

GEOGRAPHIC ASSESSMENT OF INDUSTRIAL ZONE AND ITS EFFECTS ON LOCAL PEOPLE OF PATHEIN TOWNSHIP, AYEYARWADY REGION

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Abstract

The paper tries to present changes in Industrial sector of Pathein City and its effects on local people from geographical point of view. Industrial Zone of Pathein Township was established in 2013 and there were 7 factories. Most factories are located outside the industrial zone. Major factories located in industrial zone are textile industries and other factories such as ice factory, rice mills, etc. They give job opportunities for people living in the area and it attracts migrants from other nearby towns. Every factory has more than 2000 labours in the industrial zone and they are unskilled and skilled labours. The objectives of the paper is to understand changes in spatial distribution of factories of Pathein City, to investigate the factors supporting the Industrial Sector, to explore its effects on local people and to find out future prospects of the Industrial Sector of Pathein City. To present the paper, primary data and secondary data were used and focus group discussion was done with authorities, local people and labour, to get thorough understanding on its effects on local people. To present the paper, quantitative qualitative mixed methods and geographical methods will be applied.

Keywords: *Industrial sector, its effects on local people, migrants, unskilled and skilled labours*

Introduction

Industrial sector including small and medium size enterprise (SME) development is seen as a key to economic growth, innovation and market competition in most advanced western economies (Acs and Audretsch, 1990). Moreover, SMEs are considered as a central source of job generation, and wealth creation (Birch, 1979; Storey, 1994) and as a preparation against high unemployment and stagnant economic growth (Thurik *et al.* 2008).

Acs and Audretsch, 1990 stated small business growth could potentially be contributing to absorbing any labour surpluses which might result from economic restructuring and improving the trade balance through export earnings or import substitution and Coad and Tamvada, 2012 wrote that they offer individuals a livelihood and a source of independent revenue and small business and entrepreneurship provide a vehicle for people to escape from poverty and inequality (Naude, 2010).

Industrialization is crucial for economic development of a nation. Small and Medium Enterprises (SMEs) play a vital role in both developed and developing economies in terms of employment generation, expansion of output, export growth, poverty alleviation, economic empowerment and wider distribution of wealth (Pa Pa Kyaw, 2018).

In Myanmar, SME program had been initiated since 1990. In Myanmar, totally 18 industrial zones were established in 1990 under the supervision of Myanmar Industrial Development Committee (MIDC). SMEs dominate most of the economy contributing 34-48 % of GDP. Pathein Industrial Zone was established in 1993. Although industrial zone was established, most factories are still located outside the industrial zone. Like other industrial zones, it encounters the challenges and deficiencies.

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Main industries of Myanmar are agricultural processing industries, wood and wood products industries, copper, tin, tungsten, iron industries, cement, construction materials industries, pharmaceuticals industries, fertilizer industries, petroleum and natural gas industries, and garments industries. In Patheingyi Industrial area, major industries are food & beverages industries, clothing industries, construction materials industries, personal goods industries, household goods industries, industrial raw material industries, mineral & petroleum products industries, agricultural & equipment industries, machinery & equipment industries, electrical goods industries, transport vehicles industries and miscellaneous.

Patheingyi City located in Ayeyarwady Region possess agro-based industries that depend local raw materials and existing mode of transportation supports the growth of small and medium enterprises. Patheingyi City is one of the largest city in Myanmar and rice mills, saw mills and salt mills are found. Moreover, other industries such as textile industries, Patheingyi traditional snack (Harlawar) and other cottage industries are also found.

Patheingyi City is one of the major industrial areas in Myanmar. Competitive land price, abundant labour supply, easy accessibility due to two main modes of transport (road and river/ sea), 188 km away from Yangon, a major commercial city of Myanmar, and waterfront and port facilities are major supporting factors for the growth of industrial area. Industries are found both in industrial zone and in other areas of the town. Therefore, to present current industries in Patheingyi City, all industries located in Patheingyi City are studied.

Objectives

The objective of the paper is-

- to study the number and types of industries in Patheingyi City,
- to investigate the factors supporting industries in Patheingyi City,
- to explore its effects on local people and
- to find out future prospects of Industrial Zone of Patheingyi Township.

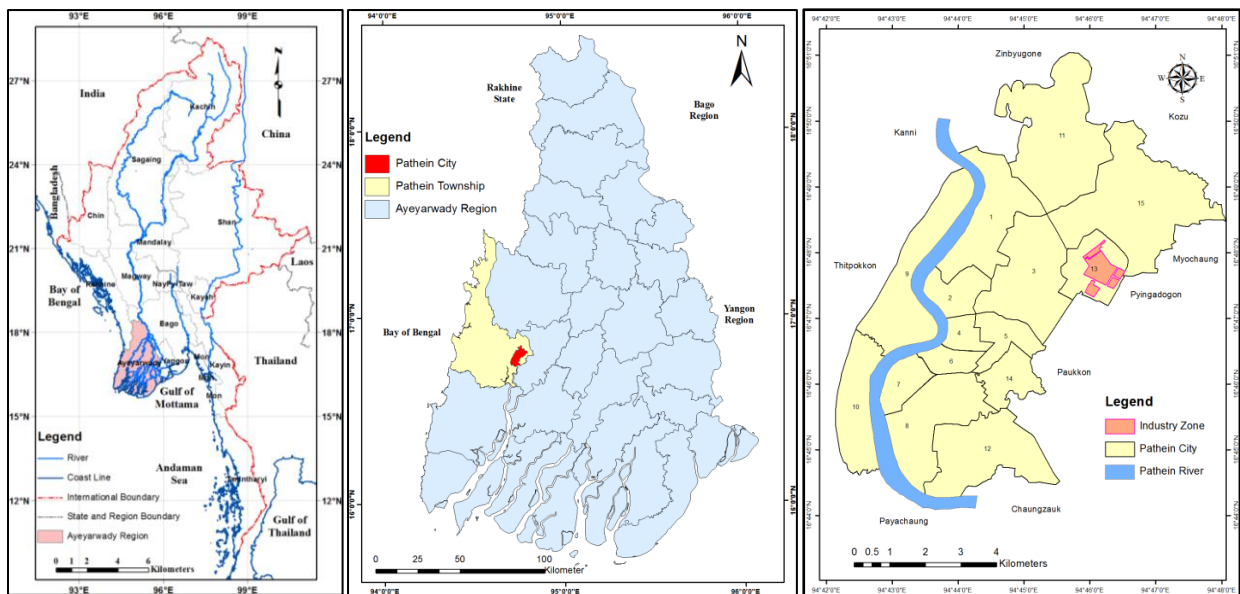
Data and methodology

Primary data: labour availability, original place, length of stay, etc were collected through field survey and questionnaires. Interviews were done with authorities of Patheingyi Industrial Zone to find out changing growth of industries. Necessary secondary data and information were collected mainly from Patheingyi Industrial Zone and related activities.

Descriptive method was used by using secondary data to present changing trend of industries in industrial zone. Primary data were mainly used in applying qualitative and quantitative method. Geographic methods were also used in illustration of changes in Industrial Zone.

Basic Facts of Patheingyi City

Patheingyi City is located in the eastern part of Patheingyi Township and it serves as the capital of Ayeyarwady Region. The geographical location of Patheingyi City lies between north latitudes 16°44' and 16° 51', and east longitudes 94° 42' and 94° 48'. The area of the city is 66.1square kilometer (25.52 square mile). The city is made up of 15 wards.



Source: Survey Department, Pathein

Figure 1 Location of Pathein Township and Ayeyawady Region

Generally, the city is about 10 meter high (33 feet) above sea level and Pathein City receives the tropical monsoon type of climate and mean monthly temperature is 27.9°C and the average total annual rainfall is 3062.5 mm. In 2019, the total population is 163,996 persons.

Results and Findings

Current Status of Industrial Sector in Pathein City

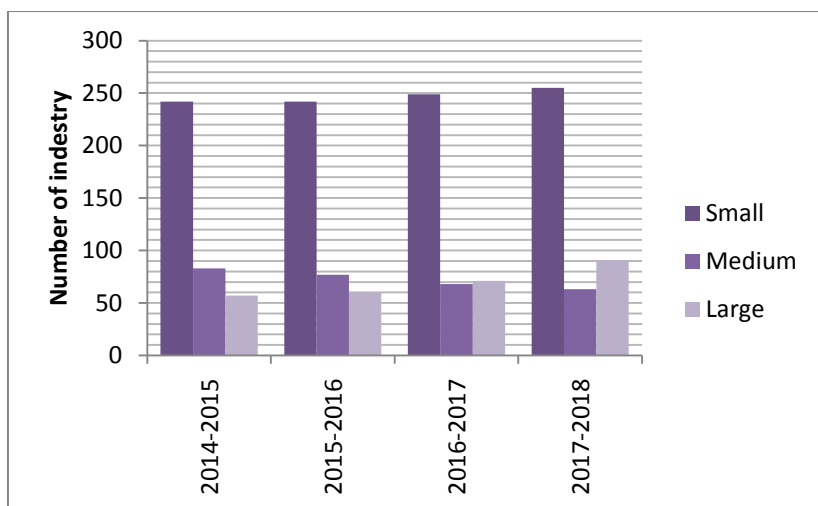
Number of industries in Pathein City increased in the study period due to accessibility and labour availability.

The amount of investment and production had risen and number of workers also increased significantly during the period under study. The number of small enterprises did not change significantly and the number of medium enterprises had declined. It might be due to the improvement of medium to large enterprises.

Table 1 Number of Registered Industries in Pathein

No.	Year	Number of Industry			Total
		Small	Medium	Large	
1	2014-2015	242	83	57	382
2	2015-2016	242	77	60	379
3	2016-2017	249	68	71	388
4	2017-2018	255	63	91	409

Source: Department of Industrial Supervision and Inspection, Pathein



Source: Department of Industrial Supervision and Inspection, Patheingyi

Figure 2 Number of Registered Industries in Patheingyi

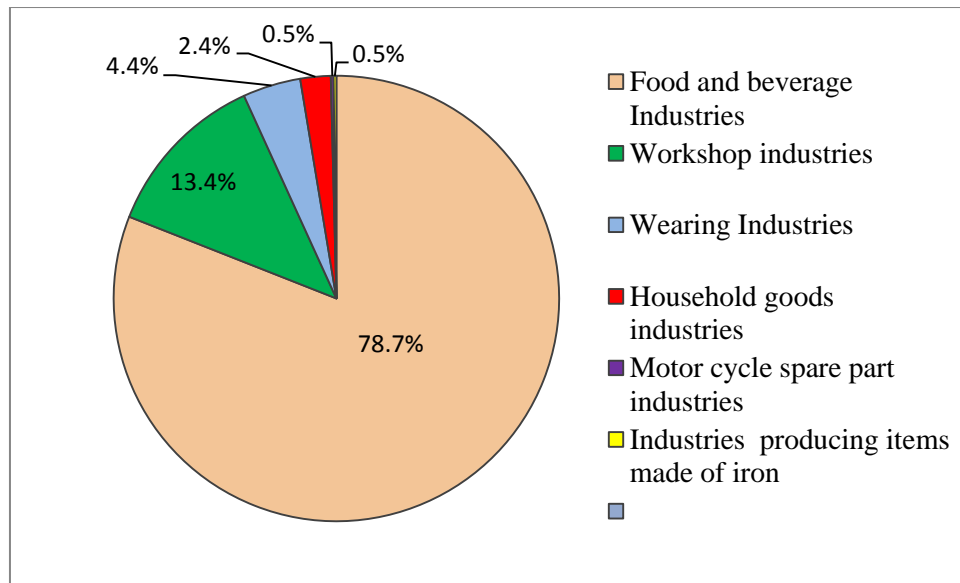
In Patheingyi City, 6 major industries are mainly found and they are food and beverage industries, wearing industries, household goods industries, industries producing items made of iron, motor cycle spare part industries and workshop industries.

In Patheingyi City, total number of factories was 409 in 2018. Among the industries located in Patheingyi City, food and beverage industries is largest in number with 322(80.9 percent) and Miscellaneous Industries including workshops ranked second with 50 (12 percent).

Table 2 Types and Number of industries in Patheingyi City

No.	Type of industry	Total Number of Factories	Percent
1	Food and beverage Industries	322	78.7
2	Wearing Industries	18	4.4
3	Household goods industries	10	2.4
4	Industries producing items made of iron	2	0.5
5	Motor cycle spare part industries	2	0.5
6	Workshop industries	55	13.4
	Total	409	100

Source: General Administrative Department, Patheingyi



Source: Table 2

Figure 3 Types and Number of Industries in Patheingyi City

The industrial establishment is chiefly found along the river banks, especially on the eastern side of Patheingyi River. Owing to poor drainage condition in the northern section of the city area, the factories are limited along the western bank of Patheingyi River and the southern part of urban area. Food and beverage factories are found along Patheingyi River bank and large scale industries such as rice mills, saw mill and salt mill and dock-yard are also found.

Food and beverage industries rank first with more than half of industries, followed by construction materials. The proportion of industrial raw materials, machinery and equipment operated the smallest. It indicates that industries mainly operated with low level of technology with minimal investment.

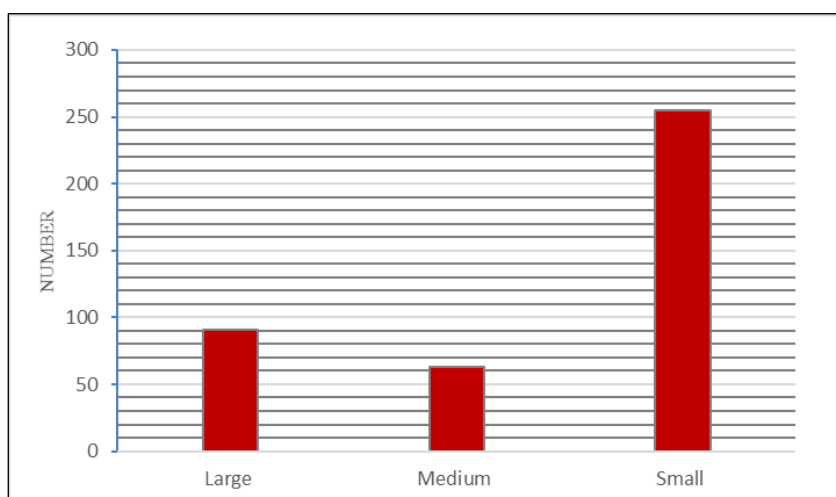
Total number of factories was 80 in Industrial zone and that of outside Industrial zone 329. In most townships of Ayeyawady Region, most of the industries are situated in Industrial Zone but in Patheingyi City, larger number of factories lies outside the Industrial Zone although Patheingyi Industrial Zone was established in 1993. The Industrial Zone is situated near the Patheingyi highway bus terminal and Kinmalinkyun railway station. Among factories located in Industrial Zone, workshop industries including motor car's work shop were largest (55) because of increasing number of automobiles. Number of garment factories is 10 factories and the rests are ceramic factories and building material factories. Therefore it is certain that there will be work opportunities for the local people.

Table 3 Number of industry in and outside of Industrial Zone

Type of Industry	Number of factories in Industrial zone	Number of factories outside Industrial zone	Total
Food and beverage Industries	15	307	322
Wearing Industries	10	8	18
Household goods industries	5	5	10
Industries producing items made of iron	2	0	2
Motor cycle spare part industries	2	0	2
Workshop industries	55	0	55
Total	89	320	409

Source: Department of Industrial Supervision and Inspection, Pathein

In Pathein City, although there are large enterprises, medium and small enterprises, more than 250 small enterprises are small and it is largest in number. Medium enterprises are smallest in number with 63. High percentage in food and beverages sector indicated that industries mainly operated with low level of technology with minimal investment.



Source: Department of Industrial Supervision and Inspection, Pathein

Figure 4 Large, medium and small enterprises in Pathein City

Major Factors supporting industries in Pathein City

Locational advantages

Pathein City is located in southern part of Ayeyarwady Region. Existing physical factors especially location, relief, etc are favourable for industries establishment.

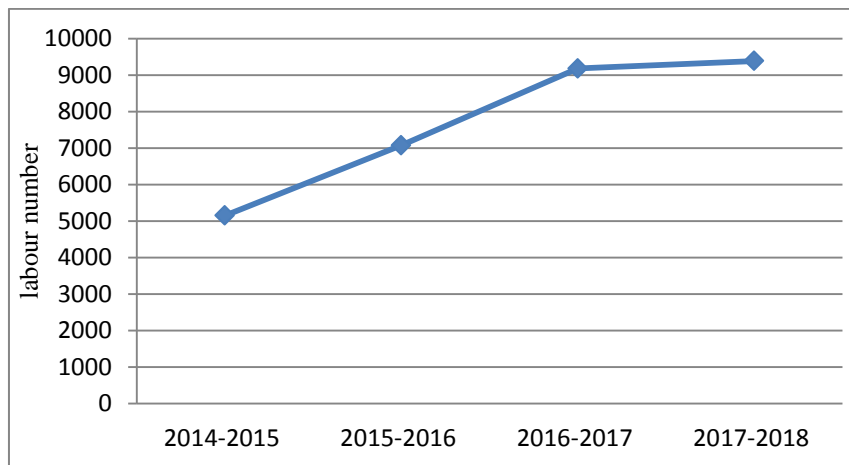
Pathein is 188 kilometer far from Yangon. It is a sea port city which is about 120 kilometer away from the sea. Therefore, Pathein has the largest number of factories in Ayeyawady Region. It is suitable to establish factories in Pathein because it is situated in Ayeyawady Delta having vast plain areas with the exception of a few areas covered with water. As situated on both side of Pathein River and having good transportation, there are many rice mills, salt mills, vermicelli mills, saw mills and dock-yards along the river sides.

Support of Government

Economic policy to support and assist MSMEs, the first exhibition and competition was jointly launched by the Ayeyarwady Region Government and Ministry of Industry. The event was held in Pathein on 13 May 2018. In June 2018, Ministry of Industry held a workshop for Ayeyarwady Region SME Agency Plan (Pa Pa Kyaw, 2018)

Population

The town population was 129376 persons in 1983 and the average growth rate of population with 1.43 per cent becomes 158172 persons in 2004. According to the available statistics 2014, population increased to 18653 persons by the average annual growth rate of 0.85 percent. At present in 2019, the total population of Pathein is 163,996 persons. The higher population growth was due to favourable transportation routes and Pathein Industrial City Project. People living in nearby area moved to Pathein City because of job opportunity. Some industries such as textile factory are labour intensive and labour availability is one of the major supporting factors for industries in Pathein City.



Source: Department of Industrial Supervision and Inspection, Pathein

Figure 5 Increase in labour force of Registered Industries in Pathein City

Accessible area

It is located in the accessible area. It is located on Pathein-Monywa Highway and Pathein – Yangon Road. Moreover, Pathein – Hinthada - Kyangin Railway line (145 kilometer) supports to carry products produced from factories in Pathein City. It has also an outlet to the sea at Pathein Port. Clothes produced from garment factories are carried from the sea.

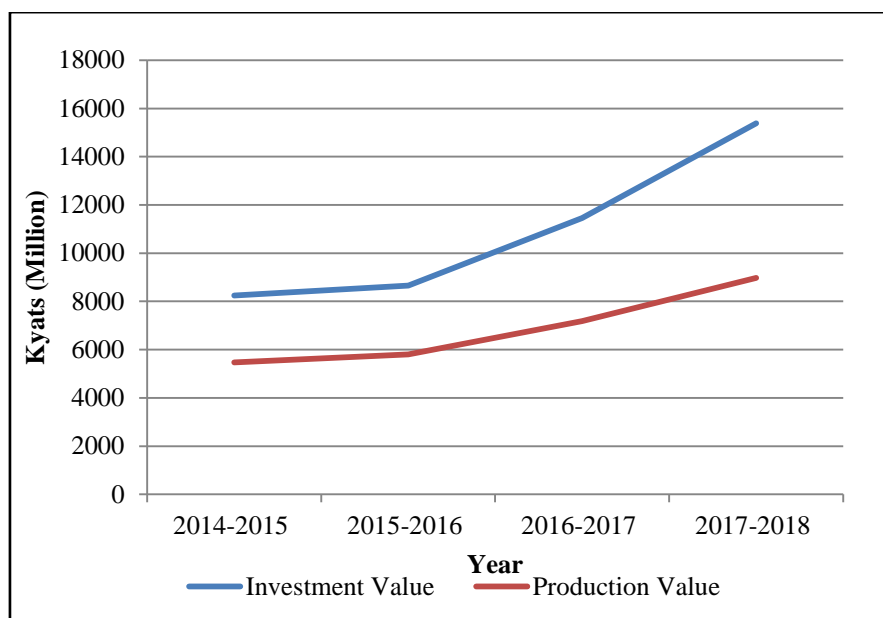
Investment

Investment is one of the factors supporting industries in Pathein City. In the study area, not only Investment but also 5469.331 gradually increased between 2014-2015 and 2017-2018.

Table 4 Investment and Production Value of Industries in Pathein City

Year	Investment Value (in million Kyats)	Production Value (in million Kyats)
2014-2015	8242.801	5469.331
2015-2016	8655.325	5805.277
2016-2017	11461.77	7181.503
2017-2018	15387.09	8976.015

Source: Department of Industrial Supervision and Inspection, Pathein



Source: Table 4

Figure 6 Investment and Production Value of Industries in Pathein City

Others

The Government, through the SMEs Development Centre and in cooperation with SMIDB had started loan programs for SMEs. Financial difficulty is the root cause of SMEs challenges. Insufficient capital is a major drawback of SMEs. The loans were available for one-year term at an interest rate of 8.5%. According to interview, CB Bank, Myanmar Apex Bank, Myanmar Citizens Bank, KBZ Bank and SMIDB Bank provided loans for SMEs in Pathein City. If the existing banking system could support, SMEs will benefit from financing their medium- and long-term investments. Insufficient capital prevents businesses for technology improvement and market penetration.

Not only the financial problem, but also other challenging problems such as inadequate power supply are also the factors affecting industries in the area.

Characteristics of Migrants

According to interview, more than half of the industrial workers are migrant labour and adult male and female from nearby towns and villages moved to Patheingyi City for the purpose of getting regular income.

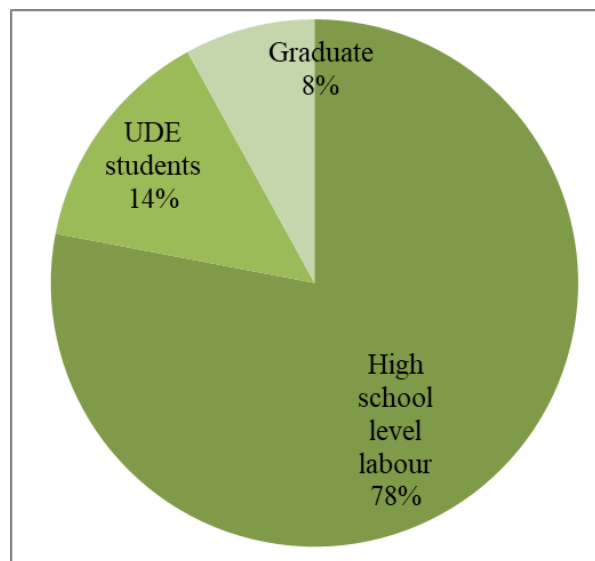
According to questionnaires and interviews, most migrant workers come from nearby towns such as Einme, Kangyidaunt, Kyaunggone, Danuphyu, etc. Moreover, some labourers moved from other regions such as Taungoo, Bago, etc.

Although some migrant workers have live in Patheingyi City for more than 12 years, most migrants (nearly 70 percent) moved into Patheingyi City only last 5 or 6 years. It shows that number of migrant workers gradually increased due to job opportunity and better environment.

Nearly 80 percent of the migrant workers are female because most of the factories such as garment factories, soft drink factories need more female labours. Nearly 30 percent of the migrants moved from one factory to other factory located in Patheingyi City. It is a nature of the blue collar workers found in developing countries. They can get job easily because of low skilled workers and most factories need low skill workers. One or two family members living in other areas came to Patheingyi City to earn extra income while the remaining family member stay behind in their native places.

According to questionnaires' results, 72 percent of the labourers working in industries get regular income with less than 200,000 kyats per month and 28 percent more than 200,000 kyats. All workers pay 100,000 kyat per month to their family.

Seventy-eight percent of the workers do not pass matriculation exam and 14 percent of the migrant workers are students from University of Distance Education. Remaining percent are graduates from University. Job is easily available and job availability does not depend on education level.



Source: questionnaires' results

Figure 7 Education level of industries workers in Patheingyi City

Conclusion

Pathein City has favourable location for establishing Industries. It possesses three modes of transportation: road, railway and water way and they are also supporting factor. It has a port that gives a locational advantage to carry products produced from the area to other areas including foreign countries.

In the area, most are rural people but they have a chance to work in these industries because job requirement is irrespective to education. High rural population support unskilled labour for industries in Pathein City.

Most of the factories are food related and it shows that the level of industries was still low as well as they produce items for local consumers. Although garments factories are located in Pathein City, their existence is due to cheap labour availability of the area. The items produced from these factories are carried by sea.

At present, industries of Pathein City are increasing and it will be more developed in the future because of government policy encouraging SMEs' growth, increase in population and better accessibility.

Although the number of industries increased in the area, availability of skilled workers through capacity building of industries, labour force is important for the area. Industries need to produce value-added products with international packaging designs. Furthermore, by conducting research and innovation through cooperation with relevant institutions, qualified marketable products will be produced.

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