

ASSESSING ON DECLINING TRADITIONAL MANUFACTURING INDUSTRIES OF CHAUNGZON TOWNSHIP: A CASE STUDY OF SLATE AND SLATE PENCILS INDUSTRY AND PIPE INDUSTRY

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Abstract

In Chaungzon Township, various manufacturing activities such as pipes, walking sticks, bamboo products, slate and slate pencils, rubber rings and other handicraft industries are found. Among them, slate and slate pencils, and pipe produce unique local traditional products that have cultural value. But, the traditional product work decrease in production and significance due to changing market demand, raw material availability, technology improvement, etc. To present traditional, manufacturing industries particularly production of slate and slate pencils industry and pipe industry, Chaungzon Township was selected as study area. The products of manufacturing activities of Mudu village tract and Ywalut village tract are not only used for local areas but also exported to other regions. Then, present situation, problems and future prospects of were presented. Some manufacturing activities such as pipe industries, walking stick industries and slate and slate pencils industries are found to be in slow progress in study area. This is due to the shortage of skilled labours, decrease of market demand and insufficiency of capital.

Keywords: manufacturing activities, pipe industries, slate, slate pencils, walking stick

Introduction

Chuta & Allal, 1982, said that the local traditional product production plays an important role in income and work opportunity and it also been accepted worldwide as a mean for poverty reduction. Leesuwan, 2010, then, mentioned that the local products lost its role because industrial products flourished due to better quality, beautiful design and high demand. Yang et al, 2018, also wrote that traditional products reflect the culture and tradition of a particular region.

In most countries, local traditional product and craft production decline in certain extent due to technology improvement, low market demand, low economic return, etc. Local traditional product cannot compete modern products that have high quality and are more beautiful although local traditional product has intangible cultural value.

Objectives of the paper are:

- To examine present traditional manufacturing industries of Mudu village and Ywalut village tracts.
- To explore the major requirements to improve the production of local traditional products
- To understand the declining of traditional manufacturing industries in the study area
- To predict future prospects on local traditional products production

Methodology

The research work was based on primary data and secondary data. Primary data are collected through field observation and semi-structure interviews. Primary data are mainly

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concerned with major requirements for traditional manufacturing industries, present and past situation, problems encountered by labour and owners, etc. In Mudu Village Tract, 3 owners and 3 labour of slate and slate pencils were interviewed and 3 owners and 3 labour of pipe industries in Ywalut Village Tract.

Secondary data were obtained from departments concerned. Key informants who experience more than 40 years were interviewed to get in-depth understanding on traditional manufacturing industries of Chaungzon Township. To present the research work, exploratory approach was used. To present the paper, geographical techniques were applied and Geographic Information System tools are used to portray traditional manufacturing industries in Chaungzon Township.

Study Area

Chaungzon Township is one of the ten townships in Mon State. It is located in the western part of Mawlamyine Township. It lies between latitudes $16^{\circ} 8' N$ and $16^{\circ} 32' N$ and longitudes $97^{\circ} 21' E$ and $97^{\circ} 38' E$. It has an area of 658.13 km^2 or about 5.35 per cent of the total area of Mon State. Chaungzon Township is located 10-minute driving time from Mawlamyine, the capital of Mon State. Slates are a unique product of Mudu Village because plenty of the slate is extracted near Mudu Village.



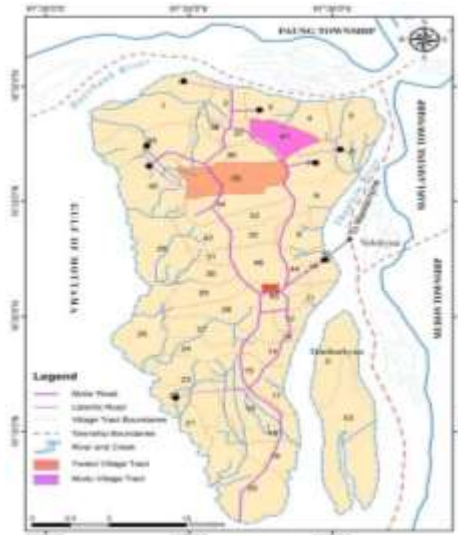
Source: MIMU

Figure 1 Location of Chaungzon Township



Source: MIMU

Figure 2 Wards and Village Tracts of Chaungzon Township



Source: MIMU

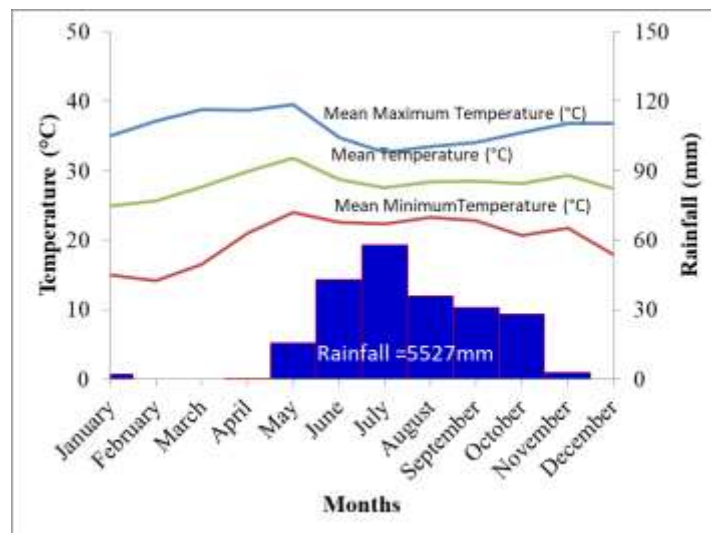
Figure 3 Study Areas (Ywalut and Mudu Village Tract) in Chaungzon Township

Social Background of Chaungzon Township

The topography can be divided into two parts: ranges and lowlands. Ranges lies in the central part of the township, generally trending from north to south. The ranges rise from 100' to 600' high above sea level. The foothill is below 50' above sea level.

Temperature is high throughout the year, because the township is in the tropical region. Range of temperature is small due to nearness to the Gulf Mottama. During 14 year- period from 2002 to 2015, the mean minimum temperature in January is 24.62° C (76.31° F).

The average monthly mean maximum temperature in April is 30.55° C (86.99° F). There is an average range of mean temperature of 5.93° C (42.67° F). Total rainfall is 5527 mm and the study area is one of the areas that get higher rainfall due to its location. Therefore, slate extraction has not been done in the rainy season owing to high risks. The area experiences tropical monsoon (Am) climate.



Source: Meteorology and Hydrology Department, Yangon

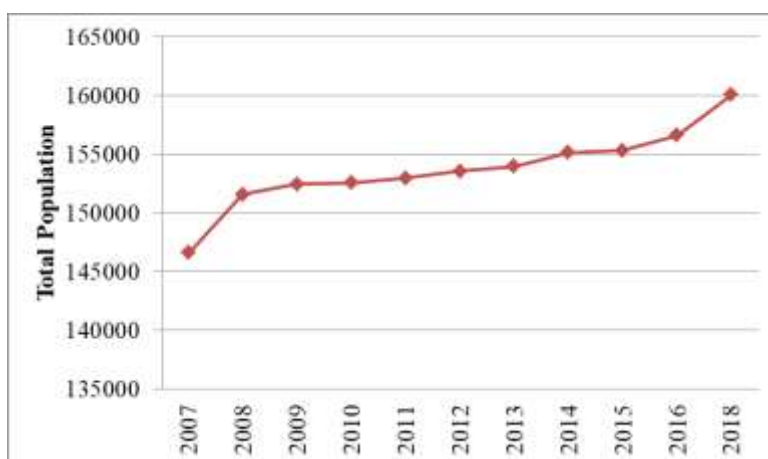
Figure 4 Temperature and Rainfall of Chaungzon Township (2008-2019)

Demographic Background of Chaungzon Township

In 2008, population of Chaungzon Township was 151573 and it increased to 153956 in 2013. Then, population increased to 160065 in 2018. The population increased due to natural increase and migration.

Physical Features of the township influence the population distribution. Generally, the foothill areas of the central ridge are the most populated because of fertile agriculture land, easy accessible road transportation and higher ground above the level of flood. The western part is sparsely populated due to the low level plain and flooding. The eastern and northern part of the township is densely populated.

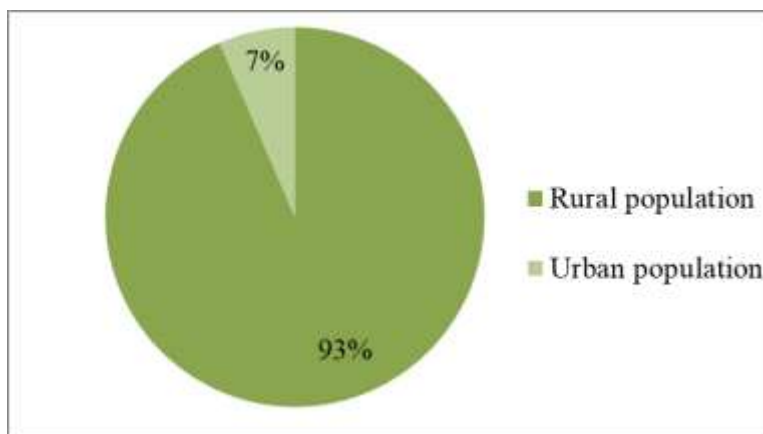
Population density of Changzon Township was 233.31 persons per sq-km in 2012 and it increased to 237.98 persons per sq-km in 2016. Population density of Changzon Township was 243.2 persons per sq-km in 2016. Ywalut and Mudu village tracts are of medium population density with between 501 and 1000 person per sq-km.



Source: Labour, Immigration and Population Department, Chaungzon Township

Figure 5 Population Growth of Chaungzon Township (2007 to 2018)

Urban population is 7 percent and they depend on secondary, tertiary sector and etc. The rural population is 93 percent that depends on primary activities such as agriculture, fishing, etc.



Source: Labour, Immigration and Population Department, Chaungzon Township

Figure 6 Urban and rural population for Chaungzon Township

Chaungzon Township is famous for traditional products such as pipe industries, walking stick industries, bamboo products industries, other handicraft industries, slate and slate pencils industries and rubber rings industries and people in this region work in traditional manufacturing activities.

Skilled labour is one of the important factors for the development of manufacturing activities because manufacturing activities chiefly depend on the sophisticated machine and the use of manual labour in the study area. According to data of General Administrative Department, Chaungzon Township, nearly 10 percent of the total population engages in manufacturing activities including pipes, slate and slate pencil production.

Results and Findings

Manufacturing Industries of Chaungzon Township

There are many types of manufacturing industries in Chaungzon Township. They are pipe industries, walking stick industries, rubber rings industries, bamboo products industries, rice mill industries, saw mill industries, purified drinking water factories, blacksmith industries, goldsmith industries, slate and slate pencils industries, concrete industries and furniture industries, etc.

Among them, pipe industries and slate and slate pencils industries were selected to be presented because of unique local traditional economies that are mainly found in Chaungzon Township within Myanmar.

Table 1 Manufacturing Industries of Chaungzon Township

Type	Type of Industries	Total	Percentage
1	Pipe industries	7	1.1
2	Walking stick industries	3	0.5
3	Rubber rings industries	3	0.5
4	Bamboo products industries	301	45.4
5	Rice mill industries	111	16.7
6	Saw mill industries	31	4.7
7	Furniture industries	21	3.1
8	Blacksmith industries	16	2.4
9	Steel and ironsmith industries	33	4.9
10	Goldsmith industries	15	2.3
11	Slate and slate pencils industries	15	2.2
12	Brick Baking industries	19	2.9
13	Concrete industries	21	3.1
14	Purified drinking water factories	3	0.5
15	Other handicraft industries	64	9.7
		663	100

Source: General Administrative Department

Traditional manufacturing industries in Chaungzon Township

Although there are many types of manufacturing, Chaungzon Township is famous for local traditional products production such as slate and slate pencils, pipe, etc.

Pipe industries and Slate and slate pencils industries

In Chaungzon Township, 7 Pipe industries and 15 slate and slate pencils industries are found. Pipe industry is only found in Ywalut Village Tract and slate and slate pencils industries in Mudu. Ywalut is a tourist attraction for its handcrafted pipes and while its neighbor, Mudoon, has been famous for producing writing slates.

Raw materials

Major raw materials needed for pipe industries are timber, stem made with fibre or rubber, super glue, polished oil, etc. Timber are obtained from Hpa-an, Mupon, and Belukyun at which parts of timer floating in rivers are collected to be used in pipe making. Some small timbers are also obtained from saw mills located in Belukyun. Super glue, polish oil, fiber are available from Malamyine and rubber stem from Bago.



Source: Researcher (12.5.2020)



Source: Researcher (12.5.2020)

Plate 1 Raw Materials for Traditional Pipe Industry

Plate 2 Raw Materials for Traditional Pipe Industry

Slate and slate pencil production need raw slate and timber only. Slate had extracted from Mudun Mountain of Belukyun but extraction from the area has been stopped due to low demand. Therefore, some owners have bought slate from Thahton for the purpose of continuing their work.



Source: Researcher (13.5.2020)



Source: Researcher (13.5.2020)

Plate 3 Raw Materials (Slate) for Slate and Slate Pencils Industry

Plate 4 Raw Materials (Timber) for Slate and Slate Pencils Industry

Teak and Padauk that are expensive are used only in pipe industries and raw materials for Pipe industry become scarce. Therefore, owners buy small parts Teak and Padauk tree from saw

mills as cost of Padauk tree is between 30000 and 40000 Kyats. The pipe made with teak is durable and that of Padauk is more beautiful.



Source: Researcher (12.5.2020)



Source: Researcher (12.5.2020)

Plate 5 Pipe production in traditional pipe industry

Plate 6 Pipe production in traditional pipe industry

Three size of slate are produced and the cost is 2500Ks per 100 sheets. Owners of the slate industries also buy trees to make frame of slate and it costs 60000 ks or 80000ks.



Source: Researcher (13.5.2020)

Plate 7 Raw Slate for making slate and slate pencils



Source: Researcher (13.5.2020)

Plate 8 Processing in slate making

Processing

In pipe production, teak and Padauk are mainly used to make pipe although Yinkhat is used in pipe making. Workers firstly cut the timber and after that mold it manually or by small machine in necessary pattern. Then, to be smooth, the raw pipes are rubbed by sandpaper. Stem is put into the pipes and they are polished.

Price of pipe differs from one type to another. Pipes made with teak and padauk are more expensive than those made by Yinkhat. Price of pipe made with teak and padauk is about 8000 ks and that of Yinkhat is 1000 ks.

In slate making, raw slate plate is cut into various size depending on demand. To be smooth, slates are rubbed by files and then, they are painted black. Moreover, it is necessary to slate frames with timber. Timber is cut by saw and grooves are created in the middle of the frame to fix the slate. Price of slate differs depending on size.

Investment for pipe work is about 10 lakh and 50 lakh are needed for slate work. As the investment is not too much for these works, if demand is high, local people can perform the work by using family labour force. Sorayaei et al, 2014, said that technology improvement have the greatest effect on quality, export and marketing, and low cost. But, on the other hand, it will decrease employment opportunity for local people.

Labour

In pipe production, polishing was mainly made by female workers lase decades. But, at present, these processes can be done not only male workers but also female workers with the help of small machines. In slate production, painting and smoothening are mainly made by male workers and slate cutting and timber cutting are done by female labour.



Source: Researcher (12.5.2020)

Plate 9 Processing in Pipe Industry



Source: Researcher (12.5.2020)

Plate 10 Female Labour in Pipe Industry

Traditional manufacturing industries support job opportunity for local people because not only adult but also old-aged person can earn in these industries because of light work. 4 out of six pipe production, rental labour are used and the remaining works apply family labour only. 6 out of 8 slate and slate pencil works has rental labour. In these works , female and male workers receive equal wage with 7000 ks per day. No labour problem is found in the area due to sufficient family members.

Working period

Pipes are made all the year round in the area. Slate and slate pencil work is done from October (Thidingyut) to April (Thingyan) because raw materials are not available for slate and slate pencil making as slate cannot be extracted in the rainy season.

Working calendar

	J	F	M	A	M	J	J	A	S	O	N	D
Pipe making												
Slate and slate making												
			Working period									
			Stopping period									

Source: Interviews



Source: Researcher (12.5.2020)
Plate 11 Various Types of Pipe



Source: Researcher (13.5.2020)
Plate 12 Slate Production as a Souvenir

According to interviews, sixty seven percent of the pipe works applied new design in pipe production and they imitate the designs from design books and they create pipes with their Thirty three percent make pipes in traditional design. In slate production, they produce slate and slate pencils for the purpose of writing as well as for keeping as souvenirs.



Source: Researcher (12.5.2020)
Plate 13 Unique-designed Pipe (1)



Source: Researcher (12.5.2020)
Plate 14 Unique-designed Pipe (2)

Some foreigners buy expensive pipes with unique designs that are traditional or as souvenirs although they are expensive and foreigner particularly French often come to see pipe making processes.

Market

Pipes are not only sold in local area but also sent to Yagon, Bago, Rakhine, Ayeyarwady, Mandalay, Maymyo by car. Bogyoke Market is one of the major markets of pipe because tourist arrived to Yangon visit Bogyoke Market and buy souvenirs produced in Myanmar. Four out of six pipe work said the finished products are mainly sent to Yangon and remaining work said that buyers come to buy pipe once per month.

Slate and slate pencils were sent Manadalay depot and Mawlamyine last 10 years ago but they are sent to Mawlamyine, Hpa-an, Yangon, Rakhine State and these are stored in local store houses. At present, the demand of these local traditional products decrease due to replacement of modern products, raw material scarcity, less modernized designs, etc.

Present Situation of Local Tradition Product Production

Most owners make pipes and sell them at national markets including Rakhine State and Dawei. Some produce simple pipes because it is easier and quicker to be made. The traditional pipe making industry dropped their significance in 1990s because of a lack of raw materials and

some skilled labour migrated from the village to other areas that have high job opportunity (Nyein Nyein, 2015).

Last 4 decades, People lived in Mudu Village mainly work in slate and slate pencils production and they sent these products to other areas in Myanmar. Slates were once an important stationary item for elementary students. Since last 20 years ago, students eventually stopped using slates and slate pencils and the industries gradually declined in importance. According to interviews, many slate workers have left the village to earn more money in other place.

Slate miners normally get about 10,000 kyat per day. They go down dark, dirty, and dangerous mines that are 150 feet in depth to extract slates and then, bring big pieces of slate back to the place where they cut them to get various size for slate making (Tin Thet Paing, 2017).

Demand is one of the main pillars for the growth of economic activities. According to interview, demand of local tradition products decreased due to replacement of other modern products. Generally, price of these products increases, but the economic return is still small due to higher raw material cost, labour wage, transportation cost, etc.

Seventy eight percent of the owners have new generations who are students. According to interviews with owners, although new generations are interested in the works on local tradition products, it is difficult to do as major economic activities for the family due to low economic return. If the demand and economic return are higher, they would like to maintain their local traditional product production.

The factors affecting declining traditional manufacturing industries

According to interviews with owners and labours, poor capacity utilization of slate is a factor declining the traditional manufacturing industries. Although it is true that slate and slate pencils are cheap and affordable, it is difficult to look the lesson erased again.

Second factor is Raw material shortages for the industries. As the slate has been extracted, the production becomes low and raw material shortage is found. As a consequence, price of raw slate increases due to high labour cost and scarcer slate.

Third factor is lack of strong market demand. As other modern written items were cheap and affordable, students mainly used note books and pencils last 30 years. Therefore, the demand decreased and it is one of the major causes declining traditional manufacturing industries.

The fourth is lack of technology up-gradation. Traditional manufacturing industries use old methods and old style of production, it is difficult to compete products produced by using modern technology.

Low income also affects traditional manufacturing industries. These works give low and irregular income for the owners and workers. As demand is low, production of pipe is also low. Therefore, workers get small amount of wage and the income derived from these manufacturing industries is insufficient for family survival.

Lack of coordination is a factor affecting the decline in these industries. There is lack of co-ordination both within owner groups local area and among owners, readers, technician, and labours as well as authorities concerned.

The last is unwillingness of young generation to continue to this profession. Most of the adult are unwilling to work the traditional manufacturing activities. Adults would like to earn in modern factories with regular high salary. These factors have led traditional industries to be vulnerable as well as declining.

Conclusion

Traditional manufacturing industries have been major economy of the Chaungzon Township.

Traditional manufacturing industries of Chaungzon Township are declining due to above mentioned factors. This will lead to collapsing the industries that support local economy, local income, local GDP, and job opportunity. Therefore, it is important to educate young generation on the role and value of local traditional products of the area. It is needed to share the knowledge, skills, process, and modern design of local traditional products through vocational training schools. It is necessary to maintain local traditional products as intangible cultural value and it will protect traditional manufacturing industries in Chaungzon Township. Local authorities need to coordinate with owners, technicians, designers and traders to upgrade these industries.

It is also needed to do further researches on technology availability, investment, skills, etc for the purpose of recovering the traditional manufacturing industries of Chaungzon Township. By conserving industries and supporting the needs for the production of traditional products, traditional manufacturing industries produce standard articles, traditional products will be a symbol of Myanmar's culture, local economy will be surely improved and they will take over large share of market.

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