Title	Analysis of Socioeconomic Factors Affecting the Rice Production : A Case Study in Theegone Village, Shwe Bo Township.
Author	Dr. Myint San Win
Issue Date	2013

ANALYSIS OF SOCIOECONOMIC FACTORS AFFECTING THE RICE PRODUCTION: A CASE STUDY IN THEEGONE VILLAGE, SHWEBO TOWNSHIP

Myint SanWin[1]

ABSTRACt

The economy of study area depends on agriculture. Rice is a major food crop and an essential source of income for households in the study area. However, the production of rice has been declining from 2010. To find out the reasons of this situation, this study has been conducted to investigate the socio-economic factors affecting the production of rice in Theegone Village in Shwebo Township as a case study. After calculation the relationship between the output of rice and various factors, the findings shown that various socio-economic factors have to be reviewed in order to improve the production of rice. The results described that acreage (land), capital, fertilizer and price, have positive relationship with the output. These are factors on which, the government should emphasize on, in order to increase the production of rice. Nevertheless, this study has not covered the whole area of the Shwebo Township, due to financial and time constraints. Further researches are needed in order to provide more information to whoever would like to know in rice production in Shwebo Township.

INTRODUCTION

All societies including rural and urban must lead to productivity. Because, it can become efficiency and simultaneously directs to the national value. (From intellectual talk on TV program). In Myanmar, 70 % of total population is in rural. 90% of food products are available from agriculture which can vary from place to place depending upon the land holding, related investment, management and productivities.

Now a day, state government is carrying out rural development program. Actually, rural people, 70 % of population in Myanmar, are basic producers for food products. It can be recognized that the only when there is the development of living standard in rural community there will be state development.

Theegone Village is located at Latitude 22° 36′ N and Longitude 95°41′ E. The village stands at the 2 mile 4 furlongs distance at the north of Shwebo Town. The village is just below the Shwebo-Khin U canal road connected with Shwebo and till Kindat Dam.

The total population is 668 people and the total household is 134 in the village. In studies of the socioeconomic structure of Theegone village, agriculture, baskets weaving with strip from palm frond, vendors, toddy palm-climbers, carpenters, tailors, and others.

Objectives

The main objectives of the study are:

- To investigate the socioeconomically backward area in Shwebo Township.
- To study the socioeconomic structure behind the underdevelopment of rural areas

Lecturer, Department of Geography, University of Mandalay.

- To investigate the factors in the context of underdevelopment and find out the possible ways of undertaking in terms of socioeconomic development.
- Finally, to enable the planner and policy makers to formulate village level specific human development plans.

Data and Methodology

The study area is included in Pitaukkhoung Village Tract which set up five villages: Pitaukkhoung, Theegone, Ooyintaw, Sesongone and Maygon. Theegone village is continuous to the Pitaukkhoung Village with only cart track separation and has 134 households. Therefore, researcher can make data collection all households.

For required data, structured interview method was used. The questionnaire was filled by asking questions to household leader or household member if there wasn't household leader. The map of the village is derived from UTM map 2295.

Problem statement

The economy of Myanmar depends on agriculture with rice being a major food crop as well as an essential source of income. Rice cultivation also plays an important role in the economy of study area. However production of rice declined in 2012 and it has dropped in output. Out of 38 agricultural households, 35 households (92 %) are in debt though the government lends the agricultural loan.

Since the agricultural sector is the key to development in Myanmar, and a major factor in poverty reduction, there is need to carry out study that will analyze relevant socio-economic factors that affect rice production. The focus of the study will be Shwebo Township. However it is expected that the results of this study will be used by agriculture decision makers to increase the production of rice in Myanmar.

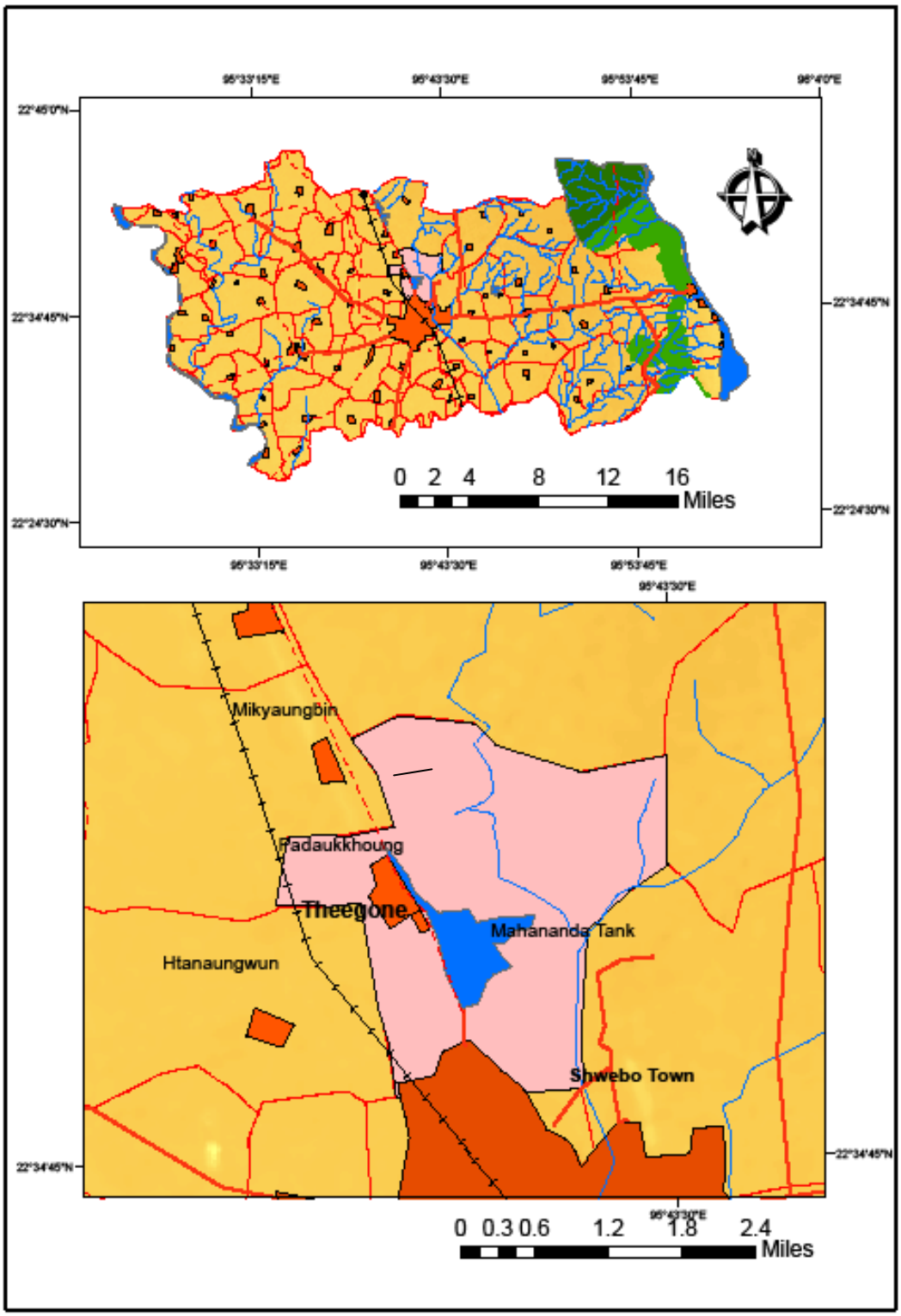
Overview of literature

In study of many agricultural researches, land, labor and capital are the basic factors of production. Different models and recommendations have been suggested.

The rate at which an economy becomes transformed from a primarily agriculture economy to mixed economy depends mostly on the proportion of the labor force, the technique of farming, the capital used, and the way the land is maintained. It has been hypothesized that the differences in technical inputs and human capital (education) do account for the agricultural productivity gap among countries. (Hayami et al; 1971).

In this study an attempt will be made to analyze the relationship between the output and the different socio-economic factors affecting rice production in Theegone Village, Shwebo Township.

Location of Theegone Village



Source: UTM Map 2295

Demography

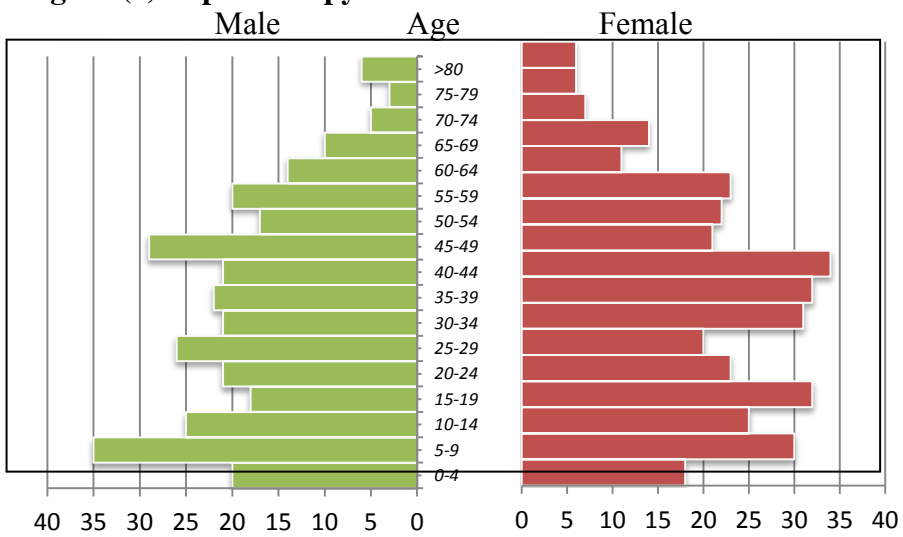
Among the total population 668 people, male was 313 people and female was 355 people. The ratio for male-female was 88:100. According to the collected data, there were 203 people (30.4%) under 18 years, 82 people (12.3%) over 60 years and 383 people (57.3%) between 18 years and 60 years. The economically active population will normally have to support other persons. The number of persons each economically active person has to support is measured by the **dependency ratio.** This dependency ratio not only includes the economically inactive part of the population, such as housewives and students, it also includes children and young people under 18, as well as older people over the age of 60. This ratio is 0.5 and unemployment rate is 65.57 %, labor participation rate 34.43%. Population by the age group in 2013 is depicted by the population pyramid. This figure shows that the child under 4 years is rather low as compare with other medium age groups. As a result, it can be noted that the fertility rate in this year is also low. Then, the age groups in medium are more than the others and most of them are single.

Table (1) Population by age group in Theegone Village (2013)

Age group	Male	Female	Total
0-4	20	18	38
5-9	35	30	65
10-14	25	25	50
15-19	18	32	50
20-24	21	23	44
25-29	26	20	46
30-34	21	31	52
35-39	22	32	54
40-44	21	34	55
45-49	29	21	50
50-54	17	22	39
55-59	20	23	43
60-64	14	11	25
65-69	10	14	24
70-74	5	7	12
75-79	3	6	9
>80	6	6	12
Total	313	355	668

Source: Field Survey

Figure (1) Population pyramid



Economic structures

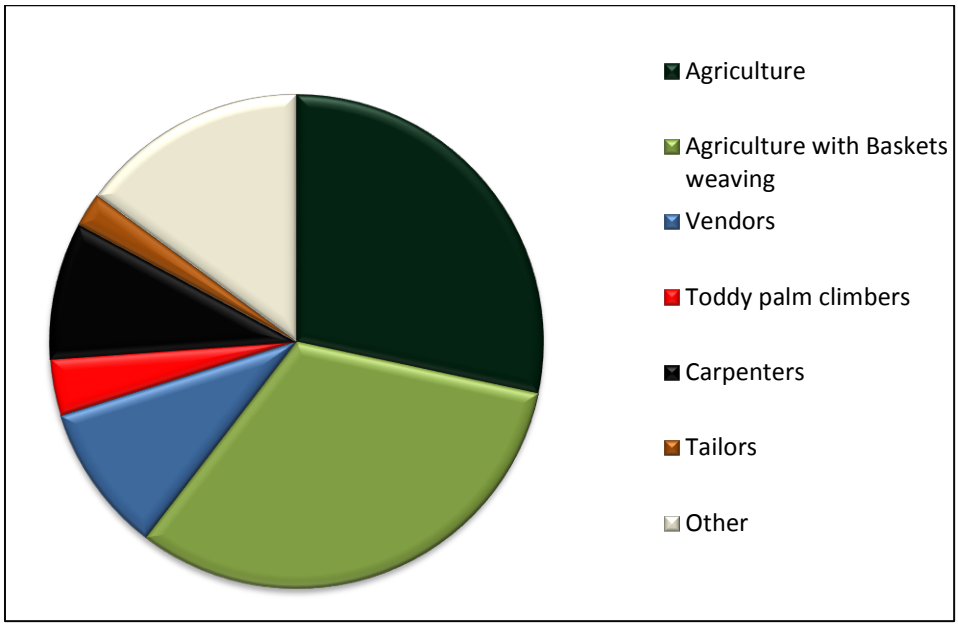
Economic structures in Theegone Village are mainly agriculture, baskets weaving, vendors, toddy palm climbers, carpenters, tailors and others.

Table (2) Economic Structures by household

Economic Structures	Households
Agriculture	38
Baskets weaving	43
Vendors	13
Toddy palm climbers	5
Carpenters	12
Tailors	3
Others	20
Total	134

Source : Field Survey

Figure (2) Economic Structures by household



Source: Field Survey

Farm Holding

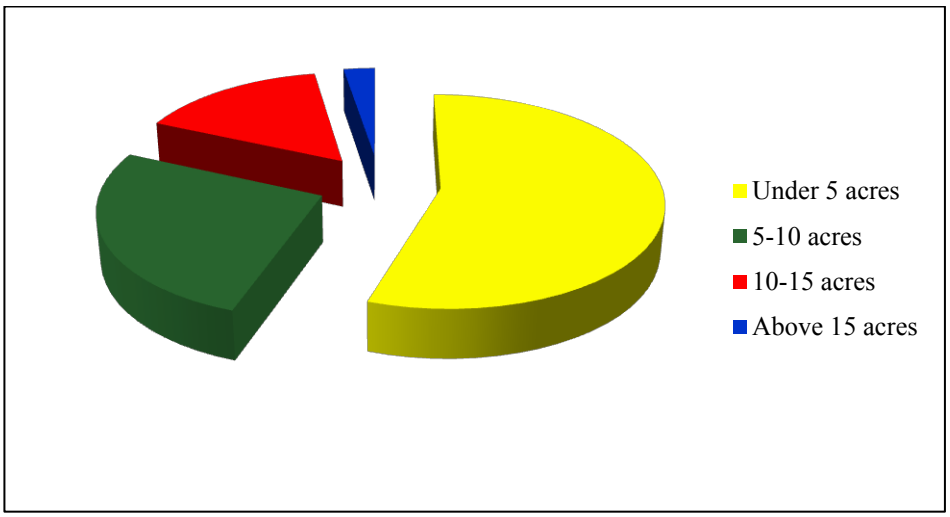
Agriculture is the main economy of the study area. Rice is grown as a staple food grain. It is grown by the irrigation from the Old Mu Canal (OMC) which is branched as a left canal from Kindat Diversion Weir. If the water from the OMC can supply, farmers grow the paddy not only in the monsoon but also in the summer. There are 38 (28.4%) in total agricultural households with about 230 acres of total farming. Notably, household which possesses above 15 acres is only one. Different farm holding by household is shown in Table. The proportion of land held by non-agriculturists is small. Of the 38 households owning or cultivating land, 3 households possess power tiller.

Table (3) Farm holding by household

Acres	Households
Under 5 acres	21
5-10 acres	10
10-15 acres	6
Above 15 acres	1
Total	38

Source: Field Survey

Figure (3) Farm holding by household



Source: Appendix Table

Varieties of paddy under cultivation in Theegone village

Paddy crops cultivated in Theegone village are: *Baygyar, Manawhari, Manawthukha*, *IR 747*. *Baygyar*, which at the moment predominated production, accounting for more than 70% of the acreage under cultivation though the *Manawhari* had formed the largest share of production for many years. *Baygyar* has been experiencing market growth especially in urban areas and this growth is expected to continue increasing. *Manawthukha* and *IR 747* are usually cultivated as summer paddy.

Rice Production

Rice production may be classified as home consumption and trade production. According to interview, since 2001s rice production in study area has increased due to the distribution of water from the Old Mu Canal. But in 2012, paddy output has fallen from 70-80 baskets per acre in 2001s to about 60 baskets per acre in year 2012 due to combined effects of pests, declining soil fertility and reduced input use.

Surplus production of rice is small. About 21% of the farm households can produce surplus paddy in entire rice production and 79% can produce only for home consumption. An opportunity for exports to higher value markets does not found. Most farmers generally sell their surplus to the local agents at the paddy threshing ground for repaying their debt due to too much cost for one acre. This has contributed to the underdevelopment of their life. A few numbers of farmers who can store their surplus has command at the rice market.

Figure (4) Flow Chart for the Marketing Channel

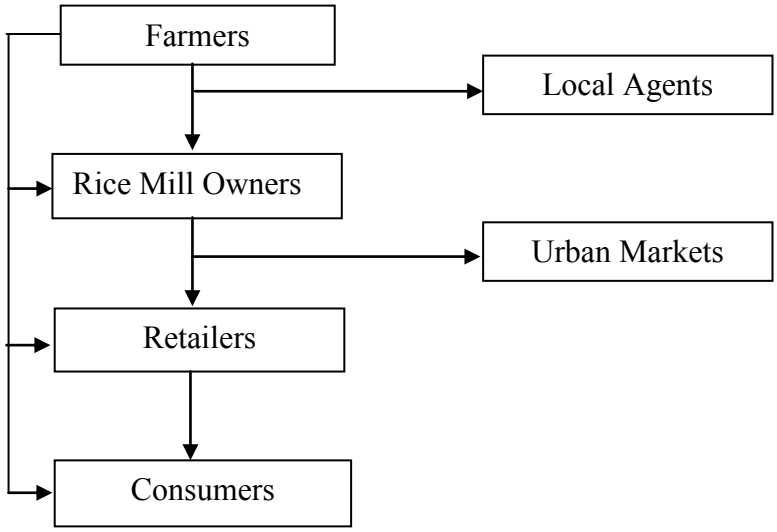


Table (4) Cost for one acre

Items	Rate	Cost
Cost for seed	2 baskets ×10000	20000
Harrowing for nursery	2 days × 3000 Ks	6000
Harrowing for the field to be planted	Diesel 2 gallons × 4000 Ks	8000
Harrowing for the field to be planted	1 acre × 2 Sat × 10000 Ks	20000
Seedlings plucking and Carrying seedling bundles	1 acre × 400 bundles × 25 Ks	10000
Transplanting	1 acre × 25000 Ks	30000
Chemical Fertilizer(T-super)	2 bag × 20000 Ks	40000
Chemical Fertilizer(Potah)	2 bag × 15000 Ks	30000
insecticide	1 packet with 8 sack × 12000 Ks	12000
Harvesting + Threshing +Winnowing	1 acre × 33000 Ks	33000
Total		**209000**

Source: Field Survey, March,2013

Table (5) Net profit for one acre of paddy

Items	Rate	Cost	Receipts
Cost for one acre		209000	
Interest for that cost	5 Months × 5 Ks	52250	
Receipts for one acre	56.5 baskets × 7000 Ks		395500
Net profit for one acre			**134250**

Statistical Analysis

Average yield per acre was 56.51 baskets. The highest was 70 baskets and the minimum was 40 baskets.

According to the data collected, 38 households grow paddy. The average farm holding was 5.9 acre. The highest farm holding per household was 15.31 acres while the minimum quantity was 0.7 acre. From the findings, per acre yield for paddy is positively related to farm holding acreage with coefficient, r = + 0.104, (r^2 = 0.011). This can be expected relationship between per acre yield and farm holding is that, as more land is brought under production, yield per acre is increased.

The average labor done by the households was 2.4 persons. The highest was 5 persons while the minimum was 1 person. From the results, labor does influence on yield per acre as shown the coefficient, r = + 0.075 (r^2 = 0.005). This implies that households with more labor by 1%, the per acre yield increases by .005%.

The average use of fertilizer for one acre is 2.756 bags (50 kg), while the minimum use was 2 bags and maximum use was 4 bags. Per acre yield is positively related to the use of fertilizer as shown from finding, where the coefficient, r = +0.262 (r^2 = 0.068). This means that when the use of fertilizer increases by 1%, per acre yield is increased with 0.068%.

The price of paddy was at an average of 797297.3 Kyats per hundred baskets. The household who sold his paddy at the minimum price was 720000 Kyats, and the maximum price was at 950000 Kyats. Per acre yield is positively related to price of paddy as shown by the positive coefficient of r = +0.364 (r^2 = 0.13). This means that a 1%increase in price of paddy, per acre yield is expected to increase by 0.13%.

Statistics show that 68% of the farm households have attained at least primary level and 32% at the middle and high school level. From the results, education shows a positive, but a little, relationship to the output as the coefficient of r = 0.017 but (r^2 = 0.000). Meaning that education in this study does not have significant influence on the output of paddy in study area.

Figure (5) Correlation between Output and Farm holding

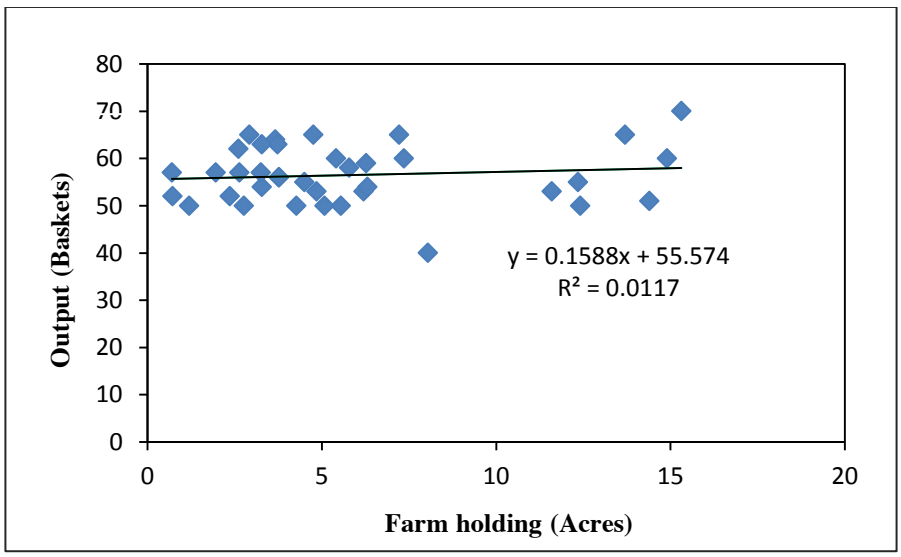


Figure (6) Correlation between Output and Labor

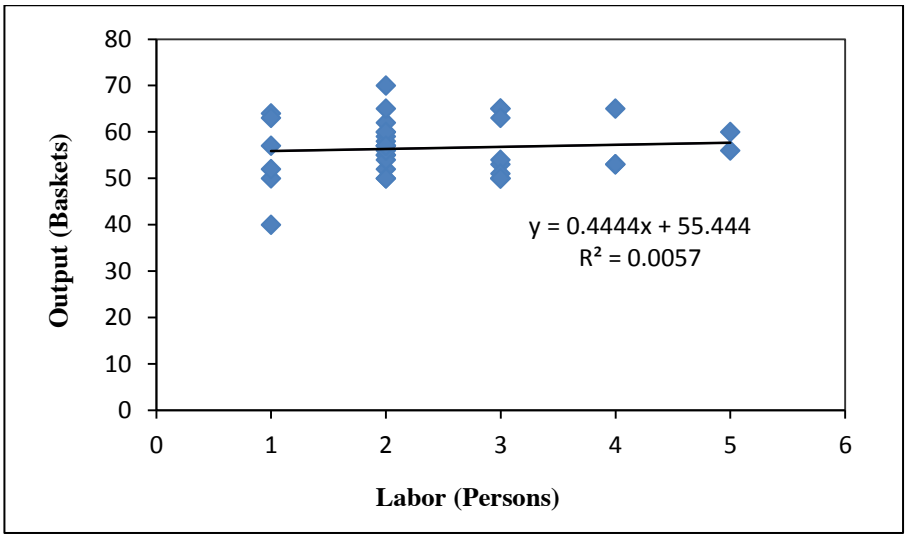


Figure (7) Correlation between Output and Fertilizer use

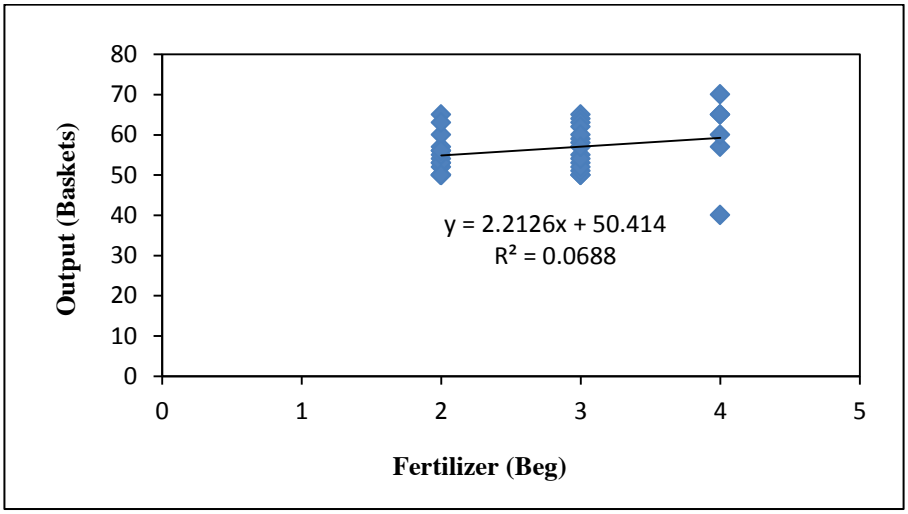


Figure (8) Correlation between Output and Price per hundred baskets of paddy

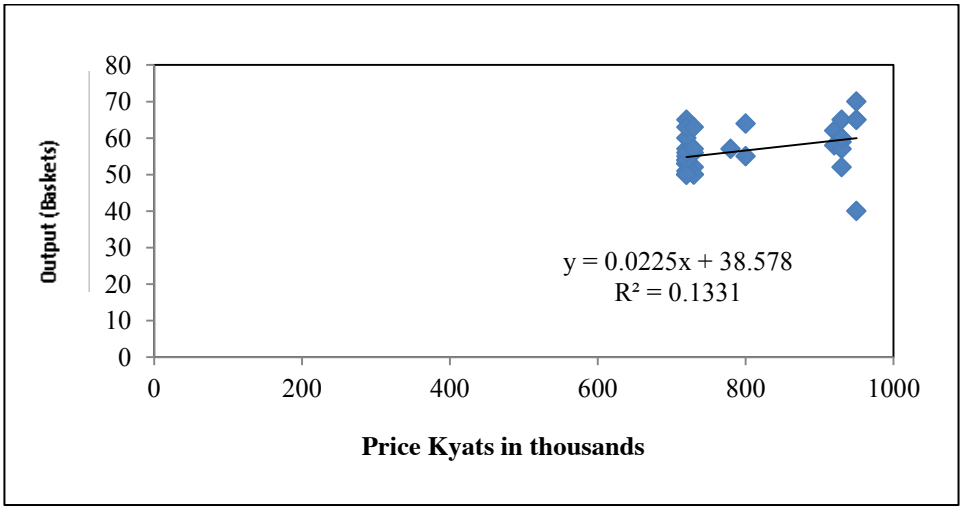
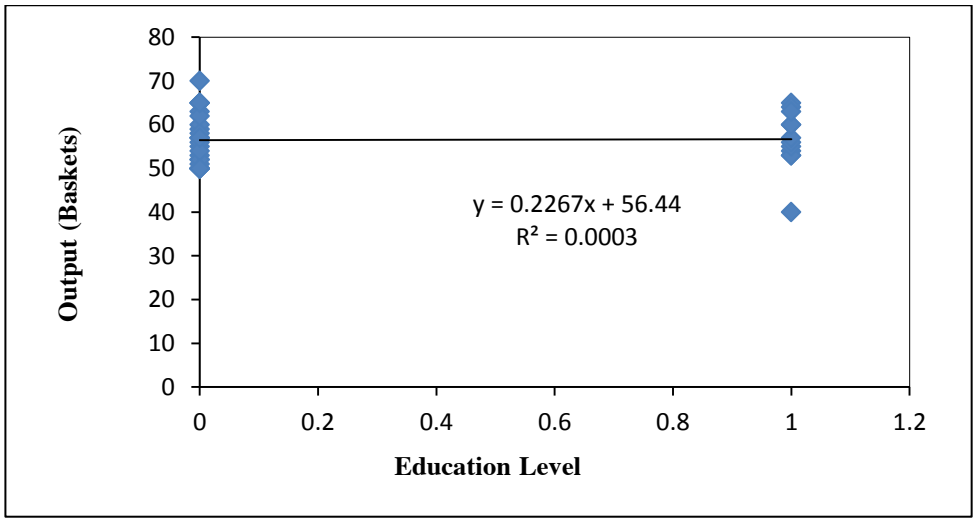


Figure (8) Correlation between Output and Education Level



Conclusion

The main objective of this study was to investigate the socio-economic factors influencing the production of rice in Shwebo Township. After estimating the relationship between the output of paddy and various socio-economic factors, the findings show that various socio-economic factors have to be reviewed in order to improve the production of rice in the country. The results described that acreage (land), capital, fertilizer and price, have positive relationship with the rice output. These are factors on which, the government should give emphasis, in order to increase the production of rice. There are other factors such as education which in this study has shown a positive coefficient, but explained an insignificant relationship to the rice output. One of the reasons is that educated people run away from rural areas to towns. Labor was another factor which in this study has shown positive effect. However based on these findings, we can conclude that land, capital, fertilizer, and price are the important socio-economic factors that have effect on the production of rice in study area.

Recommendations

Based on the above findings, it is recommended that:

1. Since the land is fixed, the government should encourage the use of fertilizer at an affordable price so as to increase the level of production.

2. Government should improve its method of cultivation and use of modernized agricultural implements to increase its current level of services.

3. The current scenario with the low rice production in Shwebo requires the government to provide affective pesticide with a reasonable cost.

4. The government should lend more money than the current amount with a low interest rate and encourage private sector to invest in credit facilities like small–scale banks to offer credit to farmers at affordable rates. This should be through legislation to facilitate credit creation.

REFERENCES

Hayami Y. , Vernon W. R. (1971), "*agricultural Development: an International Perspective*",The Johns Hopkins Press, Baltimore and London.

Joël Mpawenimana, (2005), **"***Analysis of socio-economic factors affecting the production of Bananas in Rwanda: A case study of Kanama District"*

http://infotut.com/geography/Rwanda/

APPENDIX

Statistical analysis of the study variables

0	Name	Farm (Acreage)	Yield Per acre	Labor (Person)	Fertilizer (Bag)	Price (Kyats)	Edu
1	U Ngwe Maung	13.7	65	3	3	930000	1
2	Daw Nyunt Yee	6.27	59	2	3	930000	0
3	U Aung Mya	15.31	70	2	4	950000	0
4	U Kan Tin	4.85	53	4	3	720000	1
5	U Tin Shwe	12.35	55	2	3	800000	0
6	U Htun wei	2.36	52	2	2	730000	0
7	U Myint Aung	4.27	50	3	3	730000	0
8	U Kyaw Lay	0.7	57	2	4	780000	0
9	Daw Hla May	5.55	50	3	2	720000	0
10	U Nyo Aye	5.08	50	2	2	720000	0
11	U That Le	2.92	65	4	2	720000	0
12	Daw Nyunt	11.6	53	3	2	720000	0
13	U Htun Aye	12.41	50	1	3	730000	0
14	U Hla Htun	8.04	40	1	4	950000	1
15	U Hla Htu	3.28	54	3	2	720000	1
16	U Hla Thein	3.78	56	5	2	730000	0
17	U That Wei	7.36	60	5	4	930000	1
18	U Myo Maung	6.2	53	4	2	720000	1
19	Daw Hla Shin	3.25	57	1	2	720000	0
20	U Hla Than	14.4	51	3	3	720000	0
21	U Myint Thein	3.67	64	1	3	800000	1
22	Daw Mar Mar Aye	0.72	52	1	3	930000	0
23	U Hla Maung	1.2	50	2	2	720000	0
24	U Kyaw Nyunt	4.5	55	2	2	720000	1
25	Daw Maw Maw	7.22	65	3	4	950000	0
26	U Myat Naing Oo	5.41	60	2	2	720000	0
27	U Kyaw Htwe	3.73	63	3	3	720000	0
28	U Nyo	5.79	58	2	3	920000	0
29	U Than Aung	6.31	54	2	3	720000	0
30	U Htun Htun Win	2.61	62	2	3	920000	0
31	Daw Aye May	2.77	50	3	2	720000	0
32	U Kyaw Naing Htwe	3.77	56	2	2	720000	1
33	U Zaw Min Lat	2.64	57	2	3	930000	1
34	U Kyaw Kyaw Oo	14.9	60	2	3	930000	1
35	U Myat Phay	3.28	63	1	2	730000	1
36	U Tin Myint	1.96	57	2	3	730000	0
37	Daw Tin May	4.76	65	2	4	950000	0
Avg		5.91676	56.513	2.40540	2.75675	797297.3	0.324324
Max		15.31	70	5	4	950000	1
Min		0.7	40	1	2	720000	0
Std. Dev		4.14871	6.0992	1.0397	0.72285	98900.86	0.47457
Correlation		0.10803		0.07576	0.26223	0.364769	0.017636

0= primary level, 1=middle to high school level