CO-OPERATIVE UNIVERSITY, SAGAING
DEPARTMENT OF CO-OPERATIVE STUDIES
MASTER OF SOCIAL ENTERPRISE MANAGEMENT

ANALYSIS OF SOCIO-ECONOMIC CONDITIONS IN SALINGYI TOWNSHIP: A CASE STUDY ON DONE TAW VILLAGE

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MSEM (II) - 11
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Analysis of Socio-Economic Conditions in Salingyi Township: A Case Study on Done Taw Village

This thesis is submitted to the Board of Examiners in partial fulfillment of the requirements for the degree of Master of Social Enterprise Management.

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ACCEPTANCE

This is to certify that this paper entitled "**Analysis of Socio-Economic Conditions in Salingyi Township: A Case Study on Done Taw Village**" submitted as a partial fulfillment towards the degree of Master of Social Enterprise Management has been accepted by Board of Examiners.

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ABSTRACT

This paper is concerned with the socio-economic conditions of non-mining employee's households and mining employee's households in Done Taw Village, Salingyi Township. Socio-economic status is a term comprises of two variables: the social status and economic status. Social status is acquired by social position and economic status is associated with the money or economy a person has. The socioeconomic status is measured with the same indicators by different sociologists, educators and psychologists. Objectives of the study are to study the socio-economic conditions of Salingyi Township, to compare socio-economic conditions of copper-mining employee households and non-employee households in Done Taw Village, Salingyi Township and to analysis the influencing factors of household's expenditures in Done Taw Village. In this paper, descriptive statistics, multiple and logistic regression analysis are applied from primary data. This survey is conducted by using well-structured questionnaires. The literacy rate of non-mining employees' households and mining employees' households are high (primary level), their illiteracy rate are very low. Most of non-employee's households are farmers. Mining employee's households are mining workers. The age of householders is the middle age groups of householders in Done Taw Village. Housing type of RC, brick, wooden, bamboo and telephone are influential factors for socio-economic conditions of households in Done Taw Village. Family size and income per month of sample households are significant. Housing type of RC, brick, wooden, bamboo and telephone are significant. Most of sample respondents told that employment opportunities are very low for local residents (34.68%). Most of sample respondents told that the benefits of infrastructure are high (73.99%) in this village.

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CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

CSR	=	Corporate Social Responsibility
ME 1	=	No.1 Mining Enterprise
MICCL	=	Myanmar Ivanhoe Copper Company Limited
MWMCL	=	Myanmar Wanbao Mining Copper Limited
MYTCL	=	Myanmar Yany Tse Copper Limited
NORINCO	=	China North Industries Corporation
SES	=	Socio-economic Status
S&K	=	Sabetaung and Kyisintaung
SLO	=	Social License to Operate
UMEHL	=	Union of Myanmar Economic Holdings Limited
SPDC	=	State Peace and Development Council

CHAPTER 1
INTRODUCTION

The development of country depends on the development of township which has also interdependent on development of wards. According to their socio-economic condition, the subsistence need of the public of this country also becomes sufficient. It can affect and evaluate on economic and social community development of country on the other hand it is very useful and has benefit to make an economic plan for country.

Socio-economics is the social science that studies how economic activity affects and is charactered by social processes. In general, it studies how societies develop, stagnate and regress due to their local or regional economy or the global economy.

The government has been building infrastructure through systematic plans for all citizens to be able to enjoy a rich life and to pass a promising future. In line with the objectives of the government on the five rural development tasks: securing smooth and better transportation in the rural areas, availability of clean water in the uplift of health care for the rural people and development of the economy in the rural regions to promote rural areas. The Most development goals have strong social development elements. These include: poverty reduction strategies, promoting human development (e.g. through better health and education), and promoting good government, particularly through the encouragement of participator process. In the context of rural development, in the context of dimensions of change involve: to better access basic social needs (foods, health, education, security…), to better access the means for poor people to enhance their productive capacity (markets, suppliers, employment, health and education). In performing rural development activities, the state plays its role as policy maker, strategy planner, supervisor and rural development measure to implement these strategic plans have taken in selected targeted area by constructing village approach.

Thus it studied on socio-economic conditions of the families live in Done Taw Village, Salingyi Township, Sagaing Regional Division. The aims of this paper are: to compare copper mining employee's households and non-employee's households and to describe social communication by surveying family member, education level, domestic conditions, occupation, working classes and kinds of houses of households and infrastructure progresses such as basic food, fuel use, clothing, education

circumstances, social activities having luxury, public health and health care, water and sanitation, types of toilet of those households. In this paper, it attempts to study the socio-economic conditions of Done Taw Village, Saliengyi Township and to find out local residents' perceptions on copper-mining activities.

1.1 Rationale of the Study

In the last 40 year of planned socio-economic development plan, Myanmar has progressed to some extent. The majority of the people of Myanmar reside in rural areas. Based on the survey, only 26 percent of population are living in urban and 74 percent of the populations are living in rural areas. After the new elected government, the government has conducted the national level workshops for reviewing and renewing for better development and growth. Therefore, meeting the needs of rural people will certainly contribute to Myanmar's socio-economic progress. And the economic and human resource development will be much more beneficial to raise technology and productivity for the socio-economic development of Myanmar.

The Republic of the Union of Myanmar is transforming to a developed country by laying down the rules, regulations, and policies activities. In the last five years, there has been rapidly and ambitious social, political and economic. According to prior census collected from the time of 30 March to 10 April in 2014, its population is over 51 million, and most people are living in rural area. Myanmar has significant mineral resources of gold, silver, copper, tin, tungsten, lead, zinc and nickel. Precious stones such as jade, ruby and sapphire are some of the country's largest export items. Myanmar accounts for approximately 90 percent of global jade and ruby production. Gold mines can be found across the country. Copper is the country's main export product in the mining sector.

The government wants to attract new foreign investments in mining. Myanmar has vast mineral wealth but the industry is largely underdeveloped. Investment in the sector has the potential to bring social and economic benefits to Myanmar. However, extractive industries, such as large-scale mining, also pose specific risks to human rights. In fact, they often require the expropriation of land and generate harmful waste that requires careful management. Agriculture, industries, energy and tourism are the main sectors of the Myanmar economy. Agriculture, however, is the dominant sector and accounts for nearly 60 percent of GDP. Heavy industries are owned and operated by the state. Agriculture is mainly a private activity, although rice exports are a state

monopoly. Recent government initiatives to improve agricultural production have failed as drought and floods have reduced rice production. The cultivation of pulses and beans, however, has increased significantly.

As in Myanmar overall, agriculture is the mainstay of the local economy in Sagaing Division. The most common crop is rice, moreover wheat is grown in Sagaing. Other crops are sugarcane, sesame, millet, peanuts, cotton and tobacco. Livestock and fresh water fisheries are also important sectors. There is also some agro-industrial activity, as the Region has many rice mills, edible oil mills, cotton mills, and mechanized weaving factories. In this region, Natural resources such as gold, copper, coal, and small amounts of petroleum are being produced. Nationally controlled mining and forestry interests are found throughout Sagaing.There are several coalmines in Kalewa Township and there is a large copper mine located outside of Monywa. Forest products have played an important role in the economy since ancient times, especially in the northern regions where teak and other hardwoods are mined. However, as in parts of Myanmar, the sustainability of forestry may be long-standing issue of concern. The area has number of national parks and wildlife sanctuaries in Sagaing region. They are Alaungdaw Kathapa National Park, Chathin Wildlife Sanctuary, Mahamyaing Wildlife Sanctuary and Htamanthi.

The socio-economic analysis is fundamental to thoroughly understand present conditions, defines chances and risks of future development and indicates possibilities to minimize negative impacts on the quality of human life. Socio-economic science is the social science that studies how economic activity affects and is shaped by social processes. In general, it analyzes how societies progress, stagnate or regress due to their local or regional economy, or the global economy. The societies are divided into 3 groups: social, cultural and economic.

Education in families of higher socioeconomic status generally stands out as much more important, both within the home and in the local community. In the poorest areas where food, shelter and security are priorities, education can take over.

Myanmar's economy is one of the poorest in Southeast Asia.Despite rapidly growth during the 1990's, per capita income by 1998 was little higher than in the middle 1980s. Inflation rates are high, the currency value has fallen sharply, and Myanmar has one of the world's lowest rates relative to income of government revenue and these incomes are not spent on military.

The impacts of natural resource extraction, including mining, on local communities have been a longstanding interest for social scientists. Scholarly inquiry is identified that extractive industries contribute to both poverty reduction and economic growth. Yet, there's also a body of research that indicates natural resource dependence can result in slow economic growth, environmental degradation and social upheaval. Research on mining and development typically focus on three areas: the impact of mining on governance, national economics and growth the relationship between mining and community-level social, economic and environmental change and the development of socioeconomic indicators measuring mining impacts. However, over the past two decades, mining companies and governments have become increasingly concerned with the notion of 'social license to operate' (SLO) and corporate social responsibility (CSR) in response to impacts on local communities in developing countries.

According to the World Bank, SLO is the process by which mining companies engage with communities to obtain free, prior and informed consent, negotiate voluntary resettlement, and address the rights of indigenous peoples. Rather, CSR emerged as a culture of practice through which mining companies seek to improve livelihoods, socioeconomic well-being, and environmental conditions in the regions in which they operate. Indeed, SLO can be seen as an element of CSR which aims to embed a number of critical values, including accountability, credibility and stakeholders 'involvement (Understanding Social, Economic and Environmental Impacts from Gold Mining in Quang Nam Province, Vietnam).

Mining is the extraction of non-renewable resources; as such, it is an inherently unsustainable practice. Even carefully managed and supervised, mining still has social and environmental costs. This is especially true in developing countries, where environmental governance tends to be weaker than in industrialized countries. Myanmar is an authoritarian state that has been ruled by successive military governmental since 1962. Human rights violations and environmental degradation around Myanmar's mining industry are similar to those occurring in other extractive industries in the country and are indicative of the state of environmental governance: unfair and ineffective.

This article is an analysis of the socioeconomic conditions of the Salingyi Municipality and illustrates a case study on the socioeconomic conditions of the households of employees and non-employees of the copper mines in the village of Done Taw, Salingyi Municipality, near the project. Monywa copper in the Sagaing Regional

Division. This project is Myanmar's largest mine and a joint venture between the Canadian company Ivanhoe Mines Limited and the Myanmar Ministry of Mines under the State Peace and Development Council (SPDC). Highlighting the weakness and problems with environmental governance and mining in Myanmar begs questions of how the situation might improve.

Mining in Myanmar is widespread and conducted in various ways.The Ministry of Mines reported 43 large-scale mining permits, 165 small-scale permits and 1320 subsistence permits in 2004. (ABARE and Mikong Economics 2005). As of 2005, many of these permits were inactive, which is not to say that the mining industry in Myanmar is inactive or that the Ministry of Mines' figures are accurate.

Many of the years, villagers focus and operate on agriculture and farming. This village wide 709.78 acres and 40 acres are village land areas. In the village, land areas are gradually decreased because S&K mines has been operated since about 1980s. Done Taw Village is identified into a risky village. In the village, S&K mines' wastes, dust, acids and gas, oils wastes destroy the land and decrease the rates of crops. Although mining projects provide employment opportunities, it is not enough for local residents. And we found that mining projects can not enough give compensation for villager's break down of land and crops. This village encounters the side effects because of the S&K mine and Letpadaung projects.

So this project should be analyzed for the present socio-economic and environmental situation of the Done Taw Village, as it is not only important for the local population but has significant impacts on the ecosystem services. The aim is to deliver baseline data for measures to minimize negative impacts caused by the predictable future development.

1.2 Objectives of the Study

Objectives of the study are:

1. To study the socio-economic conditions of Salingyi Township.
2. To compare socio-economic conditions of copper-mining employees' households and non-employees' households in Done Taw Village, Salingyi Township.
3. To analysis the influencing factors of household's expenditures in Done Taw Village, Salingyi Township.

1.3 Method of the Study

Key Informant Interview (KII), statistical sample survey method is used and primary data were collected simple random sampling of (173) copper-mining employees' households and non-employees' households from 459 households. In this paper, descriptive statistics, multiple and logistic regression analysis are used from primary data. This survey is conducted by using well-structured questionnaires.

1.4 Scope and Limitation of the Study

In this survey, the socio-economic conditions of 173 sample households of 116 non-mining employee's households and 57 mining employees' households were selected from 459 households in Done Taw Village, Salingyi Township. Secondary data were used from the 2014 Myanmar Population and Housing Census of Sagaing Region Census Report Volume 3-E and the 2014 Myanmar Population and Housing Census.

1.5 Organization of the Study

This paper is formed by five chapters; Chapter 1 presents introduction, Chapter 2 describes literature review, Chapter 3 is composed by socio-economic conditions of Salingyi Township, and Chapter 4 presents about analysis of the socio- economic conditions of Done Taw Village and chapter five is conclusion of the paper.

CHAPTER 2
LITERATURE REVIEW

Socio-economic means relating to concerned with interaction of social and economic factors ‘status’ is complex of many elements including economic, political. Social, religious and other relationship, it is not certainly easy task to assess the social and economic’ status ofhuman, the term “Socio-economic” status means’ in system of social stratification refers to a combination of Various social and economic indexes of rank which are used in studies. The term is often used to deal with stratification in a society without the need for the assumption that these are distinct social classes” (Bhhusan 1989). The socioeconomic status of people is not entirely dependent upon the circumstances of age ethnic life style, geography and number of other variables imposed by the wider national society in terms of constitutional and legal frameworks (Oxford Advanced Learner’s Dictionary (2007)).

The sociologist Max Meber conceptualized unfair along three tracks: class, status and party (1958).Each was seen as a basis for power and influence. While the class focused on economic resources and the party referred to political influence, status was understood as honor and prestige. For Weber, the status groups were hierarchically arranged based on distinctive lifestyles, consumption patterns, and behaviors or behaviors.

Socioeconomic (also known as social economics) is the social science that studies how economic activity influences and shapes social processes. n general, it analyzes how societies are progressing, stagnating or declining because of their local or regional economy or the world economy.

Socio-economics is sometimes used as an umbrella term for various fields of investigation. The term “social economics” refers widely to the use of economics in the study of society. More narrowly, contemporary practice considers behavioral interactions of individuals and groups through social capital and social markets and the formation of social criterions.

A specific complement usage represents social economics as “a discipline studying the reciprocal relationship between economic science on the one hand and social philosophy, ethics, and human dignity on another hand” toward social reconstruction and development or as also highlighting multidisciplinary approaches from such areas as sociology, history, and political science. Criticizing current economics criticizing for its alleged faulty philosophical premises (for example the

pursuit of self-interest) and neglect of dysfunctional economic relationships, such advocates tend to classify social economics as heterodox.

Socio-economic status comprises of two variables: the social status and economic status. Social status is achieved by social position and economic status is associated with the money or economy a person has. The socio-economic status is measured with the same indicators by different sociologists, educators and psychologists (Claudia Cabrera).

Socio-economic status is the term used to distinguish between people's relative position in the society in term of family income, political power, educational background and occupational prestige (Parson, Stephanie and Deborah (2001)).

Socioeconomic status is a combined measured of an individual or families' economic and social position relative to other based on income, education and occupation (Saifi and Mehmood (2011)).

Socioeconomic status (SES) is defined as a measure of one's combined economic and social status and tends to be positively associated with better health. This entry focuses on the three common measures of socioeconomic status; education, income and occupation. It includes definitions, theoretical background, and empirical support for each of these SES indicators and their relationship with health SES is generally thought to influence health through three avenues (1) SES influence health through the ability to purchase health promoting resources and treatments; (2) socialization of early health habits differs by SES; and (3) it has been posited that rather than SES influencing health influences SES- less healthy individuals complete fewer years school, miss more work, and earn lower incomes (Elizabeth H. Baker, 2014).

Income refers to wages, salaries, profits, rents and all income received. Income can also come in the form of unemployment or work accidents, social security, pensions, interest or dividends, royalties, trusts, alimony, or other financial support from the government, the government or the family. Income can be viewed in two terms: relative and absolute (John Maynard Keynes).

Education also plays a role in income. Median earnings increase with each level of education.As shown in the table, the highest degrees, professional degrees, and doctoral degrees generate the highest weekly earnings, while those without a high school diploma earn less. Higher levels of education be involved with better economic and psychological results (Annette Lar eau).

Education level was achieved through record linkage to information from a national education register and was divided into three classes: Low (elementary school), medium (upper secondary school), and high (at least 3 hears of university or corresponding education) (Socio-economic conditions, lifestyle factors, and self-rated health among men and women in Sweden).

Professional prestige, as a component of ESS, encompasses both income and education level. Occupational status reflects the level of education required to obtain employment and the income levels which vary between jobs and within the ranks of occupations. In addition, it shows the achievement of the skills required for the position. Occupational condition measures social position by describing job characteristics, decision-making ability and control, and psychological demands at work (Richard G. Wilkinson, J. Lynch, and G.A. Kaplan).

Profession is the most difficult factor to measure because there are so many out there and there are so many competing scales. Many scales classify occupations according to the skill level involved, from unskilled manual labor to skilled labor to professional labor, or use a combined measure using the level of education needed and the income involved (J. Lynch and GA Kaplan).

Socio-economic condition is classified as a combination of factors including income, level of education, income, size of landholding, pattern of food consumption, caloric intake per head, occupational structure, and other basic amenities and infrastructure facilities. It is a way of examining how individuals or families fit into society using economic and social measures that have been shown to impact the health and well-being of individuals.Socio-economic status and health conditions are closely related, and socio-economic status can often have profound effects on a person's health due to differences in ability to access health care as well as dietary and other lifestyle choices that are associated with both finances and education (Socio-economic profile of BHAIRABPUR village in Malda District, West Bengal (2013)).

This socio-economic regulatory model integrates economic and regulatory theory with sociological theories to take into account social norms in addition to the economic handles and traditional methods that are now key elements of regulation. This extension model explains how the current version and regulation determine the requirements for participation and inclusion in regulatory theory and practice. The social contract for good regulation must also go beyond the traditional model of leadership and control in an attempt to promote compliance in complex interactions

between countries such as citizens, businesses, government, and agencies (Feld and Frey, 2007).

2.1 Empirical Study

An article characterized Environmental and Socio-Economic Impacts of Mining on Local Livelihoods in Tanzania:.G.N. Kitula (2006) A Case Study from Geita District. The results of a study undertaken to assess the socio-economic and environmental impacts of mining in Geita district, Tanzania.Mineral mining involves the excavation of underground pits and the destruction of rocks with explosives, which has resulted in regional land degradation. According to the miners, the abandoned pits are not considered a serious problem, even though they have caused disruption to pastoralists and farmers in mining areas. Some of environmental impacts purposed by professional mining activities consist of diversion of rivers, siltation of water, land degradation, deforestation, and widespread mercury pollution.

The study not only selects community perceptions of mining activities, but also identifies interventions that can help mitigate the negative impacts of mining. Environmental and socio-economic relations are forcing progress in local artisanal gold mines if the government supports technical support to local operators, improves regulations, and reduces unlawful mining activities. Although it is not the main economic occupation for the majority of the region's population, mimicry still provides the necessary additional income. In terms of environmental impact, local communities believe that mining has caused land degradation. The mines apparently prevented farmers from collecting manure from livestock, and excessive vibrations caused by repeated explosions caused buildings to crack and collapse near the minefields.

Zin Mar Than (2011) wrote an article "Socio-Economic Analysis of Lake Indawgyi, Mohnyin Township". No clear correlation was found between occupation and income. Livelihoods often require more than one profession and in many cases are insecure due to the size of the business, the ownership of goods and animals, and the lack of knowledge. Some respondents had to invest, so their expenses exceeded their income. Fishing is considered a major source of income. The decline in fish populations is due to several reasons (overfishing, pollution, non-compliance with the closure period). Poisoning bird hunting practices are another, as they endanger not only the bird population of the protected sanctuary, but also the health of the people who directly consume them. Another risk factor that needs to be controlled through stricter regulation and monitoring is mercury pollution.

The natural treasures of Indawgyi Wildlife and Bird Sanctuary were traditionally offered, and still provide a variety of economic opportunities for people living around the lake. These chances attract immigrants and lead to an on-going population growth. The concomitant circumstances of growing, unstructured population leads to pollution, increasing fresh water requirements and food demand; are serious contingencies relating to a sustainable socio-ecologic development and concurrent resource protection of this important wetland nature reserve.

The implementation of such a structured approach to the sustainable socio-economic development of the Indawgyi region requires the cooperation of all relevant stakeholders in the region, the region, the country and the international community.The experience of the past and the economic situation of the country, which suffers from ineffective structures in many government levels plus the constraints of many years under embargo from the western hemisphere highlight the need of international engagement. Implementing such a structured approach to the sustainable socio-economic development of the Indawgyi region requires the cooperation of all relevant regions, regions, countries and the international community.

CHAPTER 3

SOCIO-ECONOMIC CONDITIONS OF SALINGYI TOWNSHIP

This chapter presents data analysis, finding and discussion of Salingyi Township. The objective of the study is to study the socio-economic conditions of Salingyi Township. In this study, the secondary data were used in the 2014 Myanmar Population and Housing Census of Sagaing Region Census Report Volume 3-E and The 2014 Myanmar Population and Housing Census Department of Population Ministry of Labour, Immigration and Population October 2017, Sagaing Region, Yinmarpin District, Salingyi Township Report.

3.1 Socio-Economic Background of Sagaing Region

As in Myanmar overall, agriculture is the pillar of the local economy in Sagaing. Southern districts of Sagaing Region belong to historical and economic core areas Myanmar, and they have interested from the vicinity to main rivers for transportation, communication and trade. Rice is the most common crop, although Myanmar's main producer of wheat. is also Sagaing. Other main crops are sugarcane, sesame, peanuts, pulses, cotton, tobacco and etc.. Livestock and fresh water fisheries are also vital roles.

There are also some agro-industrial activities, as the Region have many rice mills, edible oil mills, saw mills, cotton mills, and mechanized weaving factories etc.. Natural resource extraction also takes place in Region, with gold, coal, salt and little amounts of petroleum being produced. Throughout Sagaing, nationally controlled mining and forestry interests are found. Kalewa Township hosts several coalmines, and there is a many copper mine located out of Monywa that has been the site of several serious incidents relate to the land and resource rights. Forestry products have taken an vital role in the economy since old times, especially in the northern fields, where teak and other hardwoods are extracted. However, as in other parts of Myanmar, the sustainability of forestry has been a long-standing issue of concern. A number of areas of Sagaing Region are included in national parks and wildlife sanctuaries, which are among Myanmar's most important four (Alaungdaw Kathapa National Park, Chatthin Wildlife Sanctuary, Mahamyaing Wildlife Sanctuary and Htamanthi) Wildlife Sanctuary.

The local economy and socio-economic indicators are mainly diversified. In the south, where most of the population lives and where urbanization is highest, people enjoy a reasonably good standard of living compared to the rest of Myanmar. In its

remote northern regions, especially in the hills, where infrastructure is poor and where the region's ethnic minorities live, standards are significantly lower in terms of economic activity and social sector performance. Parts of the communes belonging to SAZ Naga are among the poorest, most isolated and least developed in Myanmar.

3.2 Profile of Salingyi Township

Salingyi is a town in Salingyi Township is located in Yinmabin District, Sagaing Region in Myanmar. It is the administrative headquarters of Salingyi County, and is located at a triple crossroads with roads going northwest from Yinmabin, north from Monywa, there is a large textile factory which was completed in 2005. There are organized 3 wards and 39 village tracts in Salingyi Township. There are 116837 households and living 121808 people in which male are 55729 (45.8%) and female are 66079 (54.2%) in Salingyi Township.

Union of Myanmar Economic Holdings Limited (UMEHL) and its Chinese subsidiary Wanbao Copper seized more than 7,800 hectares (3,200 hectares) of agricultural land in the township to set up a copper mine at Letpadaung.

3.3 Descriptive Statistics for Households of Census Data in Salingyi Township

The study uses descriptive statistics. This study is primarily concerned with socio-economic conditions of Salingyi Township, in which population, age, labor force, education, occupation, lighting, cooking, types of houses, drinking water, types of toilet and transportation.

Table (3.1) Population by 5-Year Age Groups, Salingyi Township

Age Groups	Total	Male	Female
0-4	90089	4550	4539
5-9	10269	5209	5060
10-14	11599	5724	5875
15-19	9940	4613	5327
20-24	9677	4400	5277
25-29	10429	4591	5538
30-34	9419	4223	5196
35-39	9242	4121	5121
40-44	8428	3792	4636
45-49	7593	3308	4285
50-54	6760	2953	3807
55-59	5775	2546	3229
60-64	4839	2159	2680
65-69	3281	1370	1911
70-74	2255	885	1370
75-79	1829	715	1114
80-84	1004	372	632
85-89	479	153	326
90+	201	45	156
Total	121808	55729	66079

Source: Census Report Volume 3-E (Sagaing), 2014

Table (3.2) Population of Selected Age Groups in Salingyi Township

Age-Groups	Population	Percentage (%)
0-14	30957	25.4
15-64	81802	67.2
65+	9049	7.4

Source: Census Report Volume 3-E (Sagaing), 2014

Productive working population of portion between 15 to 64 years of age in Salingyi Township is 67.2%. The portion of children aged 14 and below together with the portion of the elderly aged 65 and over are less than the portion of the working age

group population. Fewer portions of children and elderly reduce the dependency of those age groups on the working age population.

Table (3.3) Youth Literacy Rate (aged 15 - 24), Salingyi Township

Gender	Total Population (15 - 24)	Percentage (%)
Total	18,708	97.7
Males	8,275	98.1
Females	10,433	97.4

Source: Census Report Volume 3-E (Sagaing), 2014

The literacy rate for youth aged 15-24 is 97.7% with 97.4% for female and 98.1% for male.

Table (3.4) Educational Attainments by Gender in Salingyi Township

Highest Grade	Male	Female	Total
None	3751	6815	10566
Primary(1-5)	4587	9525	14112
Middle (6-9)	5484	4206	9690
High (10-11)	3324	1906	5230
Diploma	150	34	184
University/College	2732	2788	5520
Post-graduate and above	79	111	190
Vocational Training	121	26	147
Others	753	892	1645

Source: Census Report Volume 3-E (Sagaing), 2014

Table (3.4) shows the population 25 years and over by highest level of education completed and sex (both household and institutions). According to this table, total population completed primary school were 14112, 4587 were male and 9525 were female. Middle school level populations were 9690 and from them, 5484 were male and 4206 were female. University/ College level completed population were 5520, 2732 were male and 2788 were female. According to these data, it can be assumed that the most population 25 years and over in Salingyi Township are primary school level. The

second is middle school level and the third is University/ College level. The least population has completed vocational training.

Table (3.5) Usual Activity Status by Gender in Salingyi Township

Usual Activity Status	Male	Female	Total
Employee (government)	1843	2372	4215
Employee (private)	12913	6977	19890
Employer	918	512	1430
Own Account Worker	13059	10628	23687
Unpaid Family Worker	3317	6262	9579
Sought Work	1159	1168	2327
Did Not Seek Work	158	60	218
Full Time Student	6816	7285	14101
Household Worker	556	15580	16136
Pensioner, Retired, Elderly	2897	4117	7014
Ill, Disabled	383	381	764
Other	1951	1138	3089

Census Report Volume 3-E (Sagaing), 2014

Table (3.5) shows the population 10 years and over by usual activity status and sex in Salingyi Township. According to this table, total own account workers were 23687, 13059 were male and 10628 were female. From total household workers, 16136, male workers were 556 and female workers 15580. Private employees were 19890. From them, 6977 were female and 12913 male. So, it can be assumed that the most usual activity status is own account worker, the second most is private employee and the third most is household worker in Salingyi Township. Moreover, the least status is sought work.

Table (3.6) Occupation by Gender in Salingyi Township

Occupation	Employed Persons			Percentage (%)		
	Total	Male	Female	Total	Male	Female
Total	53155	28330	24825	100	100	100
Managers	201	130	71	0.4	0.5	0.3
Professionals	1103	336	767	2.1	1.2	3.1
Technicians and Associate Professionals	721	421	300	1.4	1.5	1.2
Clerical Support Workers	1681	921	760	3.2	3.3	3.1
Services and Sales Workers	5333	2026	3307	10.0	7.2	13.3
Skilled Agricultural, Forestry and Fishery Workers	20326	11721	8605	38.2	41.4	34.7
Craft and Related Trades Workers	8332	3314	5018	15.7	11.7	20.2
Plant and Machine Operators and Assemblers	1903	1519	384	3.6	5.4	1.5
Elementary Occupations	11170	6999	4171	21.0	24.7	16.8
Others	-	-	-	-	-	-
Not Stated	2385	943	1442	4.5	3.3	-5.8

Source: Census Report Volume 3-E (Sagaing), 2014

In Salingyi Township, 38.2% of the employed persons aged 15-64 are skilled agricultural, forestry and fishery workers and is the highest proportion, followed by 21.0% in elementary occupations. Analysis by sex shows that 41.4% of males and 34.7% of females are skilled agricultural, forestry and fishery workers.

Table (3.7) Labor Force Participation in Salingyi Township

Labor Force (aged 15 – 64)	Total	Male	Female
Labor Force Participation Rate	70.8%	85.6%	58.7%
Unemployment Rate	3.8%	3.4%	4.2%
Employment to Population Ratio	68.1%	82.7%	56.3%

Source: Census Report Volume 3-E (Sagaing), 2014

Table (3.8) Households by Types of Ownership of Housing Unit in Salingyi Township

Ownership of Housing Unit	Households	Percentage (%)
Owner	24778	93.6
Renter	447	1.7
Provided Free (individually)	386	1.5
Government Quarters	230	0.9
Private Company Quarters	602	2.3
Other	24	0.1

Source: Census Report Volume 3-E (Sagaing), 2014

Table (3.8) shows households by type of ownership of housing unit in Salingyi Township. According the table (8), most of the households (24778) were owner, it was 93.6%. Six hundred and two households were staying in Private company quarters; it was 2.3% and the second most. Four hundred and forty-seven households were renters and the percentage is 1.7%. It is the third most. Therefore, most of the households in Salingyi Township live by their own houses.

Table (3.9) Households by Main Source of Lighting in Salingyi Township

Main Source of Energy for Lighting	Households	Percentage (%)
Electricity	12,009	45.4
Kerosene	64	0.2
Candle	1,041	3.9
Battery	8,419	31.8
Generator (private)	1,200	4.5
Water Mill (private)	20	0.1
Solar System/Energy	1,752	6.6

Source: Census Report Volume 3-E (Sagaing), 2014

Table (3.9) shows the households by main source of lighting in Salingyi Township. According to this table, 12,009 households had available electricity, percentage was 45.4%. 8,419 Households had battery, percentage was 31.8%. One thousand and seven hundred and fifty-two households used Solar system/energy for

lighting were 6.6%. It can be assumed that the most households have available electricity lighting and the second most households use battery. The least households use water mill for source of lighting.

Table (3.10) Households by Main Source of Energy for Cooking in Salingyi Township

Main Source of Energy for Cooking	Households	Percentage (%)
Electricity	4,195	15.8
LPG	*	< 0.1
Kerosene	*	0.1
Biogas	*	0.1
Firewood	21,609	81.7
Charcoal	532	2.0
Coal	*	0.1
Other	80	0.3

Source: Census Report Volume 3-E (Sagaing), 2014

Table (3.10) shows main source of energy for cooking in Salingyi Township. In Salingyi Township, households mainly use wood-related fuels for cooking with 81.7% using firewood and 2.0% using charcoal. Only 15.8% of households use electricity for cooking.

Table (3.11) Main Source of Drinking Water of Households in Salingyi Township

Main Source of Drinking Water	Households	Percentage (%)
Tap Water/Piped	4,021	15.2
Tube Well, Borehole	11,481	43.4
Protected Well/Spring	6,579	24.9
Bottled/Purifier Water	988	3.7
Total Improved Water Sources	23,069	87.2
Unprotected Well/Spring	459	1.7
Waterfall/Rainwater	*	< 0.1
Other	189	0.7
Total Unimproved Water Sources	3,398	12.8

Source: Census Report Volume 3-E (Sagaing), 2014

Table (3.11) shows main source of drinking water in Salingyi Township. In Salingyi Township, 87.2% of households use improved sources of drinking water (tap water/ piped, tube well, borehole, protected well/spring and bottled water/water purifier). Some 43.4% of the households use water from tube well, borehole and 24.9% use water from protected well/spring. Some 12.8% of the households use water from unimproved sources.

Table (3.12) Households by Types of Housing in Salingyi Township

Types of Housing	Households	Percentage (%)
Apartment/ Condominium	31	0.1
Bungalow/ Brick House	523	2.0
Semi-Pacca House	1,186	4.5
Wooden House	8,626	32.6
Bamboo House	15,068	56.9
Hut 2 - 3 Years	890	3.4
Hut 3.41 Year	82	0.3
Other	61	0.2

Source: Census Report Volume 3-E (Sagaing), 2014

Table (3.12) shows the households by types of housing in Salingyi Township. According to this table, 15,068 households lived by Bamboo house and its percentage

was 56.9%. It can be said that the most households in Salingyi Township owns Bamboo house. The percentage of households who own wooden house was 32.6% and it is the second most. The third most is the households by semi-pacca house, 4.5%. The other types of housing were apartment, bungalow/ brick house, hut 2 - 3 years, hut 3.41 year and other. The least type of housing is 0.1% and it is named apartment/ condominium.

The majority of the households in Salingyi Township are living in bamboo houses 56.9% followed by households in wooden houses 32.6%.

Table (3.13) Households by Types of Toilet in Salingyi Township

Types of Toilet	Households	Percentage (%)
Flush	473	1.8
Water Seal (improved pit latrine)	18,606	70.3
Total Improved Sanitation	19,079	72.1
Pit (traditional pit latrine)	216	0.8
Bucket (surface latrine)	21	0.1
Other	166	0.6
None	6,985	26.4

Source: Census Report Volume 3-E (Sagaing), 2014

Table (3.13) shows the households by types of toilet in Salingyi Township. Most of the households (19,079) used total improved sanitation, it was 72.1 %. The second most is water seal (Improved pit latrine), using 18,606 households and it was 70.3. None were (6,985) households and it was 26.4 %. Moreover, the households who use flush latrine were 473, 1.8 %. It can be seen that the sanitation condition was middle in Salingyi Township. Therefore, these improvements were due to the health education given by township authority concerned.

Table (3.14) Households by Availability of Communication Amenities in Salingyi Township

Availability of Communication Amenities	Households	Percentage (%)
Radio	14,374	54.3
Television	11,739	44.4
Landline Phone	552	2.1
Mobile Phone	5,762	21.8
Computer	482	1.8
Internet at Home	1,004	3.8

Source: Census Report Volume 3-E (Sagaing), 2014

Table (3.14) shows the households by availability and related amenities. According to this table, the properties of radio, television, landline phone, mobile phone, computer and Internet at home of households were 14374, 11739, 552, 5762, 482, and 1004 were households. The most available item for amenities is radio and television. 54.3% of the households in Salingyi Township have access to radio and is the highest among the access of communication and related amenities. In Salingyi Township, some 44.4% of the households have access to television.

Table (3.15) Households by Availability of Transportation Equipment in Salingyi Township

Availability of Transportation Equipment	Households	Percentage (%)
Car/Truck/Van	406	1.5
Motorcycle/Moped	15,796	59.7
Bicycle	17,794	67.2
4-Wheel Tractor	327	1.2
Canoe/Boat	632	2.4
Motor Boat	295	1.1
Cart (bullock)	7,809	29.5

Source: Census Report Volume 3-E (Sagaing), 2014

Table (3.15) shows the households by availability of transportation items in Salingyi Township. According to this table, most of the households (17,794) used bicycle. The second most of the households, (15,796) used motorcycle/moped. The

third most of the households (7,809) used cart (bullock). In Salingyi Township, 67.2% of the households have bicycle as a means of transport and it is the highest proportion, followed by 59.7 % of households having motorcycle/moped.

3.4 Background History and Current Conditions of Done Taw Village

By asking to local authorities who are heads of ten and hundred houses in Done Taw Village, the information is received from them. Done Taw Village is located in by the side of the Pathein-Monywa high-way road. It is far from about 8 miles from Monywa. It is near the Shwetaung Oo pagodas. It is situated on the west of Chindwin River in Salingyi Township, Sagaing Regional Division and including square types of village in which almost all of land are used for cultivation, farming and living. Chindwin river and Monywa are situated in east, Yama Chaung bridge is in north, Sabetaung and Kyisintaung mountains are in west and Letpadaung Copper mountains and No.1 Copper Mine Town are in south of the village. These data are collected from U Myint Sein who is the president of local authority of that village.

Many of the year, villagers focus and operate on agriculture and farming. There are four hundred and fifty-nine households and 2073 people live in there, in which male are 1025 and female are1048.

All of streets in there are just in earth and paved road, the villagers can communicate to city and town by using cycles, cars, three wheels' motorcycle and high way express cars. At present, there are four monasteries and sixteen pagodas, and one Affiliated Basic Education Middle school. In Done Taw Village, a primary school was founded at 1973-1974 academic year and promoted into middle school in 2018-2019 academic year. In order to increase the knowledge of the villagers, there is a library and moreover there is a stadium in this village. For social communication and works they use most telephone.

Local health care clinic was founded in 2013. Regarding health care and social welfare there is a social voluntary society in there, moreover Myanmar Women's Affairs Federation, Volunteer Fire Fighter group, Free Funeral Services Society, and Myanmar Maternal and Child Welfare Association are also formed together with villagers for social services. Fund for these groups and societies are collected from villagers depending on their property and income in Done Taw Village. Municipality provided water distribution since 2014.

After getting electricity in 1997, electricity is more used for cultivation and farming. All of the households are Buddhists and there are many shrines. There is an artesian well for drinking water for the household. The households are placed waste in the underground and some are destroyed in the fire. This village wide 719.78 arecas and 40 arecas are village land areas. At present, Myanmar Yang Tse Copper Co., Ltd provides requirements concerning with the stadium, school facilities, 25KW transformer, educational facilities, providing services to the age of over 75 support, weekly health care and pure water machine into a Rural Development Project.

3.4.1 Location and Land Area

Done Taw Village is located in by the side of the Pathein-Monywa Highway Road. It is situated on the west of Chindwin River in Salingyi Township, Sagaing regional division and including square types of village in which almost all of land are used for cultivation, farming and living. Chindwin River and Monywa are situated in east, Yama Chaung bridge is in north, Sabetaung and Kyisintaung mountains are in west and Letpadaung Copper mountains and No.1 Copper Mine Town are in south of the village. This village wide 719.78 arecas and 40 arecas are village land areas.

3.4.2 Race and Religion

There are four hundred and fifty-nine households and 2073 people in which male are 1025 and female are1048. In Done Taw Village, all of the people are Burma. In religion, all the people are Buddhist. The pagoda festivals are held in every year. At present, there are four monasteries and sixteen pagodas and there are many shrines. In Done Taw Village, pagoda festivals are held annually.

3.4.3 Health and Education

Local health care clinic was founded in 2013. Municipality provides water distribution at 2014. For drinking water, there is an artesian well for the households are placed waste in the underground and some are destroyed in the fire. Although there are 459 households, 173 sample households are using cover pit toilet according to the study. The hospital and dispensary are not had in the village.

The education is fairly good. In Done Taw Village, a primary school was founded at 1973-1974 academic year and promoted into middle school level in 2018-2019 academic year. There is a library and a stadium for youth to expand the knowledge

in Done Taw Village. There is no high school in the village. There are a number of 302 students at Middle School in Done Taw Village.

At present, Myanmar Yang Tse Copper Co., Ltd provides requirements concerning with the stadium, school facilities, 25KW transformer, educational facilities, providing services to the age of over 75 support, weekly health care and pure water machine into a Rural Development project.

3.4.4 Social Societies

There are five societies in Done Taw Village. They are Myanmar Women's Affairs Federation, Social Society, Volunteer Fire Fighter group, Free Funeral Services society, and Myanmar Maternal and Child Welfare Association.

3.4.5 Infrastructure and Transportation of the Village

All of streets in there are just in earth and paved road, the villagers can communicate to city and town by using cycles, cars, three wheels' motorcycle and highway express cars. At present, there are four monasteries and sixteen pagodas, it has one Middle school, Library, Stadium, Local Health Care, two Transformers, and Pure Water Machine. For social communication and works they use most telephone.

3.5 Background of Monywa Copper Project

Large-scale mines like the Monywa Copper Project are huge operations and are often funded by foreign investors.They have a high level of recovery and production and use technologically advanced methods and equipment, including heavy machinery and complex chemical processes.The Monywa Copper Project is the largest mine in Myanamar, located in central Burma, in the Sagaing Division, and includes sulfide-copper deposits called Sabetaung, Sabetaung South, Kyisintaung and Letpadaung. The first three (collectively referred to as S&K) are adjacent and because of this they were developed as one project, the whole of Letpadaung is about 10 kilometers southeast of S&K and is undeveloped. The Moniva project, an open pit mine, is the first choice for mining companies because it is the most economical form of mining.They are also the most devastating for the landscape. Surface mines represent the largest man-made holes on the planet, holes that can only have an irreversible impact on the ecosystems they displace.

In 1980s the Monywa project consists of the Sabetaung and Kyisintaung (S&K) and Letpadaung copper mines, has been operational and Letpadaung is under construction. In 1996, the Canadian company Ivanhoe Mines Ltd., entered into a joint venture with a Myanmar state-owned company, Mining Enterprise No.1 (ME1), to create the Myanmar Ivanhoe Copper Company Limited (MICCL), in which both owned 50 percent interest, MICCL operated the S&K mine. In 2007, Ivanhoe Mines decided to disengage from Myanmar and set up a third party trust to which its assets in Myanmar were transferred.

China North Industries Corporation (NORINCO) and UMEHL have announced that they have reached an agreement on the Moniva project, which includes the S&K and Letpadaung mines in 2010.Subsidiaries of Wanbao Mining Ltd (owned by NORINCO) carry out both mines today. The process by which the assets of ME1-Ivanhoe Mines were transferred to the China-Myanmar military partnership of Wanbao-UMHEL has never been disclosed.

3.5.1 Profile of Mining Enterprise (ME 1)

Monywa project consists of the Sabetaung and Kyisintaung (S&K) and the Letpadaung copper mines. S&K has been operational since the 1980s.In 1930s, British administration conducted regional geological studies. In 1950s, Burma (Myanmar) Geological Department surveyed the area with Yugoslav counterparts. In 1972, The Japanese Government gave technical and financial assistance for more definitive drilling. In1978, an agreement was signed between ME1 and the Bor Copper Institute of Yugoslavia to develop the S&K deposits. In 1980, the Ministry of mine No1 Mining Enterprise (ME1) prepared extraction of copper in the S&K mine.

In 1983-84, ME1 is really begun extraction of copper. Because of without the development of machine gun and technology. ME1 was operated over 1000 employees and the term is 10 years. In 1988, ME1 was suspended animation for copper extraction and it gave salaries to their employees. During the operation of ME1, because of S&K mine's copper extraction wastes and acids flow out to the around the local communities' lands, the residents' lands were degraded. Nowadays, we found it is not cultivated crops on crash lands (U Saw Kyaw Win, employee of ME 1 (retired)).

Yugoslav has been searching for cathode copper in S&K mine, in 1978. In 1979-80 ME 1 was really begun extraction of copper. Because of without the

development of mechanisms and technology, ME 1 produced only copper concentrates. In 1978s, ME 1 was begun founded Mine Myoo No.1 High School Copper Mine and Mine Hospital. The organization structure of the ME 1 was organized nine departments and the operation of the copper extraction was employed over 1500 employees. In 1988, ME 1 was suspended animation for copper extraction and it gave salaries to their employees. ME 1 was stopped copper extraction of S&K mines in 1994-95. In 1992, Ivanhoe Copper company limited (Canada) was studied into a one investigation period in the S&K mines and the Letpadaung mine (U Soe Moe Thaung, supervisor of MYTCL).

ME 1 was founded Mine Myoo No.1 Copper Mine High School copper mine and mine hospital in 1980-81. Yugoslav was supported to ME 1 mechanisms and technology for copper extraction in S&K mines, in 1983. In 1984-85, ME 1 was operated the extraction of copper in S&K mines with Yugoslav. In 1985-86, ME 1 was produced copper itself with Yugoslav's mechanism and technology. ME 1 was stopped copper extraction of S&K mines in 1994-95. In 1996, Ivanhoe Copper Ltd., (MICCL) was studied into one investigation period in the S&K mines and the Letpadaung mine. In 1998-99, MICCL had begun cathode copper production in S&K mine. MICCL was begun produced 25000 tons per years in S&K. In 2007, MICCL was stopped copper extraction in the S&K mines. In 2010, Myanmar Yang Tse Copper limited has been reached for cathode copper production in S&K mines (U Than Soe, employee of MYTCL, retired).

3.5.2 Profile of Myanmar Ivanhoe Copper Company Limited (MICCL)

Myanmar Ivanhoe Copper Company Limited (MICCL) is owned the 50-50 joint venture company by Mining Enterprise No. 1 (ME-1), an agency of the Ministry of Mines of the Union of Myanmar, and Ivanhoe Myanmar Holdings Limited (IMHL), is owned by the Monywa Trust. On February 27, 2007, the Monywa project, an independent, third-party trust, acquired interim ownership of the IMHL interest from Ivanhoe Mines Ltd. The Sabetaung-Kyisintaung (S&K) Mine, situated in central Myanmar, is an open-pit, heap-leach copper mine operated by MICCL. Currently, the mine is operating at a capacity of its initial design capacity 25,000 tons of copper per year.

3.5.3 Profile of Myanmar Yany Tse Copper Limited (MYTCL)

Myanmar Yany Tse Copper Limited (MYTCL) is an international mining corporation enhancing its overseas focus on the national environmental commitment, community and culture.As the head of Myanmar's copper industry in the Republic of the Union of Myanmar, MYTCL has defined a unique approach towards unity and combination of community and begin. MYTCL was established in 2011 and is a subsidiary of Wanbao mining Ltd., which was incorporated on October 27, 2004 with a registered capital of RMB 1. 3billion. As an international mining company based in Beijing and owning many mining subsidiaries abroad, its business scope ranges from exploration, mining, processing, smelting, trading of mineral products, investment and operation of the industry concerned.Being responsible for shareholders, employees, customers and society, Wanbao Mining adheres to the corporate culture of "human orientation, collaboration and win-win; enterprising and innovative, pursuing excellence "in order to contribute to a harmonious society.

Mission

- To develop overseas mineral resources, and to realize both economic and social benefits.

Vision

- WANBAO Mining aims to build more mining bases overseas, extracting advanced experience from a leading mining company at home and abroad, an international mining company that owns mining, advanced exploration techniques , extraction, concertation and fusion and first-class management.

Morals

- Human orientation, collaboration and win-win, enterprising and innovation, following excellence.

Philosophy

- Based on market demand and bring into play the advantage of resources;
- Absorb the essence of industry and achieve harmonious development.

Motto

- Responsibility brings motivation, communication creates values,
- Growth bring fortune, cooperation promotes the development.

3.5.4 Profile of Myanmar Wanbao Mining Copper Limited (MWMCL)

Wangbao mining was organized in 2004. On October 27, its registered capital was 5 billion yen. As an international specialized mining company based in Beijing with many foreign mining subsidiaries, its scope ranges from exploration, exploitation, ore processing, smelting, trade in minerals to raw materials, investment and operations in the respective industries.Wanbao Mining continuously acquires high quality mineral resources from abroad, develops and implements large resource projects, manages the mineral trade and vigorously explores the global mining market. Vanbao is currently licensed to operate many mines in Southeast Asia, as well as Central and South Africa, including copper, copper-cobalt, and platinum-palladium mines.

Vision

- A domestically advanced and world-renewed internationalized mining enterprise.

Mission

- To develop mineral resources to achieve economic and social benefits.

Motto

- Put people as priority, achieve mutual benefits with partners, follow excellence through innovation.

This chapter has been described the socio-economic conditions of Salingyi Township and the background of Done Taw Village. Done Taw village is located in by the side of the Pathein-Monywa road. It takes 35 minutes to go to this village from Monywa across the Yama Chung Bridge. Most of the villagers focus and operate on agriculture and farming.

CHAPTER 4
ANALYSIS OF THE SOCIO-ECONOMIC CONDITIONS OF DONE TAW VILLAGE IN SALINGYI TOWNSHIP

This chapter presents data analysis, findings and discussion of the study. The objective of the study is to compare Socio-Economic conditions of Copper-Mining employees' households and non-employees' households in Done Taw Village, Salingyi Township. This chapter also describes the study population, the sample and methods of data collection. For this study, qualitative and quantitative methods are used and primary data sources are also used. Finally, the chapter explains the approaches using in data management, data analysis and presentation of the findings.

Through this type of design, the study purposes to describe social communication by surveying family members, education level, domestic conditions, occupation, working classes and kinds of house and infrastructure progresses such as basic food, use of fuel, clothing, education circumstances, social activities having luxury, public health and health care, water and sanitation, types of toilet of households. The information collected from the study population using the survey design must reflect the total population

One hundred and seventy-three questionnaires were collected in this village. After collecting all the responses of the villagers from Done Taw Village, descriptive statistical analysis, and reliability test were conducted firstly. And then, cross-tabulation and regression analysis were conducted in order to prove the objective of this study by using logistics regression analysis method through computer software of Statistical Package for Social Science (SPSS) version 22.

4.1 Gender of Respondents

Table (4.1) Gender of Respondents

Households			**Gender**		**Total**
			Male	**Female**	
Households	Non-Mining Employees' Household	Count	97	19	116
		% of Total	56.1%	11.0%	67.1%
	Mining Employees' Household	Count	48	9	57
		% of Total	27.7%	5.2%	32.9%
Total		Count	145	28	173
		% of Total	83.8%	16.2%	100%

Source: Survey Data, 2018

Table (4.1) shows that count presents the frequencies for all cells. Thus, there are 97male and 19 female in "non –mining employees' household" and 48 male and 9 female in "mining household".

% with reasons presents the gender of respondents who choose each of the two reasons (in the Count column) as a percentage of the number of respondents in each reasons category. The total of 116 respondents (97 male, 19 female) are from non-mining employees' households. Thus, the 97 male and 19 female represent 56.1% and 11.0% of respondents.

Similarly, the total of 57 respondents (48 male, 9 female) are from mining employees' households. Thus, the 48 male and 9 female represent 27.7% and 5.2% of respondents.

Within the surveyed area, non-mining and mining employee's households are usually led by men in Done-Taw village, Salingyi Township.

4.2 Educational Qualification of Respondents

Table (4.2) Educational Qualification of Respondents

Educational Qualification			Households		Total
			Non-Mining Employees' Household	Mining Employees' Household	
Educational Qualification	Illiteracy	Count	5	2	7
		% of Total	2.9%	1.2%	4.0%
	Primary	Count	60	18	78
		% of Total	34.7%	10.4%	45.1%
	Middle	Count	13	17	30
		% of Total	7.5%	9.8%	17.3%
	High	Count	33	16	49
		% of Total	19.1%	9.2%	28.3%
	Graduate	Count	5	4	9
		% of Total	2.9%	2.3%	5.2%
Total		Count	116	57	173
		% of Total	67.1%	32.9%	100%

Source: Survey Data, 2018

Table (4.2) shows that count presents the frequencies for all cells. Thus, 5 illiteracies, 60 primary level,13 middle, 33 high, and 5 graduate level in "non –mining household" and 2 illiteracies, 18 primaries,17 middle, 16 high and 4 graduate in "mining household".

% with reasons presents the education of householder's respondents who choose each of the two reasons (in the Count column) as a percentage of the number of respondents in each reasons category. The total of 116 respondents (5 illiteracies, 60 primary level, 13 middle, 33 highs, and 5 graduate level) of non-mining employees' households. Thus, 5 illiteracies, 60 primary level, 13 middle, 33 highs, and 5 graduate level of householders represent 2.9%, 34.7%, 7.5%, 19.1%, and 2.9% of respondents.

Similarly, the total of 57 respondents (2 illiteracies, 18 primaries, 17 middle, 16 high and 4 graduate) of mining employees' households. Thus, the 2 illiteracies, 18 primaries,17 middle, 16 high and 4 graduate of householders represent 1.2%, 10.4%, 9.8%, 9.2%, and 2.3% of respondents.

According to the table (4.2), the non-mining employees' households and mining employees' households, literacy rate is high (primary level), their illiteracy rate is very low. There was relationship between sample households and education.

4.3 Occupational Status of Respondents

Table (4.3) Occupational Status of Respondents

Occupation of Householders			Households		Total
			Non-Mining Employees' Household	Mining Employees' Household	
Occupation of Householders	Dependence	Count	12	8	20
		% of Total	6.9%	4.6%	11.6%
	Farmer	Count	68	9	77
		% of Total	39.3%	5.2%	44.5%
	Carpenter	Count	16	0	16
		% of Total	9.2%	0.0%	9.2%
	Masonry	Count	8	0	8
		% of Total	4.6%	0.0%	4.6%
	Random	Count	7	0	7
		% of Total	4.0%	0.0%	4.0%
	Mining Employee	Count	0	40	40
		% of Total	0.0%	23.1%	23.1%
	Seller	Count	3	0	3
		% of Total	1.7%	0.0%	1.7%
	Teacher	Count	1	0	1
		% of Total	0.6%	0.0%	0.6%
	Driver	Count	1	0	1
		% of Total	0.6%	0.0%	0.6%
Total		Count	116	57	173
		% of Total	67.1%	32.9%	100.0%

Source: Survey Data, 2018

Table (4.3) shows that count presents the frequencies for all cells. Thus, 12 dependents, 70 farmers, 16 carpenters, 8 masonries, 5 Casual Labor, 3 sellers 1 teacher and 1 driver in "non–mining household" and 8 dependences, 9 farmers, and 40 mining employees in "mining household".

Percentage with reasons presents the occupation of householder's respondents who choose each of the two reasons (in the Count column) as a percentage of the number of respondents. The total of 116 respondents (12 dependents, 70 farmers, 16 carpenter, 8 masonries, 5 random, 3 sellers 1 teacher and 1 driver) of non-mining employees' households. Thus, 12 dependents, 70 farmers, 16 carpenter, 8 masonries, 5 random, 3 sellers 1 teacher and 1 driver of householders represent 6.9%, 40.5%, 9.2%, 4.6%, 2.9%, 1.7%, 0.6% and 0.6% of respondents.

Similarly, the total of 57 respondents (8 dependents, 9 farmers, and 40 mining employees) of mining employees' households. Thus, 8 dependents, 9 farmers, and 40 mining employees of householders represent 4.6%, 5.2% and 23.1% of respondents.

According to this study, most of non-employee's households are farmers. Mining employee's households are mining workers. There is relationship between sample households and occupation.

4.4 Family Size of Households

Table (4.4) Family Size of Households

Family Size		**Households**		**Total**
		Non-Mining Employees' Household	**Mining Employees' Household**	
Family Size	1	8	0	8
	2	10	7	17
	3	17	18	35
	4	40	11	51
	5	28	13	41
	6	8	4	12
	7	4	2	6
	8	1	0	1
	9	0	2	2
Total		116	57	173

Source: Survey Data, 2018

Table (4.4) shows family size of households in Done Taw Village, Salingyi Township. According to this table, the family size of the most non-mining employees' households is usually had 4 and 5 members in households. The family size of the most mining employees' households is 3 and 4 members in households.

4.5 Properties of Car, Cycle and Bicycle

Table (4.5) Properties of Car, Cycle and Bicycle

Household Type			Property of Car		Total	Property of Cycle		Total	Property of Bicycle		Total
			No	Yes		No	Yes		No	Yes	
Household Type	Non-Mining Employees' Household	Count	96	20	116	22	94	116	50	66	116
		% of Total	55.5%	11.6%	67.1%	12.7%	54.7%	67.1%	28.9%	38.2%	67.1%
	Mining Employees' Household	Count	55	2	57	1	56	57	23	34	57
		% of Total	31.8%	1.2%	32.9%	0.6%	32.6%	32.9%	33.1%	13.3%	32.9%
Total		Count	151	22	173	23	150	173	73	100	173
		% of Total	87.3%	12.7%	100%	13.3%	87.2%	100%	42.2%	57.8%	100%

Source: Survey Data, 2018

Table (4.5) shows that count presents the frequencies for all cells. Thus, the number of household without car is 96(55.5%) and the number of car is 20 (11.6%) in "non –mining household" and the number of household without car 55 (31.1%) and the number of car is 2(1.2%) in "mining household". In this table the property of car is lower than others in non-mining and mining employees' households in Done Taw village, Salingyi Township.

The count presents the frequencies for all cells. Thus, the number of household without cycle is 22 (11.7%) and the number of cycle is 94 (54.7%) in "non –mining employees' household" and the number of household without cycle is 1(0.6%) and the number of cycle owner is 56 (32.6%) in "mining household".

The above table shows that count presents the frequencies for all cells. Thus, the number of household without bicycle is 50 (28.9%) and the number of bicycle is 66 (38.2%) in "non –mining employees' household" and the number of household without

bicycle is 23 (13.3%) and the number of bicycle is 34 (19.7%) in "mining employees' household".

According to table (4.5), sample households own 12.7% of car, 87.2% of cycle and 57.8% of bicycle in this village. There is no relationship between sample households and property.

4.6 Properties of TV, Radio and Satellite

Table (4.6) Properties of TV, Radio and Satellite

Household Type			Property of TV		Total	Property of Satellite		Total	Property of Radio		Total
			No	Yes		No	Yes		No	Yes	
Household Type	Non-Mining Employees' Household	Count	14	102	116	37	79	116	46	69	116
		% of Total	8.1%	59.0%	67.1%	21.4%	45.7	67.1%	26.7%	40.1%	67.1
	Mining Employees' Household	Count	5	52	57	10	47	57	42	15	57
		% of Total	2.9%	30.1%	32.9%	5.8%	27.2%	32.9%	24.4%	8.7%	33.1%
Total		Count	19	154	173	47	126	173	88	84	173
		% of Total	11%	89.0%	100%	27.2%	72.2%	100%	51.2%	48.8%	100%

Source: Survey Data, 2018

The above table (4.6) shows that the properties of TV, radio and satellite of sample households. According to the table (4.6), count presents the frequencies for all cells. Thus, the number of household without TV is 14(8.1%) and the number of TV is 102 (59.0%) in "non –mining employees' household" and the number of household without TV is 5 (2.9%) and the number of TV is 52 (30.1%) in "mining employees' household".

According to the table (4.6), count presents the frequencies for all cells. Thus, the number of household without satellite is 37 (21.4%) and the number of satellite is 79 (45.7%) in "non –mining employees' household" and the number of household without satellite is 10 (5.8%) and the number of satellite is 47 (27.2%) in "mining employees' household"

According to the table (4.6), count presents the frequencies for all cells. Thus, the number of household without radio is 46 (26.7%) and the number of radio is 69

(40.1%) in "non–mining employees' household" and the number of household without radio is 42 (24.4%) and the number of radio is 15 (8.7%) in "mining employees' household". Table (4.6) shows that sample households own 89.0% of TV, 72.2% of satellite and 48.8% of radio in this village. By looking this condition, the most of this village's residents are living in accordance with modern age.

4.7 Properties of Rice Cooker and Iron of Sample Households

Table (4.7) Properties of Rice Cooker and Iron of Sample Households

Household Type			**Property of Rice Cooker**		**Total**	**Property of Iron**		**Total**
			No	**Yes**		**No**	**Yes**	
Household Type	Non-Mining Employees' Household	Count	21	95	116	3	84	116
		% of Total	12.1%	54.9%	67.1%	18.5%	48.6%	67.1%
	Mining Employees' Household	Count	1	56	57	26	31	57
		% of Total	0.6%	32.4%	32.9%	15.0%	17.9%	32.9%
Total		Count	22	151	173	58	115	173
		% of Total	12.7%	87.3%	100%	33.5%	66.5%	100%

Source: Survey Data, 2018

Table (4.7) shows the condition of properties of rice cooker and iron of sample households in Done Taw Village. According to this table, count presents the frequencies for all cells. Thus, the number of household without rice cooker is 21 (12.1%) and 95 (54.9%) the number of rice cooker is 95 (54.9%) of households in "non –mining employees' household" and the number of household without rice cooker is 1 (0.6%) and the number of rice cooker is 56 (32.4%) in "mining employees' household".

According to this table, count presents the frequencies for all cells. Thus, the number of household without iron is 3 (18.5%) and, the number of iron is 84 (48.6%) in "non –mining employees' household" and the number of household iron is 1 (0.6%) and the number of iron is 56 (17.9%) in "mining employees' household". In this table

(4.7), sample households own 87.3% of rice cooker and 66.5% of iron in this village. According to above table (4.7), most of the sample households has rice cooker and iron in mining employees' and non-employees' households.

4.8 Properties of Telephone and Others (refrigerator, cooking pot, air cooler, etc.)

Table (4.8) Properties of Telephone and Others (refrigerator, cooking pot, air cooler, etc.)

Household Type			Property of Telephone		Total	Property of others		Total
			No	Yes		No	Yes	
Household Type	Non-Mining Employees' Household	Count	13	103	116	8	108	116
		% of Total	7.5%	59.5%	67.1%	46%	62.4%	67.1%
	Mining Employees' Household	Count	1	56	57	0	57	57
		% of Total	0.6%	32.4%	32.9%	0.0%	32.9%	32.9%
Total		Count	14	159	173	8	65	173
		% of Total	8.1%	91.9%	100.0%	4.6%	95.4%	100.0%

Source: Survey Data, 2018

Table (4.8) shows that the conditions of properties of telephone and others (refrigerator, cooking pot, air cooler, etc.) of sample households in Done Taw village. According to this table, count presents the frequencies for all cells. Thus, the number of household without Telephone is 13 (7.5%) and the number of Telephone owner is 103 (59.5%) of households in "non –mining employees' household "and the number of household without Telephone is 1 (0.6%) and the number of Telephone owner is 56 (32.4%) in "mining employees' household" as a reason.

Thus, the number of household without others are 8 (4.6%) and the number of others (refrigerator, cooking pot, air cooler, etc.) are 108 (62.4%) in "non –mining employees' household" and the number of household without others are 0 (0.0%) and the number of others are 57 (32.9%) in "mining household". According to table (4.8),

sample households own 91.9% of telephone and 95.4% of others (refrigerator, cooking pot, air cooler, etc.)

4.9 Properties of Land Ownership

Table (4.9) Properties of Land Ownership

Household Type			Land Ownership		Total	Property of Houses		Total
			No	Yes		No	Yes	
Household Type	Non-Mining Employees' Household	Count	44	72	116	1	115	116
		% of Total	25.4%	41.6%	67.0%	0.6%	66.5 %	67.1%
	Mining Employees' Household	Count	28	29	57	1	56	57
		% of Total	16.2%	16.8%	33.0%	0.6%	32.4 %	32.9%
Total		Count	72	100	173	2	171	173
		% of Total	41.6%	57.8%	100%	1.2%	98.85	100%

Source: Survey Data, 2018

Table (4.9) shows that the condition of land ownership of sample households in Done Taw Village. According to above table, count presents the frequencies for all cells. Thus, the number of household without land ownership is 44 (25.4%) and the number of household is 72 (41.6%) in "non–mining household" and the number of household without land ownership is 28 (16.2%) and the number of household is 29 (16.8%) in "mining employees' household". Also found that the half of mining employees' sample households had land for cultivation use.

Above table shows the condition of property of house of sample households. According to above table, count presents the frequencies for all cells. Thus, the number of household without house is 1 (0.6%) and the number of household is 115 (66.5%) in "non–mining employees' household" and the number of household without house is 1 (0.6%) and the number of household without house is 56 (32.4%) in "mining employees' household". Also found that all sample households own house but only one

household has not house and renter. Therefore, most of the sample households in Done Taw Village lived by their own house.

4.10 Types of House

Table (4.10) Types of House

Household Type			Types of House					Total
			RC	Brick	Wooden	Bamboo	Composite plate	
Household Type	Non-Mining Employees' Household	Count	14	30	38	22	12	116
		% of Total	8.1%	17.3%	22.0%	12.7%	6.9%	67.1%
	Mining Employees' Household	Count	3	7	11	26	10	57
		% of Total	1.7%	4.0%	6.4%	15.0%	5.8%	32.9%
Total		Count	17	37	49	48	22	173
		% of Total	9.8%	21.4%	28.3%	27.7%	12.7%	100.0%

Source: Survey Data, 2018

Table (4.10) shows the condition of types of house of sample households. According to above table, count presents the frequencies for all cells. Thus, 14 (8.1%) of RC, 30 (17.3%) of brick, 38 (22%) of wooden, 22 (12.7%) bamboo and 12 (6.9%) composite plate of households in "non –mining employees' household" and 3 (1.7%) of RC, 7 (4.1%) of brick, 11 (6.4%) of wooden, 26(15.0%) of bamboo and 10 (5.8%) of stone tablets of households in "mining employees' household". It can be said that the most sample households in Done Taw Village own wooden houses. It shows that the housing conditions of this village is fairly good and at medium level. There is relationship between sample households and housing types.

4.11 Using of Fuel

Table (4.11) Using of Fuel

Household Type			**Using of Fuel**		**Total**
			Electric	**Wood**	
Household Type	Non-Mining Employees' Household	Count	89	27	116
		% of Total	51.4%	15.6%	67.1%
	Mining Employees' Household	Count	42	15	57
		% of Total	24.3%	8.7%	32.9%
Total		Count	131	42	173
		% of Total	75.7%	24.3%	100%

Source: Survey Data, 2018

Table (4.11) shows that using of fuel of sample households. According to above table, count presents the frequencies for all cells. Thus, 89 (51.4%) electric and 27 (15.6%) wood of households in "non –mining employees' household" and 42 (24.3%) electric and 15 (8.7%) wood of households in "mining employees' household". Therefore, it can be assumed that most of the households in this village still use electricity for cooking.

4.12 Age Group

Table (4.12) Age Group

Age	Households				Total	
	Non-Mining Employees' Household		Mining Employees' Household			
	Count	%	Count	%	Count	%
25-34	12	6.9%	20	11.6%	32	18.5%
35-44	25	14.5%	15	8.7%	40	23.1%
45-54	38	22.0%	12	6.9%	50	28.9%
55-64	30	17.3%	6	3.5%	36	20.8%
65-74	5	2.9%	4	2.3%	9	5.2%
75-84	4	2.3%	0	0.0%	4	2.3%
85-94	2	1.2%	0	0.0%	2	1.2%
Total	116	67.1%	57	32.9%	173	100%

Source: Survey Data, 2018

Table (4.12) shows the age of householders of sample households. According to above table, count presents the frequencies for all cells. Thus, between 25-34, 35-44, 45-54, 55-64, 65-74,75-84 and 85-94 involves 12 (6.9%), 25 (14.5%), 38 (22.0%), 30 (17.3%), 5 (2.9%), 4 (2.3%), and 2 (1.2%) householders in "non –mining household and between 25-34, 35-44, 45-54, 55-64, and 65-74, involves 20 (11.6%), 15 (8.7%), 12 (6.9%), 6 (3.5%), and 4 (2.3%) householders of households in "mining employees' household".

According to this table, most of the non-mining employees' households are adults. Mining employee's households are youths in this village. The age of householders is the middle age groups of householders in Done Taw Village. There is relationship between sample households and age.

4.13 Income Per Month

Table (4.13) Income Per Month

Income Per Month (Kyats)			Households		Total
			Non-Mining Employees' Household	Mining Employees' Household	
Income Per Month	50000-149999	Count	2	0	2
		% of Total	1.2%	0.0%	1.2%
	150000-249999	Count	3	0	3
		% of Total	1.7%	0.0%	1.7%
	250000-349999	Count	24	4	28
		% of Total	13.9%	2.3%	16.2%
	350000-449999	Count	19	15	34
		% of Total	11.0%	8.7%	19.7%
	450000-549999	Count	14	15	29
		% of Total	8.1%	8.7%	16.8%
	550000-649999	Count	53	23	76
		% of Total	30.6%	13.3%	43.9%
	650000 -749999	Count	1	0	1
		% of Total	0.6%	0.0%	0.6%
Total		Count	116	57	173
		% of Total	67.1%	32.9%	100%

Source: Survey Data, 2018

Table (4.13) shows income per month of households. According to this table, income per month of the most non-mining employees' households are kyats 550000-649999 and it is 30.6%. Income per month of the most mining employee's households are kyats 550000-649999 and it is 13.3%. In non-mining employees' households, at least between Kyats 50000-149999 of 2 households (1.2%) and Kyats 650000 -749999 of one household (0.6%). Kyats 250000-349999 of 4 households (2.3%) is the least income in mining employees' households. Both non-mining employees' households

and mining employees' households of income per month are usually between Kyats 550000 and 649999 in Done Taw Village.

4.14 Expenditure Per Month

Table (4.14) Expenditure Per Month

Expenditure Per Month (Kyats)			Households		Total
			Non-Mining Employees' Household	Mining Employees' Household	
Expenditure Per Months (Kyats)	50000-149999	Count	2	0	2
		% of Total	1.2%	0.0%	1.2%
	150000-249999	Count	2	0	2
		% of Total	1.2%	0.0%	1.2%
	250000-349999	Count	3	4	7
		% of Total	1.7%	2.3%	4.0%
	350000-449999	Count	30	12	42
		% of Total	17.3%	6.9%	24.3%
	450000-549999	Count	20	11	31
		% of Total	11.6%	6.4%	17.9%
	550000-649999	Count	36	15	51
		% of Total	20.8%	8.7%	29.5%
	650000-749999	Count	11	5	16
		% of Total	6.4%	2.9%	9.2%
	750000-849999	Count	9	7	16
		% of Total	5.2%	4.0%	9.2%
	850000-949999	Count	1	2	3
		% of Total	0.6%	1.2%	1.7%
	950000-1049999	Count	2	1	3
		% of Total	1.2%	0.6%	1.7%
Total		Count	116	57	173
		% of Total	67.1%	32.9%	100%

Source: Survey Data, 2018

Table (4.14) shows expenditure per month for sample households. According to this table, expenditure per month of the most non-mining employees' households are Kyats 550000-649999 and it is 20.8%. Expenditure per month of the most mining employee's households is spent Kyats 550000-649999 and it is 8.7%. In non-mining

employees' households, at least expenditure between Kyats 50000-149999, Kyats 150000-249999, Kyats 250000-349999, Kyats 850000-949999, and Kyats 950000-1049999, Kyats 850000-949999 and Kyats 950000-1049999 spent in mining employees' households. Both non-mining employees' households and mining employees' households of expenditure per month are usually spent between Kyats 550000 and 649999 in Done Taw Village.

4.15 Multiple Regression Model for Sample Households

In this section, multiple regression analysis was applied to investigate the factor of expenditure per month in sample households. To develop the multiple regression model, the expenditure of sample household was used as dependent variable and family size and income per month are used as independent variable.

The estimated multiple regression model

$\hat{Y}_i = b_0 + b_1 X_{1i} + b_2 X_{2i}$

In constructing the model, the variables are noted as:

Y_i =Expenditure per month of households

X_{1i} =Family size of households

X_{2i} =Income per month of households

To determine the adequacy of the estimated model, the Durbin-Watson (DW) and Variance Inflation Factor (VIF) are used. The value of calculated (DW) is 1.715and VIF is near 1, F value is 54.881, and this model is significant at 1% level. The result of estimated multiple regression model are shown in the following table.

Table (4.15) Result of Multiple Regression Model

Independent Variables	**B**	**S.E**	**t**	**sig**	**VIF**
Family Size	0.150***	0.018	8.404	0.000	1.001
Income Per Month	19172.413***	3199.119	5.993	0.000	1.001

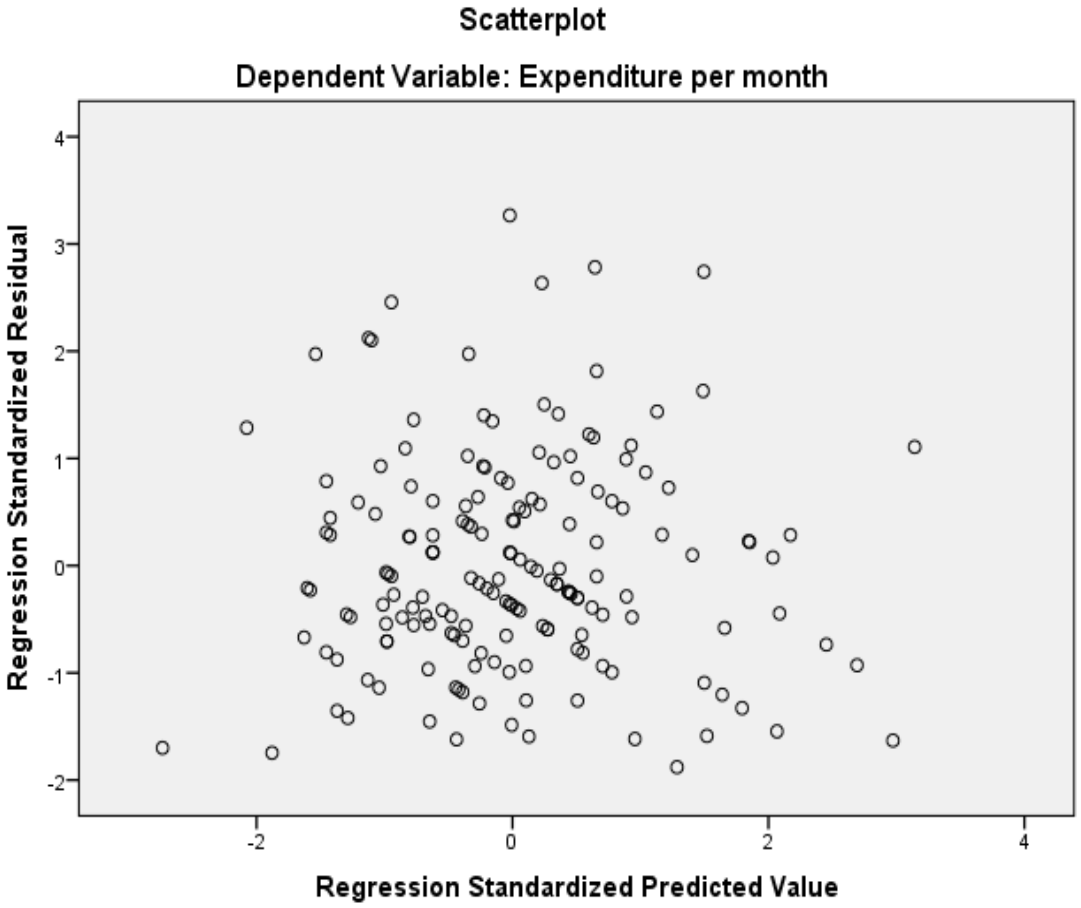
*, ***: Indicate statistical significance at the 1% and 10% level

Source: SPSS Outputs

According to table (4.15), family size and income per month of sample households are significant at 1% level. Then, these significant variables are chosen as the independent variables to find the multiple regression model for sample households.

The estimated slope coefficient for family size and income per month are 0.150 and 19172.413.

Figure (4.1) Scatterplot of Expenditure in Household



Source: SPSS Outputs

4.16 Logistic Regression Model for Sample Households

As a final stage of data analysis, logistic regression analysis was applied to investigate the socio-economic conditions of households. To develop the logistic regression model, the socio-economic conditions of households was used as expenditure and housing type of RC, Brick, Wooden, Bamboo and telephone were used as independent variables.

The probability that the households' expenditure is

$$P(\hat{Y}_i = 1/X_i) = \frac{e^{Xi}\,\beta j}{1+e^{Xi}\beta j}$$

The variables are constructing in the model noted as:

$\hat{Y}_i$ = Expenditure per month

X_{1i}= RC

X_{2i}= Brick

X_{3i}= Wooden

X_{4i}= Bamboo

X_{5i}= telephone

To determine the adequacy of the estimated model, the socio-economic conditions test (X^2) was used. The value of calculated (X^2) was 25.189 and its significant p-value was 0.000, the model was significant at 1% level.

Table (4.16) Logistic Regression Model

		B	**S.E.**	**Wald**	**df**	**Sig.**	**Exp(B)**
Step 1[a]	Types of House			18.138	4	.001	
	RC	-1.295**	.770	2.830	1	.092	.274
	Brick	-1.152*	.603	3.647	1	.056	.316
	Wooden	-.963*	.550	3.063	1	.080	.382
	Bamboo	.538	.527	1.044	1	.307	1.713
	Tel(1)	-2.151*	1.084	3.935	1	.047	.116
	Constant	-.182	.428	.181	1	.670	.833
(X^2=25.189*							

*, ***: Indicate statistical significance at the 1% level

Source: SPSS Outputs

Table (4.16) shows housing type of RC, brick, wooden, bamboo and telephone are significant at 1% level. Then, these significant variables are chosen as the independent variables to find the logistic regression model for sample households.

The estimated slope coefficient for housing type of RC, Brick, Wooden, Bamboo and telephone are -1.295, -1.152, -0.963,0.538, -2.151, and -0.182.

4.17 Local Residents' Perception on Copper Mining Activities

A mining community where the population is significantly affected by a nearby mining operation. For instance, the communities may be affected through offering them with more jobs or less. It could also be affected through pollution. The community may

be associated with the mining venture through employment or though environmental, social, economic or other impacts.

Mining is the main economic activity in developing countries. Operations, whether Small or large-scale, are inherently disruptive to the environment, producing large quantities of waste that can have deleterious impacts for decades. The environmental deterioration taken by mining occurs mainly as a result of inappropriate and wasteful working practices and rehabilitation measures. Mining has common stages or activities, each of which has potentially-adverse impacts on the natural environment, society and culture heritage, the health and safety of mine workers and communities based in close proximity to operations.

Mineral extraction involves the excavation of underground pits and the destruction of rocks using explosives, which has caused regional land destruction of rocks using explosives, which has caused regional land degradation. Mineral exploitation includes the appropriation of lands from indigenous people and massive displacement of settlements. In rural areas, locals depend on the land as a source of livelihood. Mining practices have already taken serious social and environmental impacts in some mining areas. These cases include land degradation damage to water quality, pollution, and harm to livestock and wildlife biodiversity.

Environmental pollution is the main problem in the mining areas. Continuous disposal of mine wastes promoted to air and water contamination, which are detrimental to human health, livestock and wildlife biodiversity, and have serious effects on the benefits of the mining communities, especially women and children. The health and safety of workers and the nearby communities are at risk from a variety of factors, ranging from the inhalation of mercury fumes and dust, to water contamination and poor safety procedures.

Table (4.17) Perception of Residents on Side Effects of Mining Activities

Types	Households					
	Yes		No		Total	%
	Respondents	%	Respondents	%		
Diseases	170	98.27	3	1.73	173	100
Environment	163	94.22	10	5.78	173	100
Agriculture	163	94.22	10	5.78	173	100
Health	155	89.60	58	33.53	213	123

Source: Survey Data, 2018

Table (4.17) shows that the side effects on mining activities in this village. The respondents' perception on mining activities is effected 98.27% of disease, 94.22% of environment effects and agriculture, 89.60% of health effects, and 34.68% of employment opportunities.

Table (4.18) Perception of Residents on Corporate Social Responsibility (CSR) of Mining Activities

Types	Households					
	Yes		No		Total	%
	Respondents	%	Respondents	%		
Health Care	50	28.90	123	71.10	173	100
Infrastructure	128	73.99	45	26.01	173	100
Water	30	17.34	143	82.66	173	100
Supporting of Over 75	23	13.29	150	86.71	173	100
Education Support	113	65.32	60	34.68	173	100

Source: Survey Data, 2018

Table (4.18) shows that corporate social responsibility (CSR) on mining activities in this village. The sample respondents' perception on mining activities has the benefit of 28.90% of health care, 73.99% of infrastructure, 17.34% of water, 13.29% of over aging 75 and 65.32% of education support in this village. Most of sample respondents tell that the benefit of infrastructure (73.99%) in this village.

Most of non-employee's households are farmers. Mining employee's households are mining workers. Sample households own 12.7% of car, 87.2% of cycle and 57.8% of bicycle in this village. Most of the sample households has rice cooker and iron in mining employees' and non-employees' households. Sample households owned 91.9% of telephone and 95.4% of others (refrigerator, cooking pot, air cooler, etc.) in this village. All sample households own house but only one household has not house and renter. Therefore, most of the sample households in Done Taw Village live by their own house. Most sample households in Done Taw Village owned wooden houses. It shows that the types of house of this village is fairly good and at medium level. Most of the households in this village still use electricity for cooking. Most of the sample households' expenditure per month were Kyats 350000-649999. Both non-mining employees' households and mining employees' households of income per month are usually Kyats 550000-649999 in Done Taw Village.

CHAPTER 5
CONCLUSION

This chapter focuses on the conclusion of the thesis related to findings and discussions, suggestion and recommendation and need for further research.

5.1 Findings

According to this study, social economic conditions are analyzed on non-mining and mining employees' households in Done Taw Village, Salingyi Township. Many of the year, villagers focus and operate on agriculture and farming. This village wide 709.78 arecas and 40 arecas village land areas. In the village, land areas are gradually decreased because S&K mines has been operated since about 1980s. Men led households are 97 households among 116 households in non-mining employees' households. In the education level of householders in the non-mining and mining employees' households, illiteracy rate is very low. It is found that there are eight kinds of occupation in non-mining employee's households. In other hand, there are three kinds of occupation in 57 mining employees' households in Done Taw Village. There are a few car owners in this village. Most of the households in this village use electricity only for cooking. Most of the households in non-mining employees' households are adults. Householders in mining employee's households are youths in this village. Both non-mining employees' households and mining employees' households of income per month are usually Kyats 550000-649999 in Done Taw Village. Both non-mining employees' households and mining employees' households of expenditure per month are usually spent Kyats 550000-649999 in Done Taw Village. It is found that income per month and expenditure per month are the same Kyats 550000-649999 in non-mining and mining employees' households in Done Taw Village, Salingyi Township.

In the village, S&K mines' wastes, dust, acids and gas, oils wastes destroy the land and decrease the rates of crops. Although mining projects provide employment opportunities, it is not enough for local residents. And we found that mining projects can not enough give compensation for villager's break down of land and crops. This village encounters the side effects because of the S&K mine and Letpadaung projects. At present, Myanmar Yang Tse Copper Co., Ltd provides requirements concerning with the stadium, school facilities, 25KW transformer, educational facilities, providing services to the age of over 75 support, weekly health care and pure water machine into a Rural Development Project. The villagers' land has been lost because copper mining

projects are extending again and again. In this village, land areas are very low or lost because of mining activities. In farming, crops have been bread down because copper mining projects' wastes, dust, acids and gas are spread in soil, air and water. Copper mining projects are using large machine, acids, mine explosive, other wastes, etc. So, it causes the bad weather in this village, villagers feel cholera, skin disease, kidneys disease, the affected eyes and etc. because copper mining projects caused water pollution.

The respondents' perception on mining activities is 98.27% on disease, 94.22% on environment effects and agriculture, 89.60% on health effects, and 34.68% on employment opportunities. The respondents' perception on mining activities has the benefit of 28.90% of health care, 73.99% of infrastructure, 17.34% of water, 13.29% of over aging 75 and 65.32% of education support in this village. Most of respondents tell that it is the benefits concerning with infrastructure 73.99% in this village.

Logistic regression analysis is applied to investigate the socio-economic conditions of households. Housing type of RC, brick, wooden, bamboo and telephone are significant at 1% level. Then, these significant variables are chosen as the independent variables to find the logistic regression model for sample households. According to the result of logistic regression model, it can be concluded that housing type of RC, brick, wooden, bamboo and telephone are influential factors for socio-economic conditions of households in Done Taw Village. It is found that copper mining projects does not depend on socio-economic conditions of households in Done Taw Village, Salingyi Township.

5.2 Suggestions and Recommendations

In Done Taw Village, genders of householders were usually males and the occupation was usually farmers. If the villagers' extent their farming, the households of socio-economic conditions will gradually improve in this village. In aspect of water, they usually use the water from artesian well for their home, even as drinking water. So, they need purify drinking water or to purify. In aspect of garbage system, they usually put households' wastes and sanitation into fire and underground outside the village. But it can be destroying soil and air pollution.

So this project should be analyzed for the present socio-economic and environmental situation of the Done Taw Village, as it is not only important for the local population but has significant impacts on the ecosystem services. The aim is to

deliver baseline data for measures to minimize negative impacts caused by the predictable future development.

MYTCL and MWMCL copper Ltd., should be carried on:

- Creating job opportunities for villagers surrounding the environment.
- Establishing small and medium enterprises for the development of village.
- Promoting CSR activities for surrounding environment about mining operation.
- Better conservation to natural environment.
- Rehabilitating natural environment, biological diversity and ecological conditions.
- Better prevention to surrounding environment's risks and health affects in this village.
- Better establishing to infrastructures in this villages about mining activities.

The program is being actively monitored for potential environmental impacts. Land MICCL's leased area totals 2,300 hectares, and is comprised of vegetated land, hills and pits left by previous mining activities. Mining operations and the processing of ore inevitably change the natural landscape. MICCL has the responsibility to minimize land disturbance and to rehabilitate the areas inevitably affected. A rolling five-year program of progressive rehabilitation and revegetation of the mine site that was initiated and made excellent progress and continues in effect.

Mining projects should operate extend to CSR programs to provide economic, social, and environmental benefits of local communities or to reduce the negative impacts of mining operations. Mining projects are more invest than others in infrastructure (potable water, electricity, schools, roads, hospital equipment, drainage repairs, etc.,) building social capital (proving information on HIV prevention, workshops on gender issues, information on family planning, improving hygiene, etc.,), and building human capital (proving for high-school and university education, training local people to be employed by our mining enterprise or to provide outsourced services, promote and provide skills on micro-business, aquaculture, crop cultivation, animal rearing, textile production), and so on. It provides to local residents because they suffer the side effects by operating about copper mining.

5.3 Needs for Further Study

This study identified the socio-economic conditions of non-mining employees' households and mining households in Done Taw Village, Salingyi Township. As there are no studies previously conducted in this sector, neither changes nor trends could be identified. Therefore, it is recommended that this study should write in the future to develop the comparative analysis studies.

Further, the present study conducts only for the socio-economic conditions of non-mining employees' households and mining households. This should be extended into the socio-economic impacts of livelihood of households on mining activities and the socio-economic conditions of households on pre-mining and post-mining activities.

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APPENDIX (2)

SPSS Outputs

Regression

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.626[a]	.392	.385	62650.257	1.715

a. Predictors: (Constant), Family Size, Income per Month

b. Dependent Variable: Expenditure per month

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	136535.47	430695.66	273433.53	50047.605	173
Residual	-117772.461	204640.188	.000	62284.946	173
Std. Predicted Value	-2.735	3.142	.000	1.000	173
Std. Residual	-1.880	3.266	.000	.994	173

a. Dependent Variable: Expenditure per month

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	Income per Month	Family Size
1	1	2.801	1.000	.01	.02	.01
	2	.148	4.353	.01	.72	.31
	3	.051	7.380	.98	.26	.68

a. Dependent Variable: Expenditure per month

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	185321.806	12562.672		14.752	.000		
	Income per Month	.153	.020	.511	7.755	.000	1.000	1.000
2	(Constant)	110225.224	16963.300		6.498	.000		
	Income per Month	.149	.018	.498	8.293	.000	.999	1.001
	Family Size	19253.514	3210.929	.360	5.996	.000	.999	1.001

a. Dependent Variable: Expenditure per month

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	430819195048.048	2	215409597524.024	54.881	.000[b]
	Residual	667259290501.085	170	3925054650.006		
	Total	1098078485549.133	172			

a. Dependent Variable: Expenditure per month

b. Predictors: (Constant), Family Size, Income per Month

Logistic Regression

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	173	100.0
	Missing Cases	0	.0
	Total	173	100.0
Unselected Cases		0	.0
Total		173	100.0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
Non-mining Household	0
Mining Household	1

Classification Table[a,b]

			Predicted		
			Dummy Household		Percentage Correct
	Observed		Non-Mining Household	Mining Household	
Step 0	Dummy Household	Non-mining Household	116	0	100.0
		Mining Household	57	0	.0
	Overall Percentage				67.1

a. Constant is included in the model.

b. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	-.711	.162	19.296	1	.000	.491

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	HT	18.882	4	.001
		HT(1)	1.998	1	.158
		HT(2)	4.193	1	.041
		HT(3)	3.411	1	.065
		HT(4)	13.539	1	.000
		Tel(1)	4.591	1	.032
	Overall Statistics		23.361	5	.000

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	Df	Sig.
Step 1	Step	25.189	5	.000
	Block	25.189	5	.000
	Model	25.189	5	.000

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	194.109[a]	.135	.189

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Classification Table[a]

			Predicted		
			Dummy Household		
	Observed		Non-mining Household	Mining Household	Percentage Correct
Step 1	Dummy Household	Non-mining Household	99	17	85.3
		Mining Household	31	26	45.6
	Overall Percentage				72.3

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1[a]	HT			18.138	4	.001			
	HT(1)	-1.295	.770	2.830	1	.092	.274	.061	1.238
	HT(2)	-1.152	.603	3.647	1	.056	.316	.097	1.031
	HT(3)	-.963	.550	3.063	1	.080	.382	.130	1.123
	HT(4)	.538	.527	1.044	1	.307	1.713	.610	4.812
	Tel(1)	-2.151	1.084	3.935	1	.047	.116	.014	.975
	Constant	-.182	.428	.181	1	.670	.833		

a. Variable(s) entered on step 1: HT, Tel.