

## **A Study on Socioeconomic Conditions and Determinants of Poverty Situation in Shan TeGyi Village (2010-2011)**

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### **Abstract**

This paper has attempted to study the current socioeconomic conditions and the factor which influence on households expenditure of Shan TeGyi village based on 2011 survey data. The sample survey is made from 100 sample households in Shan TeGyi village. Among 100 sample households, there were 41 households in bamboo houses, 56 houses are wooden house and 3 houses are brick building and semi-brick houses. There were one middle school in Shan TeGyi village. The adult literacy rate was 75.67% in this study. Concerning the educational status of household heads, there were 16 illiterate persons, and most of household head were of primary level education. Thirty eight percent of household heads were casual workers. In the Shan TeGyi village have two rural health care centers and two nurses. The people in this village have favorable condition of water supply and sanitation. Employing binary logistic regression model, the dependent variable, poverty situation of households, was regressed on seven explanatory variables so as to identify determinants of poverty situation in Shan TeGyi village. Regression results revealed that poverty situation falls as the economically active member in each household increases. On the other hand, poverty situation was found to rise with household size and casual workers.

**Keywords:** Socioeconomic, Poverty Line, Factor Analysis, Binary Logistic Model

### **1. Introduction**

Myanmar has embarked on programmed all around national development and promoting the living standard of the people to achieve the aim of the emergence of a peaceful, modern and developed nation since 1989. The government has been building infrastructure through systematic plans for all the citizens to be able to enjoy a rich and secure socioeconomic life and to possess a promising future.

In line with the objectives, the government has set up the five rural development task; securing smooth and better transportation in the rural areas, availability of clean water in the rural areas, uplift of the education standard of the rural people, uplift of health care for the rural people and development of the economy in the rural regions to promote the socioeconomic situation of rural areas and to narrow the socioeconomic gaps between urban and rural areas by alleviating poverty in rural areas. In performing rural development activities, the State plays its role as policy maker, strategy planner, and supervisor, and rural development measures to implement these strategic plans have taken in rural development

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measures to implement these strategic plans have taken in selected Target Areas by constructing model village approach. Therefore, the implementation of socioeconomic status of the Shan TeGyi village in East Dagon Township at Yangon Region is studied in this paper.

The objectives of the study are to review the socioeconomic services and to determine the factors which influence on poverty situation of Shan TeGyi village.

The data used in this study are the primary data from socioeconomic survey of Shan TeGyi village. The information of the socioeconomic conditions is analyzed by using the simple random sampling. A field survey was conducted to get the required data from complete enumeration of households of the Shan TeGyi village in 2011.

## **2. Background History of Shan TeGyi Village**

Shan TeGyi village is located on No.2 Yangon-Bago Highway which connects Yangon and Zayatquin Village. Shan-Tè-Gyi model village is about 21 miles away from the Sule Pagoda and its length is 2.5 miles from East to West and 3 miles from North to South. When established, the population was about 200 people in that village. Shan TeGyi stream is passing across the middle of lower Shan TeGyi village and the village is separated into Southern and Eastern Village which lay on each side of No.2 Highway.

The area of Eastern Shan TeGyi village is 3.46 square miles and the quarter included in it are Kan-Gyi-Su, Aungmingalar, Ywar-Ma, Ywarthit. It has 1602 acres of farms and 120 farmers are occupying on it. The area of southern Shan-Tè-Gyi is 8 square miles and the quarter included in it are Kan-Gyi-Su, Aung-theidi and Ywar-thit. It has 3394 acres of farms and 271 farmers are occupying on it. There are 509 households, and 2265 people, 1129 male and 1136 female in the Shan TeGyi village. The sex ratio for the total population is about 99 percent. There are 11 industrial workers and some are working as tailors and lathe-workers. The others are working in agriculture. They cultivate paddy (both summer and in the rainy season), beans, tomatoes and chilies. They get irrigation from ShanTeGyi village stream. They get drinking water from lakes and tube wells.

### 3. Data Analysis

#### 3.1 Sample Design

The design of the survey has been based on a random sample which includes 100 households. These household were chosen from 509 households which are registered in Shan TeGyi village Peace and Development Council using the design of simple random sampling. The aim of the survey was to obtain some useful information associated with the demographic and social situations and to know the living condition of people who are living in the Shan TeGyi village. Therefore, this survey emphasizes socioeconomic conditions of people in Shan TeGyi village and it was conducted in year 2011.

The data collection method used in this survey was interview method. The final year Statistics students were given training and the field operations were carried out under the closed supervision of staffs of the statistics department in Yangon Institute of Economics.

The list of households in this survey was obtained from the village Peace and Development Council Office. In this survey, 100 sample households were selected, which is approximately 20% of total households in Shan TeGyi village.

#### 3.2 Educational Status

There is one middle school in Shan TeGyi village. The primary level and the middle level students by sex are shown in Table (1).

**Table (1)**  
**Distribution of Students**

Education Level	Student		Total	Percentage
	Male	Female		
Primary	158	143	301	76
Middle	103	94	194	24
Total	261	237	495	100

According to the results of Table (1), seventy six percent of the students are primary students and twenty four percent are middle student.

### 3.2.1 Ratio of Girls to Boys in Education Level

Table (2) shows the ratios of the female students enrolled at each education level to the number of male students enrolled at the same education level.

**Table (2)**  
**Ration of Girls to Boys**

Education Level	Student		Ratio of Girls to Boys
	Female	Male	
Primary	143	158	90.51
Middle	94	103	91.26

The ratio of girls to boys at the primary education level is 90.51 and that of 91.26 in middle level education.

### 3.2.2 Teacher-Student Ratio

The teacher-student ratios for each education level are shown in table (3).

**Table (3)**  
**Teacher-Student Ratio**

Education Level	Teachers	Students	Teacher-Student Ratio
Primary	7	301	1:43
Middle	7	197	1:28

The teacher-student ratio is found to be 1:43 at the primary level and 1:28 at the middle level in Shan TeGyi village. Therefore, Teacher-student ratio in Shan TeGyi village is inadequate.

### 3.2.3 Adult Literacy Rate

In Myanmar, any person 15 years and above is considered to be adult, and this is lower age limit for computing the adult literacy rate. The 75.67% of village adult literacy rate is found. The following table (4) shows the educational attainment of adults.

**Table (4)**  
**Educational Attainment of Adult Population**

Education Level	Male	Female	Total	Percentage
Illiterate	28	23	51	15.46
Primary	73	84	157	48.3
Middle	46	48	94	28.9
High	3	13	16	4.92
Graduate	3	4	7	2.15
Total	133	172	305	100

Sources: Survey from Shan TeGyi village, 2011

According to the table (4) , in the Shan TeGyi village the illiteracy rate is 15.69%, 48.31% of population are at the primary level, 28.92% of population are at the middle level, 4.92% are at the higher level and 2.1% are at the graduate level. It can clearly be seen that education level of inhabitants in Shan TeGyi village is still at lower level. It may decline the socio-economic development not only in the village but also the whole township.

### 3.3 Health Status

There are two health care centers and two nurses in Shan TeGyi village. The Infant Mortality Rate (IMR) is 53 per thousand live - births and Childhood Mortality Rate (CMR) is 3 per thousand live-births. There is no encounter Maternal Mortality Rate (MMR) in this village.

### 3.4 The Population of Sample Households in Shan TeGyi Village

According to survey data, about 85% of the sample households are male-headed households and 14% are female-headed households. The following Table (5) shows the population of sample households by sex and age.

**Table (5)**  
**Population of sample Households by Sex and Age**

Age Group	Sex		Percentage
	Male	Female	
0 - 4	9	15	5.44
5 - 9	26	21	10.7
10 - 14	23	20	10.1
15 - 19	24	23	10.7
20 - 24	19	25	10.02
25 - 29	25	19	10.02
30 - 34	15	15	6.68
35 - 39	10	18	6.34
40 - 44	14	13	6.14
45 - 49	11	20	7.06
50 - 54	16	8	5.44
55 - 59	5	11	4.51
60 - 64	5	7	2.73
65 - 69	2	3	1.14
70 - 74	4	6	2.27
75 - 79	2	0	0.4
80 - 84	1	2	0.65
85+	0	2	0.43
<b>Total</b>	<b>211</b>	<b>228</b>	<b>100</b>

Sources: Survey from Shan TeGyi village, 2011

According to table (5), in the total population of age between 1 to 14 years are 26.24%, and the total population of age above 59 years are 7.62%. Out of the total population of age between 15 to 59 years are 66.51 %. Therefore, the working group is larger than that of dependency ratio in this village. It can also said that the labour force is high in this village. Thus, it causes the increase of per capita income.

#### 3.4.1 Sex Ratio

The sex-ratio is 93. It means that there are 93 males for 100 female in sample data.

#### 3.4.2 The Ageing Index

The aged-child ratio (or) index of aging is 29.82. It means that there are about 30 persons in old age per 100 children. Therefore, it can be said that the number of youth is greater than the number of older person.

### 3.4.3 Dependency Ratio

The following Table (6) shows dependency ratio of sample households.

**Table (6)**  
**Dependency Ratio of Sample Household**

Dependent	Number of People		Total	Dependency Ratio (%)
	Male	Female		
Young	58	56	114	39.18
Old	14	20	34	11.6
Total	72	76	148	50.78

Sources: Survey from Shan TeGyi village, 2011

According to the Table (6), old dependency ratio is 11.6 % and young dependency ratio is 39.18%. Therefore, the total dependency ratio is 50.78%. It can be seen that young dependency ratio is greater than old dependency ratio.

### 3.5 Household Size

According to the Table (7), the average household size of Shan TeGyi Model village is 4.39 (nearly 5 persons). Therefore, the household size of Shan TeGyi Village is medium level.

**Table (7)**  
**Distribution of Household Size**

Number of Household Member	Number of Households
1	5
2	11
3	16
4	25
5	18
6	13
7	5
8	4
9	2
10	1
Total	100

### 3.6 Housing Characteristics

The following Table (8) shows the housing characteristics of Shan TeGyi village.

**Table (8)**

**Percentage of Distribution of Housing Characteristics**

<b>Factors</b>	<b>Frequency</b>	<b>Percent</b>
Houses in poor structure (bamboo with thatch roof)	41	41
Houses in fair strong structure (wooden house)	56	56
Houses in good structure (brick building) and semi-brick house	3	3
<b>Total</b>	<b>100</b>	<b>100</b>

Sources: Survey from Shan TeGyi village, 2011

According to the Table (8), most of the houses are wood houses, it was 56%. Only 3% houses are brick of brick and semi-brick house. 41% are the houses made of bamboo. It shows that the housing condition of Shan TeGyi village is fairly good and medium level.

### 3.7 Water System

The following Table (3.10) shows the water system of Shan TeGyi village.

**Table (9)**

**Percentage Distribution of Water System**

<b>Factors</b>	<b>Frequency</b>	<b>Percent</b>
Irrigated cultivation	37	37
lake, Poor	42	42
Tube-well	9	9
wells	12	12
<b>Total</b>	<b>100</b>	<b>100</b>

Sources: Survey from Shan TeGyi village, 2011

According to the result of Table (9), 37% of household can get water from irrigated cultivation and 42% can get from lake and poor. 9% of households can get from tube-well and 12% get from wells. It shows that the accessibility of water system is convenient in Shan TeGyi village. But, most of household use the water from lake and poor. It may be assumed

that ground water are cleaner than surface-water and these ground water is of "reasonably safe" quality. Therefore, it assumes that the drinking water of Shan TeGyi village is not good.

### 3.8 Sanitation Condition

**Table (10)**

**Percentage Distribution of Type of Sanitation Used by Households**

Factor	Frequency	Percent
Fly-Proof Latrine (Good conditions)	79	79
Covered pit latrine	8	8
Open pit latrine	11	11
Other	2	2
Total	100	100

Sources: Survey from Shan TeGyi village, 2011

According to the result of Table (10), most of households use the fly-proof latrines. It was 79%. Another 8% were used to covered pit latrine and 11% were used to open pit latrine. It can be seen that the standard of living is not low in Shan TeGyi village. These improvements were due to the health education given by village authority concerned.

### 3.9 Electricity

The following Table (11) shows the electricity status and lighting for Shan TeGyi village.

**Table (11)**

**Percentage Distribution of Type of Lighting Used by Households**

Factors	Frequency	Percent
Public	33	33
Private	7	7
Own generator	15	15
Candle and other	45	45
Total	100	100

Sources: Survey from Shan TeGyi village, 2011

According to the results of Table (11), only in 33 houses used electricity, 15 houses use electricity from their own generator and 7 houses they use Private electricity. But most houses still remain using candle-lights. Those are about 45 percent.

### 3.10 Fuel for Cooking

The following Table (12) shows the use of fuel for cooking in Shan TeGyivillage.

**Table (12)**

#### Percentage distribution of Type of Fuel for Cooking Used by Households

Factors	Frequency	Percent
Wood fuel	75	75
Charcoal	13	13
Electricity	2	2
Total	100	100

Sources: Survey from Shan TeGyi village, 2011

According to table result of Table (3.13), 75% of households use wood fuel, 13% use charcoal and only 2% use electricity. Therefore, it can be assumed that the families of Shan TeGyi village still using fuel for cooking.

### 3.11 Households' Expenditure

The following Table (13) shows the households' expenditure.

**Table (13)**

#### Monthly Household Expenditure of Sample Households in the Survey

Amount (Kyat)	Number of Household	Percentage
Under 20000	-	-
20000 - 70000	25	25
70000 - 120000	59	59
120000 - 170000	11	11
170000 - 220000	2	2
220000 - 270000	1	1
270000 Above	2	2
Total	100	100

Sources: Survey from Shan TeGyi village, 2011

According to the results of Table (13) shows most of households' expenditure fall between 70000 to 120000 and the percentage is 59%.

### 3.12 Transportation and Communication

The transportation is indicated by the type of road and public transportation buses. ShanTeGyivillage is accessible only by road. Public transport buses are widely used in that village. The effectiveness of transport depends on the quality of roads and the motor vehicles. There are several types of public transport buses serving between the study area and other parts of Yangon City. Those who go to the downtown area and the other parts of Yangon City depend on public transport buses.

Communication condition is based on the number of telephones. The most respondent private auto phones and some use in mobile phones.

### 3.13 Sex- Age Structures of Heads of Sample Households

The following Table (14) shows the sex-age structure of heads of sample households.

**Table (14)**

**Sex-age Structure of Heads of Households**

Age Group	Male	Female	Total
24-32	7	-	7
33-41	25	6	31
42-50	30	6	36
51-59	40	6	10
60-68	74	3	10
69-77	4	-	4
78-86	1	1	2
Total	78	22	100

Sources: Survey from Shan TeGyi village, 2011

According to the results in Table (14), it can be said that out of 100 sample households under the study, 78 households are led by men and only 22 households are led by women. Therefore, the age of the heads of households (33-41) to (42-50) is 67 percent. It shows that the community of village is formed by young and healthy heads.

### 3.14 Female Headed Ratio for Sample Households

The female headed ratio for Shan TeGyi village is 22. The female headed ratio for union level for the year (2010) is 20.8. This ratio for ShanTeGyi village is greater than that of Union Level.

### 3.15 Educational Qualifications of Heads of Household

The following Table (15) shows the education qualification of households head.

**Table (15)**

#### **Educational Qualifications of Heads of Household**

<b>Level of Education</b>	<b>Frequency</b>
Illiterate	16
Primary	50
Middle	27
High	5
Graduate	2
<b>Total</b>	<b>100</b>

Sources: Survey from Shan TeGyilvillage, 2011

According to the results of Table (15), it can be seen that the education level of the heads are classified into five types. The heads of household who finished education at the primary and middle are 50% and 27%. Out of 16% and 5% are illiterate and high school. Out of the 100 heads, there are only two graduate heads. It shows that the functional literacy still is low among the heads of households.

### 3.16 Occupational Status of Heads of Household

The following Table (16) shows the occupational status of heads of household.

**Table (16)**

#### **Heads of Household by Occupational Status**

<b>Factors</b>	<b>Frequency</b>
Employer	12
Own account business	34
Government services	16
Casual worker	38
<b>Total</b>	<b>100</b>

Sources: Survey from Shan TeGyivillage, 2011

According to the results of Table(16), most of household heads are casual worker. It assumed that casual worker is an important correlated of poverty and lower of living standard. Therefore, the occupational status of heads of households Shan TeGyivillage is still low.

### 2.17 Marital Status of Heads of Households

The following Table (17) shows the marital status of heads of households.

**Table (17)**  
**Heads of Household by Marital Status**

<b>Factors</b>	<b>Number</b>
Single	9
Married	76
Widowed	13
Divorce	2
Total	100

Sources: Survey from ShanTeGyilvillage, 2011

According to the results of Table (17), 76% marital heads of household are married and 13% are widowed. 9% and 2% are single and divorce.

### 2.18.Determinants of Poverty Situation in Shan TeGyi Village

In this study, the relationship between household expenditure (dependent variable) and socioeconomic variables (independent variables) such as household size, economically active member of each household and occupation of household's head will be analyzed by binary logistic regression model. To estimate the binary logistic regression model, the poverty situation of households, designated by 1 if the households' expenditure is above or equal the actual value of the poverty line in Myanmar and non poor 0 if otherwise is used as dependent variable. According to the 100 sample households, 30% of households' expenditures are above the actual value of the poverty line in Myanmar (376, 151 kyats) and the rest 70% of households' expenditures are below that value.

The binary logistic model can be described as follows:

$$L_i = \ln \frac{\pi_i}{1 - \pi_i} = \beta_1 + \beta_2 x_{1i} + \beta_3 x_{2i} + \beta_4 x_{3i}$$

Where  $\pi_i$  = the probability that the households' expenditure is above or equal the actual value of poverty line.

$1 - \pi_i$  = the probability that the households' expenditure is below poverty line.

In constructing the model, the variables are noted as:

Y = 1 if households' expenditure is above or equal the actual value of poverty line

= 0 otherwise

$x_1$  = household size

$x_2$  = economically active member in each household

$x_3$  = occupation

= 1 if head of household is casual worker

= 0 otherwise

The corrective prediction for effect of socioeconomic variable on household expenditure was 88%. Two  $R^2$  in this model are 0.478 and 0.677 which gives the range of the variability of the dependent variable. It means that only between 48% and 68% of the variability in this model dependent variable (household expenditure) can be explained by independent variable (socioeconomic variable).

The occupation status of household's head, economically active member and household size are significant at 5% and 1% level. The sign for coefficient of household size is negative. Therefore, it can be said that the decrease of per person in a household, the expenditure of household for per person will increase, other being remain unchanged. The sign for coefficient of economically active member is positive. Therefore, it can be said that the increase of economically active member per person in a household, the expenditure of household for per person will increase. The sign for coefficient of occupation status of household's head is negative relationship.

#### 4. Conclusion

Shan TeGyivillage is situated on No.2 Road which connects Yangon and Zayatquin. Shan TeGyivillage is about 21 miles away from Sule Pagoda and the length is 2.5 miles from East to West and 3 miles from North to South. There are 2101 people in 509 households. . The sex ratio for the total population is about 99 percent.

In hundred sample households, there were 41 bamboo houses (poor structure), 56 wooden houses (fair strong structure) and 3 brick building and semi-brick houses (good structure). Therefore, half of the sample households are in poor structure. In these houses, 54% of households use candles and others for lighting and 33% households get public electricity. There were 15% of households that use their own generators and 7% of households have private electricity for lighting.

With regard to the household population in 100 sample households, there were 439 people which include 211 males and 228 females. The sex ratio (the number of males per 100 females) was 93. The average size of household was 4.39 (4 persons). Therefore, the household size of ShanTeGyivillage is medium level. Young dependency ratio is 39.18% and old dependency ratio was 9.28%. Therefore, the young dependency ratio is higher than old dependency ratio. The total dependency ratio was 50.78%. The aged-child ratio is 19.3. Therefore, Government sectors, local authorities, non-government organizations and entrepreneurs should be create job opportunities for youth in this village.

In the study of water supply, the majority of households get drinking water from lakes and pools. Therefore, the drinking water is not properly purified. Most households used fly-proof latrines.

There is one middle school in this village. The teacher-student ratio is found to be 1:43 at the primary level and 1:28 at the middle level in Shan TeGyi village. Therefore, the number of teachers in ShanTeGyi village is inadequate. The ratio of girls to boys is 90 girls per 100 male students at the primary level and 91 girls per 100 male students at the middle level. It can be said that the gender equality for at each educational level is nearly the same. The adult literacy rate was 75.67%. In the educational development, the number of schools should be uplifted to raise the number of educated persons, and educational facilities should be upgraded and set up the schools in this area. The middle school should be uplifted to high school as education is one of the best investments any country can make.

In the health sector, they have two health care centers and two nurses. The Infant Mortality Rate (IMR) was 53.33 and childhood Mortality Rate (CMR) is 2.7 in this survey area.

Seventy-eight percent of household heads were men and 22% were women. The age of household heads were between 24 years and 86 years. In educational status, there were 16 illiterate persons, and most of the household heads were primary level education. Sixteen percent of household heads were government services. Most of the household heads were casual worker (38%) and 34% of household heads were own business.

Most of the monthly household expenditure was between 70,000 Kyats and 120,000 Kyats. The average monthly expenditure of households is found to be 99884 Kyats. The sign for coefficient of household size was found to be a significant correlate of household expenditure in the study area. Thus, expansion of education and intensification of family planning programme should be promoted at the study area. The sign for coefficient of economically active member is positive. It can be said that the higher the number of economically active member, the expenditure of household for per person will increase. The sign for coefficient of occupation status household heads is negative.

Communication and transportation are essential for the development of economic, social and cultural sectors. So, sufficient telephone communication should be maintained in this area. Although Shan TeGyi village is a model village, the socioeconomic conditions of the village is not strong enough.

Household heads will get more self-confidence and they will support their families and they will reduce their families' poverty and the economic hardship in their lives. If government and non-government organizations make such some programmes for head of households in this village.

Therefore, to get the improvement in socioeconomic development of rural village, the supporting of government sector and non-government organizations are necessary. But, the native people's participation is one of the essential things. These organizations look at the situation of these villages and they should provide the requirements yearly or every two years. If all the villages like ShanTeGyi in rural area are uplifted and up graded, the poverty in the rural area can be significantly reduced and there will be all round the development in every sectors. If there will be development in rural area, so will be in urban area. Therefore, the whole nation will be developing, and the entire citizen will enjoy the fruits of development.

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