Socio-Economic Factors Determining Poverty among Households in 83-B, Cogon, San Jose, Tacloban City

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Abstract

Poverty cannot be easily eradicated. In the Philippines, poverty is rampant despite the government's efforts to alleviate it. Eastern Visayas as one of the poorest regions in the Philippines faces drastic challenges in terms of poverty. One of the areas in Eastern Visayas, facing poverty alleviation challenges is Barangay 83-B, Cogon, San Jose, Tacloban City. This study aimed to investigate the socio-economic factors determining poverty among households. As identified in this study, highest educational attainment, primary occupation, monthly income, and employment status were the primary socio-economic factors. The researchers used multiple regression analysis to predict poverty level in the area. This study identified some of the most appropriate interventions that address poverty concerns.

Keywords: Poverty, Socio-economic, Household, San Jose, Tacloban City

Introduction: Poverty is a challenge to every nation in the world. Because of this, poverty reduction has been one of the goals of equitable and sustainable development. There are many causes of poverty such as low income, poor employment/occupational status, household size, etc. As cited by Yang & Liu (2021), "Poverty is multidimensional and is characterized by multiple deprivations, including low consumption, inadequate living standards, poor health, a shortened lifespan, limited access to education, knowledge and information and powerlessness in various domains." Poverty can have several different effects such as social and economic.

Education is an important determining factor in poverty alleviation. Livelihood skills training and business education will aid in improving living standards in many areas of a country. According to David et al. (2021), business education is the proper education to

alleviate poverty, but poverty alleviation will remain a vision if no proper intervention will be done.

Employment and sustainable livelihood are also another determining factors in poverty reduction. As cited by Guo & Wang (2021), "Increasing employment opportunities has become one of the most effective and sustainable ways for the poor to overcome poverty". Employment will not only provide more money for a family but also uplifts family morale. It will also help avoid malnutrition because household members with good employment status are able to provide proper food for the family through the money earned from employment. Sustainable livelihood is also a very important factor in poverty alleviation. According to Wang et al. (2021), we should identify the limitations on poor people's livelihood development, stimulate their endogenous motivation, and realize the sustainable development of livelihood. Olsson et al. (2014) cited that successful livelihood of people transform assets into income, dignity, and agency to improve conditions, a prerequisite for poverty alleviation.

Not everybody is recognized in the same way as poor. Because of this, there a lot of people that find it difficult to be released from poverty traps. As cited by Olsson et al. (2014), "the most disadvantaged often find themselves in poverty traps, or situations in which escaping poverty becomes without external assistance due to unproductive or inflexible asset portfolios".

In the Philippines, especially in Eastern Visayas, many people become trapped in poverty because of low income due to poor occupational status. As cited by David et al. (2021), "the Philippine Statistical Authority Research and Development reported that Eastern Visayas became the poorest region in the Philippines in 2012 from being seventh in 2006". Philippine Statistics Authority (2020) further stated that in 2018, around 1 in every 4 families in the region is poor or has income below the poverty threshold, which is the amount required to meet basic food and non-food needs.

To overcome the challenges in poverty alleviation, the Philippine government developed various policy interventions such as, but not limited to, the Universal Access to Quality Tertiary Education Act of 2017 (RA 10931), Pantawid Pamilyang Pilipino Program (4Ps), Rice Tariffication Law (RA 11203), and "Build, Build, Build" Program. Despite all the poverty intervention programs of the government, poverty in the different areas of the country is still evident. With all of the programs to combat poverty, it is still unclear why poverty in 83-B, Cogon, San Jose, Tacloban City has not yet alleviated. Therefore, there is a need to investigate the socio-economic factors determining poverty among households in 83-B, Cogon, San Jose, Tacloban City. Specifically, this study aimed to establish a description of households' characteristics and determine the prime socio-economic factors determining poverty of households.

Methodology: This study was conducted in 83-B, Cogon, San Jose, Tacloban City in Leyte Philippines. The participants of this study were the heads of households. There were 850 households in the area. Out of the households, 219 participants were identified through

random sampling. The participants are the household heads who reside in the area and are carrying out their occupations or economic activities within Tacloban City. Household heads were identified as participants of this study to make sure that only people with requisite information needed will supply the information necessary in the conduct of this study.

The data were collected with use of structured questionnaires. Descriptive statistics such as mean, frequency, percentage were used. Standard multiple regression was applied to predict the dependent variable based on multiple independent variables. F-Statistics was used to test the null hypothesis.

Multiple Regression Analysis Model Equation Specification

$$PL = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} + SET$$

Where: PL = Poverty Level
X_1 = Age (years)
X_2 = Sex (male = 1, female = 2)
X_3 = Marital Status (Single = 1, Married = 2, Separated = 3, Widowed = 4)
X_4 = Highest Educational Attainment (No formal education = 1, High School Level = 2, High School Graduate = 3, College Level = 4, College Graduate = 5, Units in Master Degree = 6, Master Degree = 7, Units in Doctorate Degree = 8, Doctorate Degree = 9)
X_5 = Household size (number)
X_6 = Primary Occupation
X_7 = Farm size (km)
X_8 = Average Monthly Income
X_9 = Employment Status (Full-time/non-regular = 1, Full-time/regular = 2, Part-time = 3, Casual = 4, Contractual = 5, Self-employed = 6)
X_{10} = Membership in social organization (Yes = 1, No = 2)
β_1 to β_{10} = Parameter estimates
SET = Stochastic Error Term

Results and Discussions: Table 1 shows the characteristics of socio-economic factors of households in 38-B, Cogon, San Jose, Tacloban City. The results shows that there were more female household heads (62.1%) as compared to male household heads (37.9%) with a mean value of 1.62. This shows that more females are active in serving as breadwinners of their families. There were 15.5% of participants aged 19 to 30 years, 25.6% aged 31 to 40 years old, 32.4% aged 41 to 50 years old, and 26.5% of the participants are above 50 years old. In terms of marital status, 15.1% were single household heads, 5.5% were separated. 4.6% were widowed, while the biggest percentage belongs to married household heads with 74.9%. In terms of educational attainment, 10.0% of the participants have no formal education, 27.9% are high school level, 21.9% are high school graduates, 20.5% are college level, 19.6% have a bachelor degree. We can observe that only a small percentage of household heads who serve as breadwinners graduated with college/bachelor degrees. According to Mihai et al. (2015), "education is one of the most important factors in

breaking the vicious circle of intergenerational transmission of poverty". The government and other concerned organizations should focus on the improvements and access the quality education of people below poverty threshold. Most of the households consists of 4 to 6 members (64.4%), followed by 1 to 3 members (21.0%), then 7 to 9 members (13.7%). There were only 2 household heads (0.9%) with more than 9 household members. For the occupation of household heads, most of them are teachers (19.6%) and laborers (17.8%). In terms of farm size, 2 households (0.9%) own 3 to 4 square kilometers, 1 household (0.5%) owns 1 to 2 square kilometers, 1 household (0.5%) owns less than 1 square kilometer, while 215 (98.2%) households do not own farm lands. In terms of average monthly income, 12 (5.5%) households were earning less than Php 1,000 per month, 112 (51.1%) households were earning Php 1,000 to Php 5,000 per month, 62 (28.3%) households were earning Php 5,001 to Php 10,000 per month, 17 (7.8%) households were earning Php 10,001 to Php 15,000 per month, 13 (5.9%) households were earning Php 15,001 to Php 20,000, 1 (0.5%) household was earning Php 20,000 to Php 25,001 per month, and 2 (0.9%) households were earning more than Php 25,000 per month. According to Philippine Statistics Authority (2019), on average, a family with five members needs at least Php 7,337 to meet the family's basic needs within one month. This means that Php 7,337 is the food threshold amount for a family of five. The Philippine Statistics Authority (2019), further stated that on average, a family of five needs an amount of Php 10,481 a month to meet both basic food and non-food needs. This amount is the poverty threshold of a family of five within a month. In this research, results show that a huge percentage of households in the 83-B, Cogon in San Jose, Tacloban City are below the poverty threshold.

Table 1. Socio-Economic Factors Household Distribution

Socio-economic Factors	Frequency (n=219)	Percentage	Mean
Gender			
Male	83	37.9%	1.62
Female	136	62.1%	
Age			
19 to 30	34	15.5%	
31 to 40	56	25.6%	43.85
41 to 50	71	32.4%	
Above 50	58	26.5%	
Marital Status			
Single	33	15.1%	
Married	164	74.9%	2.00
Separated	12	5.5%	
Widowed	10	4.6%	
Highest Educational Attainment			
No formal education	22	10.0%	
High school level	61	27.9%	
High school graduate	48	21.9%	3.12
College level	45	20.5%	
College graduate/Bachelor degree	43	19.6%	
Household size			
1 to 3	46	21.0%	1.92

4 to 6	141	64.4%	
7 to 9	30	13.7%	
Above 9	2	0.9%	
Primary Occupation			
Farmer	3	1.4%	
Trader/Retailer	19	8.7%	
Teacher	43	19.6%	
Laborer	39	17.8%	
Health Worker	3	1.4%	
Private Employee	34	15.5%	
Driver	32	14.6%	
Housemaid/Houseboy	12	5.5%	
Government Official	4	1.8%	
Security Guard	4	1.8%	5.80
Utility Worker	5	2.3%	
Government Employee	12	5.5%	
Self-employed	2	0.9%	
Skilled Worker	4	1.8%	
Lawyer	1	0.5%	
"Parapangadi" (person doing the prayer during wake	1	0.5%	
Housewife	1	0.5%	
Farm size in Square Kilometer/s			
No Farm	215	98.2%	
Below 1	1	0.5%	
1 to 2	1	0.5%	1.04
3 to 4	2	0.9%	
Average Monthly Income			
Less than Php 1,000	12	5.5%	
Php 1,000 to Php 5,000	112	51.1%	
Php 5,001 to Php 10,000	62	28.3%	
Php 10,001 to Php 15,000	17	7.8%	2.63
Php 15,001 to Php 20,000	13	5.9%	
Php 20,001 to Php 25,000	1	0.5%	
Php 25,001 and above	2	0.9%	
Employment Status			
Full-time/non-regular	58	26.5%	
Full-time/regular	28	12.8%	
Part-time	12	5.5%	
Casual	1	0.5%	3.81
Contractual	39	17.8%	
Self-employed	81	37.0%	
Membership in social organization			
Yes	13	5.9%	
No	206	94.1%	1.94

Multiple regression was employed to predict the poverty level of households in Barangay 83-B, Cogon, San Jose, Tacloban City. There was linearity as assessed by partial regression plots and plot of studentized residuals against the predicted values. There was independence

of residuals, as assessed by a Durbin-Watson statistic of 1.267. The researchers also found that there was homoscedasticity through visual assessment and inspection of studentized residuals versus unstandardized predicted values plot. No multicollinearity was found by assessing tolerance of the independent variables. All tolerance values are greater than 0.1. There were no studentized deleted residuals greater than ±3 standard deviations. The data used in this study were approximately normally distributed as assessed by Q-Q Plot. Table shows that R^2 for the overall model was 38.6% with an adjusted R^2 of 35.6%, a large effect according to Cohen (1988). The multiple regression coefficient (R) was 62.1% indicating that the independent variables were correlated with poverty among households. R^2, which is the coefficient determination, suggests that 38.6% of the total variation in household poverty was explained by independent variables' influence in the regression model employed in this study.

Table 2. Model Summary[b] of Socio-economic Factors Determining Poverty

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.621[a]	.386	.356	.436	1.267

a. Predictors: (Constant), Member social organization, Gender, Farm size in Square Kilometer/s, Age, Household size, Primary Occupation, Highest Educational Attainment, Marital Status, Employment Status, Monthly Income

b. Dependent Variable: Poverty Level (Poverty Index)

Age, gender, marital status, highest educational attainment, household size, primary occupation, farm size, monthly income, employment status, and membership in social organization significantly predicted poverty level, $F(10, 208) = 13.071$. $p < 0.000$. The significance value of the regression as applied in this study shows that the selected socio-economic factors of households have significant influence on the poverty level in the locale of the study. The null hypothesis, which is multiple correlation coefficient R is equal to zero, was rejected in this study through the result of F-statistics.

Table 3. Socio-economic Factors Determining Poverty Model

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.824	10	2.482	13.071	.000[b]
	Residual	39.504	208	.190		
	Total	64.329	218			

a. Dependent Variable: Poverty Level (Poverty Index)

b. Predictors: (Constant), Member social organization, Gender, Farm size in Square Kilometer/s, Age, Household size, Primary Occupation, Highest Educational Attainment, Marital Status, Employment Status, Monthly Income

Table 4 shows that the intercept is statistically significant (p = 0.002). Highest educational attainment indicating a positive sign as well as a p-value of 0.002 implies that education acquision will help alleviate poverty. Primary occupation with a negative sign indicates that as household members acquire occupation, household poverty decreases. Monthly income with a positive sign and a statistically significant p-value of <0.000, as a socio-economic factor, while increasing will help alleviate household poverty. This indicates that increasing monthly income will decrease poverty in the area. Employment status with a

negative sign and a statistically significant p-value of 0.021 implies that an improvement in this factor will result in a decrease in household poverty. The significance levels of the variables are indicators of significant influences on poverty status of households in the area. While theoretically, age, gender, marital status, household size, farm size, and membership in social organizations are socio-economic factors. The major factors that primarily affect household poverty in Barangay 83-B, Cogon, San Jose, Tacloban City are highest educational attainment, primary occupation, monthly income, and employment status.

Table 4. Socio-economic Factors Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.334	.425		3.141	.002
	Age	.004	.003	.085	1.343	.181
	Gender	-.019	.067	-.017	-.290	.772
	Marital Status	-.055	.055	-.063	-.996	.320
	Highest Educational Attainment	.088	.028	.210	3.140	.002
	Household size	.022	.049	.025	.451	.652
	Primary Occupation	-.023	.011	-.137	-2.157	.032
	Farm size in Square Kilometer/s	-.125	.095	-.074	-1.312	.191
	Monthly Income	.217	.042	.435	5.111	.000
	Employment Status	-.040	.017	-.156	-2.321	.021
	Member social organization	-.081	.152	-.035	-.529	.597

a. Dependent Variable: Poverty Level (Poverty Index)

Conclusion and Recommendations: The researchers established that the prime determinants of household poverty 83-B, Cogon, San Jose, Tacloban City are highest educational attainment, primary occupation, monthly income, and employment status. Socio-economic determinants such as age, gender, marital status, household size, farm size, and membership in social organizations are also theoretically accepted as these were included in other published researches. The researchers recommend that initiatives on improvement on educational programs in the area should be conducted for the alleviation of household poverty. Programs such livelihood skills-based training will help household members to alleviate poverty and take advantage of opportunities within their locality thereby increasing income and improving living standards.

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