poultry, fish, and seafood. The labors

employed in this sector accounted to 48% of total employment. Given these data, the labor productivity in agricultural sector is 0.40, which means that 1% of labors employed in this sector can produce 0.40% of Vietnam's GDP, the lowest of the three sectors. The export of agricultural products accounted to 65.03% of total exports.

Brunei is a country with a population of approximately 0.42 million, the lowest population of all ten AEC countries. Its GDP is USD10.1 billion and per capita in 2016 is USD30,993 [1]. Brunei is the largest oil producer of the AEC countries. Crude oil and natural gas production accounted to 60% of GDP. The export of goods and services accounted to 81.37% of GDP in 2012, valued at USD9.88 billion.

The manufacturing sector is the largest contributor to Brunei's GDP, accounted to 70.9% of GDP. Its exports accounted to more than 90% of total exports. The main products contributing to this sector are petroleum, petroleum refining, liquified natural gas, and construction. The labors employed in this sector is 62.8% of total employment. Given these data, the labor productivity of this sector is 1.13, which means that 1% of labors employed in this sector can produce 1.13% of Brunei's GDP.

The service output is the second largest contributor to GDP, accounted to 28.4%. The main services are community and social services and transportation. The labors employed in this sector is 33% of total employment. Given these data, the labor productivity in this sector is 0.86, which means that 1% of labor employed in the service sector can produce 0.86% of Brunei's GDP.

The agricultural output is the smallest, accounted to only 0.7% of Brunei's GDP. The

main products contributing to agriculture output are vegetables, fruits, chickens, and eggs. The labors employed in this sector is 4.2% of the total labors employed. Given these data, the labor productivity in this sector is 0.17, the lowest of the three sectors.

Cambodia is a country with a population of approximately 15.6 million. Its GDP is USD19.5 billion and per capita in 2016 is USD1,144 [1]. Its export of goods and services are vital to its economy, accounted to 63% of GDP, valued at USD6.016 billion in 2012.

The largest contributor to Cambodia's GDP is the service sector, accounted to 40.7% of GDP. The main services are tourism, transportation, and logistics. The labors employed accounted for 27.3% of total employment. Given such data, the labor productivity in the service sector is 1.49, which means that 1% of the labor employed in this sector can produce 1.49% of Cambodia's GDP. The export of services accounted for 4.58% of total exports.

Agriculture output is the second largest contributor to GDP, accounted to 34.8% of GDP. The main products contributing to this sector are fish, rice, tobacco, and rubber. The labors employed in this sector is 55.8% of total employment. From these data, labor productivity in this sector is 0.62, which means that 1% of labors employed in this sector can produce 0.62% of Cambodia's GDP, the lowest of the three sectors. The export of agricultural goods accounted for 85.33% of total exports.

The manufacturing output is the smallest, accounted for only 24.5% of Cambodia's GDP. The main products in this sector are textile, footwear, wood products, and gems. The labors employed in this sector is 16.9%

of total labors employed. Given these data, the labor productivity in the manufacturing sector is 1.45 almost the same as labor productivity in the service sector. The export of manufactured goods accounted to 10.09% of total exports.

Laos PDR is a country with a population of approximately 6.5 million. It has the smallest GDP of the ten ASEAN countries. Its GDP is only USD13.8 billion and the per capita GDP in 2016 is USD1,787 [1]. The total export of goods and services accounted to 36.24% of GDP, valued at USD1.98 billion.

The service sector is the largest, accounted to 40% of Laos GDP in 2012. The main contributors to the service sector are wholesale, retail, transportation, communications, postal services, rental of dwellings, public service, hotel, and restaurant. The labors employed in this sector is 20.6% of total employment. Given these data, the labor productivity in the service sector is 1.82, which means that 1% of labors employed in this sector can produce 1.82% of GDP. The export of the services accounted to 20.16% of total exports.

The second largest sector is manufacturing, accounted to 34% of Laos GDP. The main manufactured products are rice milling, beverage production for beer, coffee, and soft drinks, plastic products, gold mining, cigarettes, detergent, garments, and wood products. The labors employed in this sector is 6.1% of total employment. Given these data, the labor productivity in this sector is 5.25, which means that 1% of labors employed in this sector can produce 5.25% of GDP, the highest of the three sectors. The export of manufacturing goods accounted to 42.82% of total exports.

The smallest sector is agriculture, accounted to 26% of Laos GDP. The main agriculture products are rice, sweet potatoes, sugar cane, corn, tobacco, coffee, gold, and gypsum. The labors employed in this sector is 73.1% of total labors employed. Given these data, the productivity in agricultural sector is 0.34, the lowest of the three sectors. The export of agricultural goods is second to manufacturing exports, accounted to 37.02% of total exports.

3. A COMPARATIVE STRUCTURAL ANALYSES OF THE TEN ECONOMIES IN AEC

A structural analysis of agriculture, manufacturing, and service sectors of the ten AEC economies is provided in Section 2. However, indicators such as share of each sector output in GDP, labor employment and labor productivity, exports in total exports, only help to determine the relative importance of each sector. This only provides understanding of the individual economies. To understand the relative importance of agriculture, manufacturing, and service sectors in all AEC economies, a comparative analyses of the three sectors among the economies are required. Therefore, a comparative study of the contribution to GDP and exports of the three sectors of all economies is provided in 3.1 and statistics are shown in Figure 1 and Figure 2. Labor employment and labor productivity of the three sectors of all economies will be discussed in 3.2, and supporting statistics are provided in Figure 3 and Figure 4.

3.1 Contribution to GDP and total Exports of Agriculture, Manufacturing, and Service

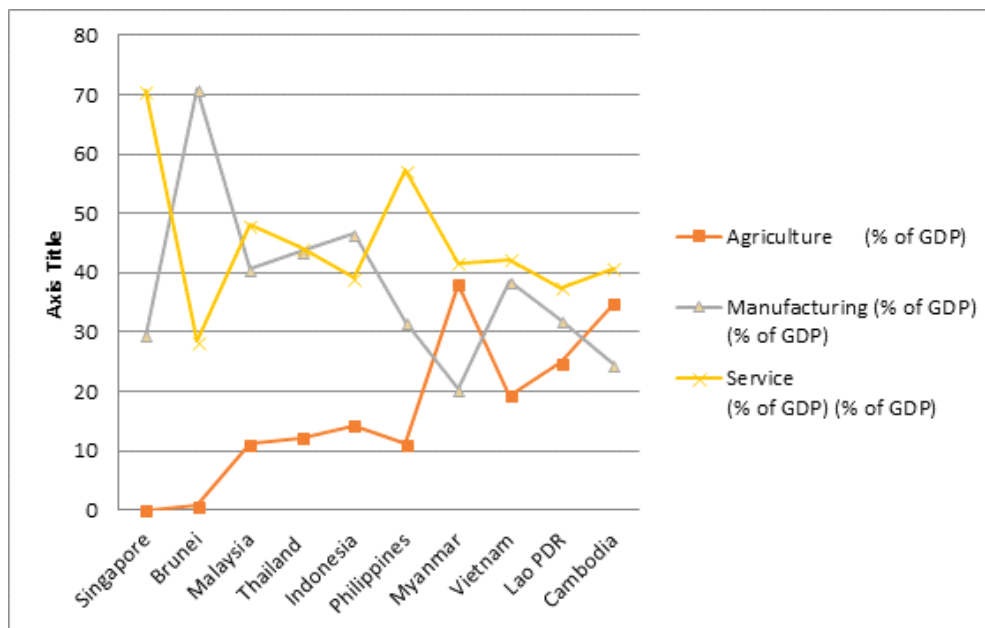
According to Figure 1 and Figure 2, agriculture is almost negligible for Singapore and Brunei. It contributed less than 1% to their GDP. Agriculture is moderately important for Vietnam, Indonesia, Thailand, Malaysia, and Philippines. It contributed less than 20% to their GDP. Agricultural exports are very important for Vietnam. It accounted to 65% of total exports. It accounted to 20-34% of total exports for Philippines, Malaysia, Thailand, and Indonesia. Agriculture is highly important for Cambodia, Myanmar, and Laos. It contributed more than 25% to their GDP. Agricultural exports accounted for 85% of total exports for Cambodia, and 37% for Laos.

Manufacturing is highly important for Brunei. It contributed 70% to its GDP. It is moderately important for Indonesia, Thailand, Malaysia, Vietnam, Laos, and Philippines. It contributed to 30-50% to their GDP. The manufacturing exports accounted to 66% and 63% in total exports for Indonesia and Thailand. They accounted to 56% and 52% for Malaysia and Philippines, respectively. For Laos and Vietnam, they accounted to 43% and 33%. Manufacturing has low contribution to the GDP of Cambodia and Myanmar, at less than 25% of their GDP. Manufacturing exports for Cambodia is low, accounted to 10% of total exports.

The service sector is highly important for Singapore and Philippines. It contributed to 71% and 57% to their GDP respectively. However, the service exports accounted to only 17% and 15% of total exports for Singapore and Philippines, respectively. It is

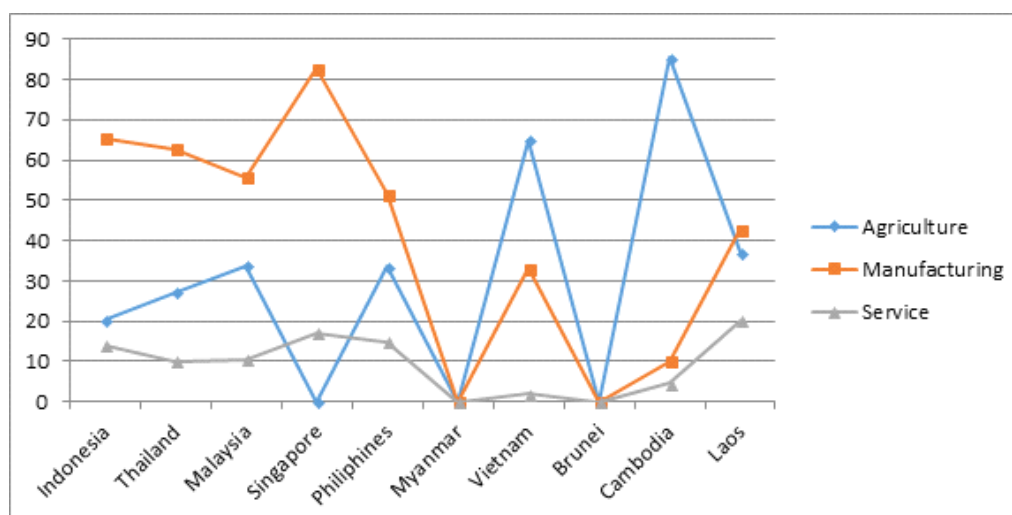
lower for Brunei, less than 30% of its GDP. It is moderately important for the rest of the member countries, between 30% and 49% of their GDP. The service exports accounted to 20% and 14% of total exports for Laos and

Indonesia. It accounted to 10% for both Malaysia and Thailand. It is between 1% and 5% for Vietnam and Cambodia (See Figure 1 and Figure 2).



Source: Constructed by the Authors

Figure 1: Agriculture, Manufacturing, and Service Output as % of GDP of Ten AEC Countries in 2012



Source: Constructed by the Authors

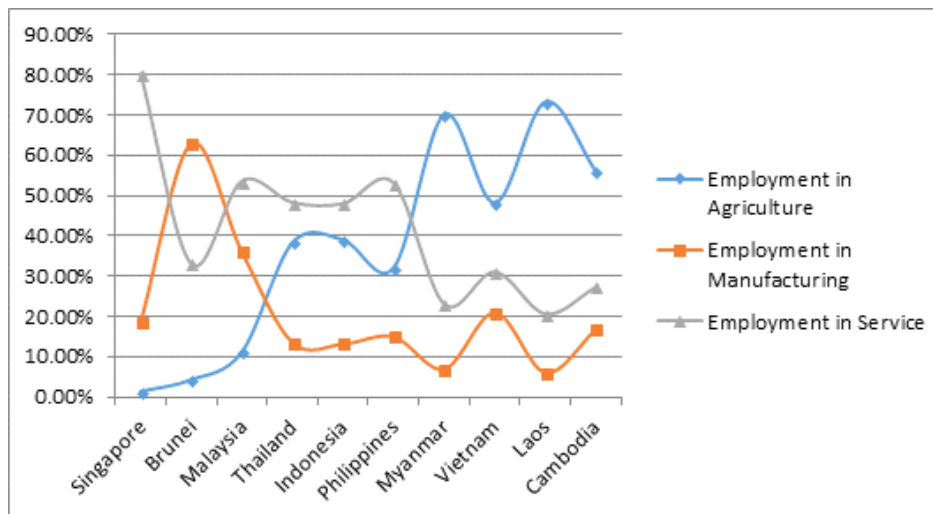
Figure 2: Percentage of Share of Agriculture, Manufacturing, and Service Exports to Total Exports of Ten AEC Countries in 2012

3.2 Employment, Labor Productivity in Agriculture, Manufacturing, and Service Sectors

According to Figure 3 and Figure 4, agriculture as a source of employment is low for Singapore, Brunei, and Malaysia. The three countries employed less than 12% of their total employment. Labor productivity in agriculture in Malaysia is 1 which is relatively high compared to 0.17 for Brunei. It is moderate for Vietnam, Indonesia, Thailand, and Philippines. The four countries employed less than 50% of their total employment. Their labor productivity is almost equal and relatively low. The value ranges from 0.32-0.40. Employment in agriculture is relatively high for Laos, Myanmar, and Cambodia. The three countries employed 73%, 70%, and 55.8% of their total employment respectively. Labor productivity of agriculture in Cambodia is 0.62, higher compared to 0.54 for Myanmar and 0.34 for Laos.

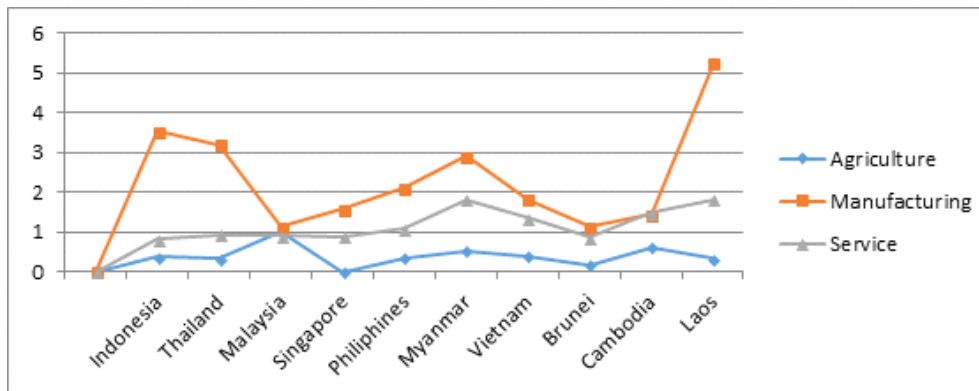
Employment in manufacturing is high for Brunei. It accounted to 63% of total employment. Its labor productivity is 1.13 which is relatively low. Employment in manufacturing is moderate for Malaysia. It accounted to 36% of total employment. Its labor productivity is 1.13 which is the same in Brunei. Employment in manufacturing is relatively low for the rest of the 10 economies. They accounted to 6%-21% of total employment. The labor productivity in manufacturing is relatively low for Vietnam, Singapore, and Cambodia, at lower than 2. However, labor productivity is relatively high for Laos, Indonesia, and Thailand at 5.25, 3.53, and 3.21 respectively. High labor productivity in manufacturing in Laos is not expected. It is subject to further investigation.

Singapore, Malaysia, and Philippines are outstanding for their high employment in the service sector. They employed 80%, 54%, and 53% of total employment, respectively. Their labor productivity is equally small, at only 1.



Source: Constructed by the Authors

Figure 3: Percentage of Labor Employed in Agriculture, Manufacturing, and Service in Ten AEC Countries in 2012



Source: Constructed by the Authors

Figure 4: Labor Productivity in Agriculture, Manufacturing, and Service in Ten AEC Countries in 2012

The employment in service is between 30%-48% of total employment for Thailand, Indonesia, and Vietnam. The labor productivity is relatively high for Vietnam, at 1.36, and less than 1 for Thailand and Indonesia. Employment in service is relatively low for the other economies. They employed less than 30% of their total employment. However, labor productivity of Laos, Myanmar, and Cambodia ranges between 1 and 2. The labor productivity in Brunei is relatively low, at less than 1.

3. CONCLUSION

Of the ten AEC economies Indonesia has the largest economy in terms of GDP and population while Singapore and Brunei have very high per capita GDP compared to the other ten AEC economies. Myanmar, Cambodia, and Laos are highly dependent on agriculture and the output share in GDP is very small for other economies. Manufacturing is important for all AEC economies but it is very

important for Brunei. Singapore and Philippines are very highly dependent on the service sector but it is also important for the rest of the AEC economies. Singapore, Brunei, and Malaysia have very low employment in agriculture but very high employment in manufacturing. The rest of the ten AEC economies also have high employment in manufacturing. Except Singapore, Brunei, and Malaysia, the seven other AEC economies have high employment in agriculture. Employment in the service sector is high for all the AEC economies, and particularly very high for Singapore. Productivity in agriculture is relatively low in all AEC economies, and high in manufacturing compared to the service sector. Generally, the export sector is crucial for all economies in the AEC, but especially very highly dependent for Singapore, and very important for Malaysia, Brunei, Vietnam, and Thailand. On a comparative structural analyses, manufacturing exports are higher than agricultural and service exports, for all economies in AEC.

REFERENCES

https://en.wikipedia.org/wiki/List_of_ASEAN_countries_by_GDP

<http://www.investopedia.com/terms/l/labor-productivity.asp>

<http://knoema.com/nwnfkne/world-gdp-ranking-2014-data-and-charts>

<http://www.indexmundi.com/Map/?v=21&r=as&l=en>

<http://data.worldbank.org/indicator/NE.EXP.GNFS.ZS>

<http://www.tradingeconomics.com/cambodia/exports-of-goods-and-services-percent-of-gdp-wb-data.html>

<http://data.worldbank.org/indicator/NY.GDP.MKTP.CD>