

Geographical Assessment on Distribution of Cottage Industries in Panglong, Southern Shan State, Myanmar

May Thu Naing¹

Abstract

This research paper studied socio-economic status of local people and the importance of cottage industries. The aim is to develop the production of cottage industries, it is necessary to avoid disadvantages and to follow advantages of these cottage industries. There is a strong competition between the local cottage industries and imported foreign products. The data required for this research were collected by using questionnaires from 4 wards and many offices in Panglong Area, Southern Shan State. Among these areas, sample of 360 respondents, who were the residents in Panglong, were interviewed. Qualitative and Quantitative methods were implied to examine the primary data collected through the questionnaires. The results showed that cottage industry can create job opportunities for general workers and unemployment. It can also provide incomes for increasing living standard in the study area. Therefore, the authorities should enforce the cottage industry with the growth of family incomes. By providing infrastructure and supporting of vocational training, job opportunity in the study area will increase and will reduce poverty in Panglong area.

Key Words: Cottage Industry, Competition, Foreign products, Poverty, Job opportunity

Introduction

Myanmar economy is mainly based on agriculture. About 70 per cent of the population of Myanmar lives in rural areas where agriculture is predominant. Most of the household materials in rural area were produced using raw materials from agriculture and related activities. In recent years traditional farming system is gradually transformed into mechanized farming system. Consequently many farmers tried to operate cottage industries in family scale. The quality of these cottage industries were developed by promoting capital, raw materials, labor, power supply, water resources, communication, transportation and vocational training. Researcher tried to study the role of agriculture and related cottage industries to combat the poverty of rural areas in Myanmar. (Myanmar Ministry of Industry SME Report, 2015)

An industry where the creation of products and service is home-based, rather than factory- based. While products and services created by cottage industries are often unique and distinctive given the fact that they are usually not mass-produced, producers in this sector often face numerous disadvantages when trying to compete with much larger factory-based companies. A combination of the cottage industries is rural industries, set up in rural areas. (Ministry of Industry SME Report, Myanmar, 2015)

A cottage industry is a small-scale, decentralized manufacturing business often operated out of a home rather than a purpose-built facility. Cottage industries are defined by the amount of investment required to start, as well as the number of people employed. They often focus on the production of labor-intensive goods but face a significant disadvantage when competing with factory-based manufacturers that mass-produce goods. They often focus on the production of labor-intensive goods but face a significant disadvantage when competing with factory-based manufacturers that mass-produce goods. (Myanmar SME Law, 2015)

¹ Associate Professor, Dr, Department of Geography, University of Mandalay

Literature Survey

This research paper is presented based on varieties of books and records that are correlated with cottage industry of Panglong Area, in Southern Shan State.

There are many studies with regard to cottage industries. Chowdery Makhtar (1980) defined cottage industry that "Industries carried on in the homes of workers, where the scale of operation is small, and there is but little organization, so that they are as a rule capable of supplying only local needs".

Navin Chandra (1990) presented the definitions of cottage industry that "A cottage industry is one which is carried on wholly or primarily with the help of the members of the family, either as a whole or a part-time occupation".

The above mentioned authors had described definitions and concepts of cottage and small scale industries and types of industry.

Win Kyaw Oo (2006) reported the only textile industries of Pakokku region among the cottage industries and analyzed the spatial pattern of textile products. Kyi Win (2007) proposed the impact of *thanakha* incense stick enterprise development of Yesagyo Township. The previous researchers had not described the cottage industries of the entire district. They had studied only as textile industry from the geographical point of view. And thus this dissertation presented the distribution pattern of cottage industries, the factors associated with the distribution of these works and situation of socio economy from the geographical point of view.

Aims and Objectives

The main aim is to develop the production of cottage industry in Panglong Area. The objectives are to explore the important role of cottage industry in reducing poverty and rural development programs and to follow/ sustain the advantages of these cottage industries.

Data and Methodology

The study area is Panglong Area in Southern Shan State. Secondary data for cottage industry were received from various offices and primary data were gathered by questionnaires and interviews with local people and related workers. Primary data for environmental and economic images, questionnaires and interview methods were applied in this study. Random sampling was used to collect the primary data. Among clusters 360 samples, the researcher allocated to distribute questionnaires and implied to measure the primary data or questionnaires. There were qualitative and quantitative methods. Among the respondents in the samples in structured interviews, (60) samples from ward (1), (140) samples from ward (2), (60) samples from ward (3) and (100) samples were conducted from ward (4). The questions focused on the study at the destinations of the management of income and job opportunity.

Research Problem

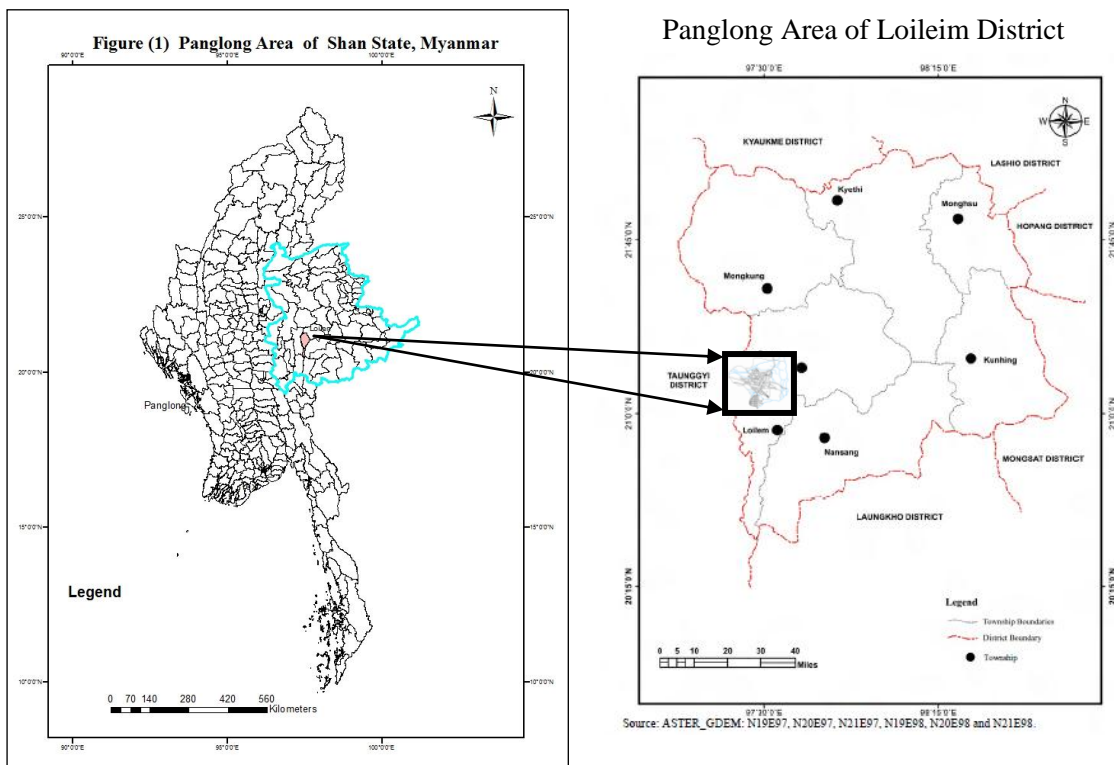
What is the correlation between distribution of cottage industries and settlement land area in Panglong Area ?

Study Area

Panglong is situated in Loinlem District, in the Southern Shan State. It lies between the latitudes of 19' 45' and 21' 27' north and between the longitudes of 97' 15' and 98' 09' east. The total area of the Panglong is about 1,678 acres or 2.75 square miles. In the north is the township of the Laikha. In the east is the Nam San Townships. Loinlem Township is in the

South and Hopong Township on the west, Panglong Area, the common boundary with the Southern Shan State. It has a compact shape.

Figure(1) Location Map of Panglong Area , Southern Shan State



Source: Geography Department of Panglong University, 2015

Although Panglong lies in the low latitudes of the Tropical Zone yet as it lies above 4,444 feet above sea level, it receives the Sub-tropical Mountain Climate (Cwb). December, January and February are the months with the lowest temperature ranging from 40° F to the freezing point. April and May are the months with the highest average temperature of 80F. As it is a hill region the daily range of temperature is high. There are 4 Wards in Panglong area with total population of 27,115 persons in 2015. Most of the population or 41 per cent of total population lived in Ward 2 of Panglong Area. Total working population is 9,707 people or 35.8 percentage of working population in this area.

Findings and Results

(1) Types of Cottage Industry in Panglong Area

According to Ministry of Industry SME Law in Myanmar (9-4-2015), it is found that three types of cottage industry were observed in Panglong Area.

These are

- (a) Cottage industry operated only member of a family
- (b) Small scale industry under 50 to 300 permanent laborers or investment 50 to 500 Millions in Kyats
- (c) Medium scale industry with more than 60 to 600 permanent laborers or investment 51 to 1000 MMK- Millions in Kyats
- (d) Large scale industry over 601 permanent laborers or investment over 1000 MMK- Millions in Kyats

In the study area, all types of cottage industries found as one family holding small cottage industries. Ministry of Industry SME Procedure Law (16-10-2016), types of cottage industry found in the study area are –

- (a) Foodstuffs industry,
- (b) Clothes and apparel industry,
- (c) Construction material industry,
- (d) Raw material industry, and
- (e) Indigenous medicine industry

Foodstuffs Industry

Foodstuffs industry of the study area include fruit (peach and plum) jam industry with 2 per cent, noodle industry with 28 per cent, and Tea leaves industry with 70 per cent of total food stuff works.

According to the locational advantages, family income is mainly received from tea plantations and tobacco plantations. There are 1485 labours working in 297 tea plantations Industries and tea leaves production. About 82 per cent of total labours are engaged in tea plantation in Ward 3. Domestic water for cottage industry is available for the whole year due to the nearness of water sources.

Noodle industry which is making Shan traditional food is widely found in several places of Shan State. Nearly all Shan families eat noodles as traditional food almost every day. Therefore, there are 116 noodle industries with 580 persons of labours. Daily income received from selling noodles in the daily market.

There are several Jam making industries (fruit boiled with sugar and preserved) based on local fruits such as pine apples, oranges, mangoes and others. There are 9 types of fruit jam making industries with 45 producers. Traditional wine production is also observed for local consumption. If the fruits are dried up and store, juice and brewery cottage industries can be undertaken by using local products.

In the foodstuff industries of Panglong Area, marketing, cooperation between government and private, attraction to local investors and support of technical know-how should be promoted for future growth.

Clothes and Appeal Industry

Shan and Pa-O people usually wear their traditional dresses. Therefore, 64 per cent of apparel industry is tailoring and 23 per cent weaving industry and 12 per cent for knitting industries. There are 104 families with 317 labours or 13 per cent of cottage industry engaged in clothing and textile industries. Since the study area is a cool place, there are tailors which specialized for jacket and coat making industries using machines. Only 3 industries produced commercially and others were for domestic needs. Appeal industry is mainly for producing traditional Shan and Pa-O bags. Raw materials were imported from other areas. There are 38 bag weaving industries with 114 labours. However, their works are mainly to conserve their hand-made as traditional industries. The raw materials were mainly imported from Inle Lake, Mandalay, China and Thailand.

Knit cottage industry is also common in Shan State because Shan traditional dresses were decorated by hand knitting. There are 54 professional workers in knit wear industry. For knit wear with modernized design, some people go to town where knit machines are available.

In order to develop this cottage industry, it is necessary to support modernized machine, technical know-how, and finding market for students in vocational training schools in Panglong Area. These students can distribute their knowledge to local people for income generation.

Construction Material Industry

Most of the houses are built with wood, clay and bricks. Therefore, construction material industries mainly include 8 brick making industries with 48 labours, 11 furniture making industries with 22 labours. There is no contract for construction work to build the whole housing unit.

Construction labours related to engineering in training classes are supporting for skillful laborers and job opportunities to local people in Panglong Area. These training classes can support skillful labours and provide job opportunities for local people.

Raw Material industry

Raw material oriented cottage industries include cheroot making industries. There are 120 *thanuphet* leaves industries with 600 labours in the study area. Due to the lack of cheroot making industries and lack of model technology about cheroot industries, the leaves were only exported as raw materials to Myingyan, Mandalay and Meiktila where cheroot industry is more developed. Therefore, it is necessary to encourage the development of cheroot industry in Panglong Area from which raw material based cottage industries will grow more efficiently.

Indigenous medicine industry

Shan and Pa-O indigenous medicines are very famous in the study area. There are 11 industries with 55 labours in indigenous medicine production. Local people mostly rely on indigenous medicines because of the shortage in hospitals, clinics, medical doctors and nurses.

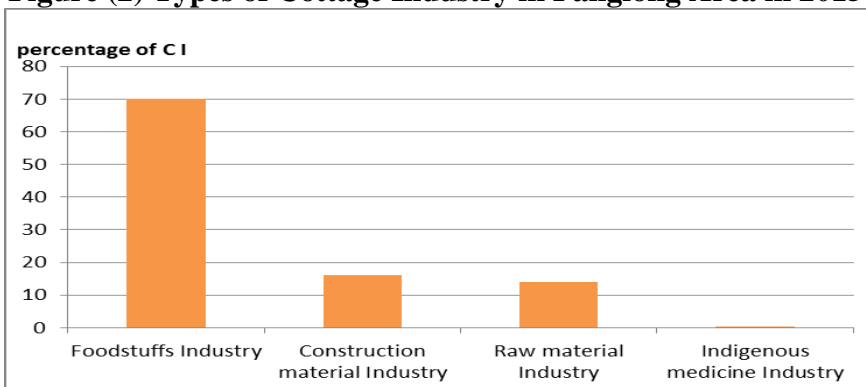
In order to promote indigenous medicine production, it is necessary to provide technology, market creation and support capitals to produce medicine based on local medicinal plants.

Table (1) Types of Cottage Industry in Panglong Area in 2015

No	Cottage Industry	No. of CI	Percentage
1	Foodstuffs Industry	2298	70.00
2	Wearing and apparel Industry	453	13.89
3	Construction material Industry	23	0.10
4	Raw material Industry	512	16.00
5	Indigenous medicine Industry	11	0.01
	Total	3297	100.00

Source: General Administrative Department in Panglong Sub-Township, 2015

Figure (2) Types of Cottage Industry in Panglong Area in 2015



Source: Table (1), 2015

(2) Spatial Distribution of Cottage Industries in Panglong Area

About 23 per cent of working population (4,003) persons engaged in cottage industries. About 63 per cent were miscellaneous workers. About 14 per cent were workers in agriculture, selling, government jobs and others. The total area of Panglong Area is 6.8 km² (1,687.9) acres.

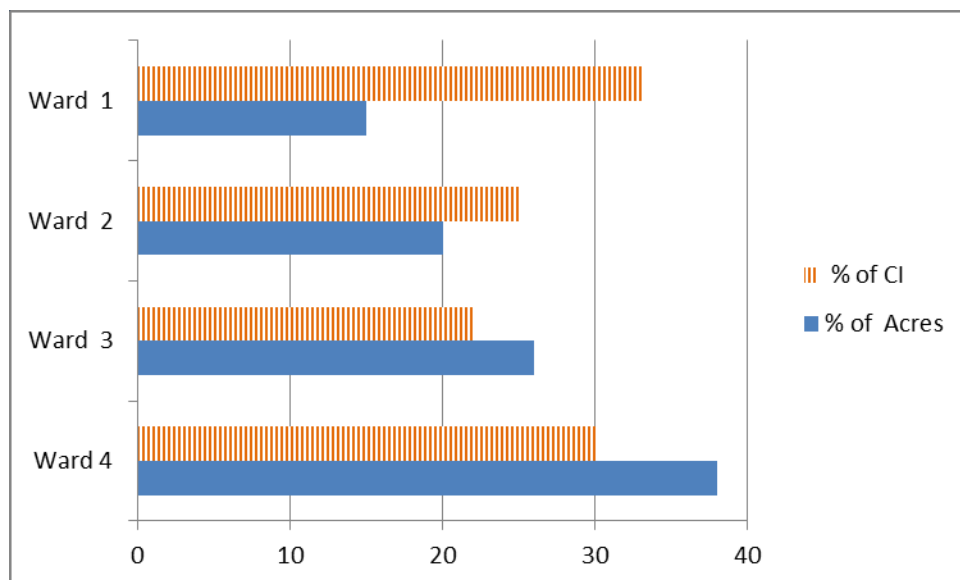
The role of cottage industry relates settlement land use area. It observed the ratio between settlement land use area and number of cottage industry.

Table (2) Distribution of Cottage Industry by Ward in Panglong Area, 2015

No.	Ward	Settlement Land Use		Cottage Industry		L : CI Ratio
		(Acres)	%	No. of CI	%	
1	Ward 1	446	26	725	22	1:2
2	Ward 2	336	20	837	25	1:3
3	Ward 3	229	15	1079	33	1:5
4	Ward 4	616	38	680	30	1:1
	Total	1687	100	3294	100	1:2

Source: Field Observation, 2015

Figure (3) Distribution of Cottage Industry by Ward in Panglong Area, 2015



Source: Table (3), 2015

The ratio (L: CI) in Ward 1 is (1:2) in Panglong Area. Therefore, there are 2 families of cottage industry in 1 acre of land. Most of the residents were government staffs and they also have small cottage industries such as tailoring, restaurants, and noodle production.

The (L: CI) ratio of (1:3) in Ward 2 showed that there are 3 families of cottage industries in one acre of land. Most of the cottage industries found in this area were tailoring, noodle and traditional food making, printing, bakery, and indigenous medicine production. Most of the residents in this area were general and miscellaneous workers.

In Ward 3, (L: CI) ratio is (1:5) or 5 cottage industries in 1 acre of Land. Most of the residents are farmers and agricultural labours who also engaged in cottage industries. The most dominant types of cottage industries were tailoring, tea leaves production, tobacco leaves production, noodle production, jam making, Shan indigenous medicine production, knitting and making traditional bags.

In Ward 4, there is one family cottage industry in 1 acre of land, or (L: CI) is (1:1). Most of the lands were under agricultural land use and most of the residents were farmers and general workers. They also worked in tailoring, furniture making, candle production, tea leaves production, brick making and alcohol production.

Cultivable lands were gradually decreased due to the increase in residential land use. If 0.37 km² (92.2 acres) of unused land is used to cultivate tea leaves, it can support raw materials for cottage industries of 90 families in the study area.

Another alternative method, Spearman's Rank Correlation Coefficient ($r_s = 1 - \frac{6\sum d^2}{n^3 - n}$) was used and calculated, (William Edwards Deming, 2001). The hypothesis H₀ is "There is no significance difference of cottage industry and settlement land use area in Panglong Area". If the calculation value is from + 0.01 to +1 .00, it has direct or indirect relationship (r_s) between the variables , the calculation value from -0.01 to -1.00 refers to reverse relationship between the variables. The calculation value (the relationship between settlement land use area and cottage industries) is (-1). They have highly indirect (negative) correlation of settlement land use area and number of cottage industry in Panglong Area.

In this town, the problem regarding the insufficiency of well water is found in summer and so water from the water pipe line distribution systems or springs is used in cottage industries of Panglong Area. The topography and climate can change the water level of the hand-dug wells among the wards. After observing 90 per cent of the hand-dug wells during March and April, one can find that 50 per cent of the wells were dry. The water resources of Panglong are received from wells, springs and streams. 89 per cent of the household used well water in 4 Wards. It is found that settlement land use area is large area and cottage industries are small scale.

(4) Perceptions of Cottage Industry Based on Field Observation

In studying the development of cottage industry within the four wards of Panglong, it is carried on after making interviews and questionnaires to 10 per cent of the total households by asking 20 questions and by collecting sample data.

In order to study the requirement and types of cottage industry by applying qualitative methods, field survey was carried on in all the four wards of Panglong. 360 persons were selected to respond to our interviews and questionnaire.

In order to assess socio-economic status in local areas, 360 households or 10 per cent of the total household in the study areas were selected as samples. There are 14 questions in the questionnaire and interview survey.

The questions mainly focused on age, gender, education, family size, occupation, products and earning, skill language, child's education, perceptions on emigration, perceptions on water resource, perceptions on foreign' worker, local needs and future prospects.

Table (3) Perceptions of local people on Local needs

No.	Reasons	Percentage
1	Education and job opportunity from the government	25
2	Low family income from substitution of crops	25
3	No seasonal works	5
4	To give education for income generation	5
5	To create good environment for the children	5
6	Warmer climate to grow fruits	15
7	To limit substitution of crops in tea plantation	20

Source: Structured Interviews Survey, 2015

Table (4) Perceptions of local people on Future Expectations

No.	Reasons	Percentage
1	To give job opportunity	25
2	To extend cottage industry	50
3	To change miscellaneous works	15
4	To give education for all children	10

Source: Structured Interviews Survey, 2015

In Panglong Area, the natural environment converted rapidly the people under the extension of agriculture, burning and cutting forest, for firewood, and loss of biodiversity, invasion or introduction of non-native species because of population growth.

In Table 4, 50 percentage of local people answered need to promote the education, job opportunity and substitution of crops in local area. Nowadays, the extension of shifting cultivation effected on the water surface area as well as water quality. They noticed well about the changing environment.

According to Table 5, the distribution of cottage industries in this area mainly rely on traditional knowledge, less priority on education, language barrier and regional consciousness. Perception of local people on future expectations, it was found that 50 percent of local people suggested to extend local cottage industry. Lack of job opportunities creates labour migration of local area to neighboring countries.

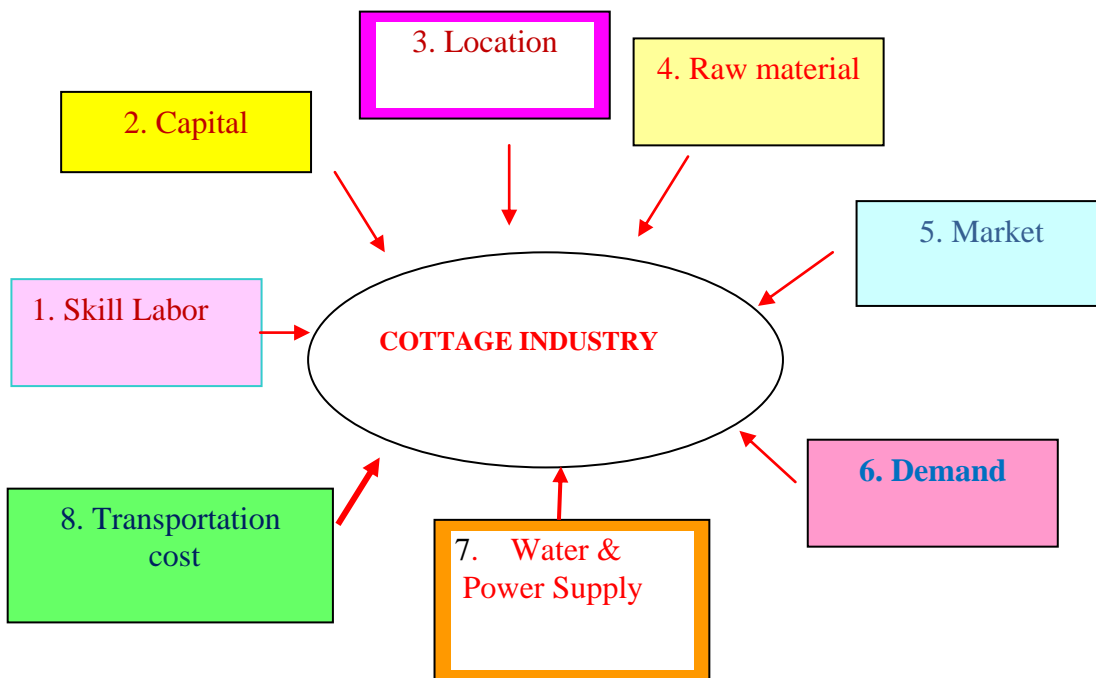
(5) Factors Influencing Cottage Industry

The most influential factors on cottage industry in rural areas are capital, raw material, skilled labor, market, power supply, water resources, communication, transportation cost and advertisement.

Another influential factor was the substitution of imported materials from foreign countries instead of traditional foods, apparels, toys and other household commodities. A higher cost for production in transportation is another factor using difficulties for local products.

There were several access roads in transportation network and commodity flow of these areas. However, these roads are seasonally weak in connectivity and accessibility. Low growth of cottage industries in Panglong Area were partly due to long difficult access by road, and high price of fuel to transport raw materials and finished products to the market in time.

Figure (4) Influential Factors of Cottage Industry in Panglong Area



Source: Field Observation in 2015.

Discussions

Advantages of the distribution cottage industries in reducing local poverty are such as cottage industry can operate with low capital investment, local consumer can use food products, lower cost of production, family participation, less transport cost for finished products, can support seasonal requirements, can solve unemployment problem, can create external market for local products and small scale hydropower can provide power for cottage industry.

Disadvantages of the distribution cottage industries were small scale garment industries, can not save money to invest in new and modernized sewing machines; knitting industries also needs a long time duration to get finished products; and raw materials of bag making industries has not local products and imported from other areas. Therefore, income from this industry is fluctuated.

Due to the growth of family size, income from one cottage industry was inadequate for daily expenses. In tea leaves production, maintenance or storage cost was high during wet season. Therefore, profit from this industry also fluctuated. *Thanetphet* leaves for cheroot industry can earn much money only one time in a year. Therefore, labours from this industry need to work other general jobs such as weeding, spraying pesticides, passenger carrier, etc. Garlic cultivations mainly influenced in foreign market conditions. Indigenous medicine productions were only traditional industry, and it has to invest a long duration, less profit for improving modernized packages and needs a large amount of capital investment for modernized equipment in medicine production.

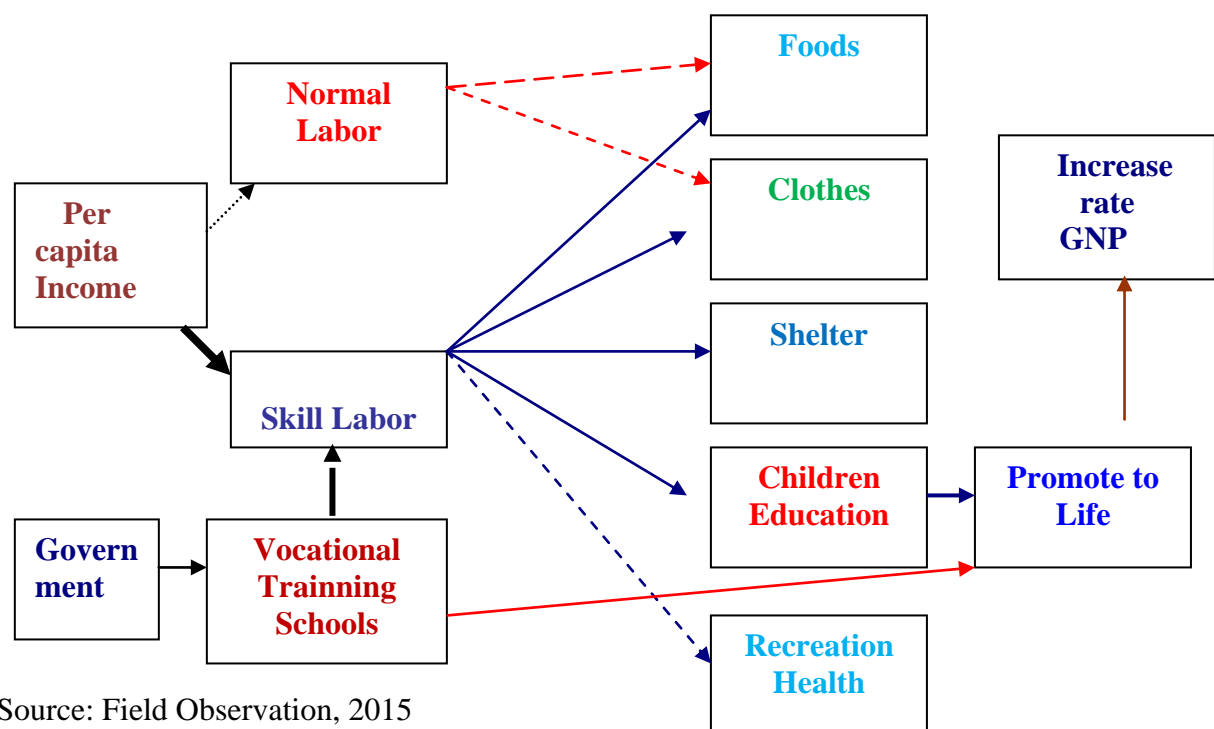
For future development of cottage industries, they need to establish a market for products from cottage industry, to support by effective banking system for cottage industry, to promote education and knowledge level of local residents to get creative power, to distribute information about commodity types, market condition, and demand and supply of commodities in Panglong Area. Nowadays, all the countries are focusing on the increase of national finance and strengthen of national economy in competitiveness. They all produce and sell various

quality products in the market. Producers are to manufacture more volume of acceptable products for customers.

Especially emphasis should be placed on best quality products to be able to compete with products of international community in the market. Promotion of trade will develop the State Economy. Energetic efforts are to be made steadfastly for more production of quality products by setting up industries in respective regions. If the nation is able to decrease imported goods, State Economy will develop. Development of small scale industries will contribute to creation of job opportunities for the local people and uplift their living standards.

This research paper studied socio-economic status of local people and the importance of cottage industries. To develop the production of cottage industries, it was necessary to avoid disadvantages and to follow advantages of these cottage industries.

Figure (5) The relationship of Per Capita Income and GNP in Panglong Area



Conclusion

The most important difficulty is transformation process from cottage industries to small scale and large scale industries by adding further capital investment. Job opportunity should be created by supporting by-products from garment factory to cottage bed and blanket industries, establishing knitting industry with support of raw materials, creating market for local products, giving loans without interest and opening vocational training classes. There were local markets for such as knit wear and foodstuff industries. It was also necessary to promote road and

railway networks to transport raw materials and finished products. Road and railway transport can support the unity and development of local area.

In Panglong Area, students from basic education worked in miscellaneous jobs during school holidays to support family income. Young graduates also worked in miscellaneous jobs such as selling and road construction. By giving vocational training to these young people unemployment and poverty can be reduced.

For human resource development in local areas, the role of students and youths should be emphasized. Vocational trainings are needed to develop human resources from normal laborers to skillful laborers. Technology should also be distributed to rural areas by family types, self reliance group types, cooperative types, formal and non-formal education type by means of which poverty in local area can also be reduced.

There is a strong competition between local cottage industries and imported foreign products. Therefore, government should support technology, market and capital investment. Cottage industry can create job opportunities for general workers and unemployment. It can also provide income for increasing living standard in Panglong Area. By providing infrastructure and supporting human resource development, job opportunities will increase and will reduce poverty in local areas.

This research paper studied socio-economic status of local people and the importance of cottage industries. To develop the production of cottage industries, it is necessary to reduce the disadvantages and promote the advantage of these cottage industries.



Photo (1) Foodstuffs Industry



Photo (2) Construction Material Industry



Photo (3) Construction Material Industry



Photo (4) Raw Material Industry

Acknowledgements

I am greatly indebted to the Chairperson Dr. Nyo Nyo, Professor and Head of the Department of Geography, University of Mandalay ,for allowing me to do this research paper. I wish to express my most grateful appreciation Dr. Thein Win, Rector (Director General, Department of Higher Education), Mandalay University for his kindness in giving me permission to do this research.

My deep thanks and gratitude are due to the personals who were concerned the various governmental offices of Panglong for their allowances to collect and uses of their official data. Lastly, I owe to my thanks to all my teachers and colleagues who have helped me with great kindness and patience.

References

- Agricultural Atlas of the Union of Myanmar(2015),Agricultural Statistics of Myanmar.
- Administrative Records (2015),Reports, Administrative Department, Panglong Sub –Townships.
- Food and Agriculture Organization of the United Nations, FAO(2012), Land- Water Linkages in rural watersheds, Proceedings of the electronic workshop.
- Geography Departments,(2010), Urban Land Use in Panglong Town, Field Reports , University of Panglong.
- JOHN L. ALLEn (2007),STUDENT ATLAS OF World Geography, USA.
- May Thu Naing,(2010), Water Resource Management in Panglong , Jour.Myan. Acad. Arts & Sc .2009 Vol.VIII.No.6 (Page 162-177)
- May Thu Naing,(2011),Network Analysis of Transportation in Loliem District, Jour.Myan.Acad.Arts & Sc .2011 Vol.IX.No.6 (Page 243-262)
- Ministry of Industry SME Law (2015), Myanmar.
- Ministry of Industry SME Procedure Law (2016), Myanmar.
- Ministry of Industry SME Report (2015), Myanmar.
- Municipal Records(2015), Reports, Panglong Sub-. Township.