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## The Effect of Rural Income and its Relation to the Development of Rural Areas in South Tapanuli District

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### Abstract:

*This study aimed to prove empirically the effect of rural income to regional development in South Tapanuli district.*

*Public income was grouped into two: the poor and non-poor, while the development of the area was measured by participation in rural development, education participation, nutritional adequacy and accessibility of health services. This study was conducted in South Tapanuli with the number of samples to 510 respondents drawn by using multi-stage sampling technique. Data were collected using questionnaires that had been tested for validity and reliability. Then the data were analyzed by using multiple linear regressions.*

*The results showed that the non-poor income effected on the four regional development indicators, namely community participation in rural development, education participation whereas conversely the income of the poor communities had no effect on the four indicators to the regional development.*

**Key words:** The Poor, The Non-Poor, Regional Development

**Classification JEL:** O1, I1, I3

## **Introduction**

Globally the proportion of people living in poverty declined from 29% in 1987 to 26% in 1998, although the total number of poor people has remained unchanged at around 1.2 billion. Reduction of global poverty incidence is a progress in East Asia, particularly in China. Performance in the three other regions such as Africa, Latin America, and South Asia showed no decrease in the incidence of poverty, while the number of people below the poverty line in the region has increased. In Sub-Saharan African, an additional 74 million poor people reaches a total of 291 million in 1998. In Latin America, the poverty rate increases from 64 million to 78 million, and in South Asia the number of 522 million people are living in poverty. Countries in Eastern Europe and Central Asia have increased, both in the incidence of poverty and the number of people living below the international poverty line. Incidence increased from 2% to 5% or an increase of 24 million people in poverty. Experience shows that in countries with low inequality, high growth to reduce poverty (World Bank, 2000).

Indonesia as one of the countries in Asia also experience and increase in urban poverty since February 1996 until February 1999 (World Bank in Kamaluddin, 2003). In the initial stages for three decades (1976-1996) of urban poverty was almost no decline in number. Since 1987 (except in 2001) the percentage of urban poor to total poor people in Indonesia turned out to be virtually unchanged from year to year, that is still in a state where the average every year nearly a third (32.12%) is in urban areas (Kamaluddin, 2003).

The urban population explosion is the result of an uncountable management problems, energy consumption environment, and social crisis. Rural communities should be strengthened and maintained as a spatial block type of social goods as opposed to the cruelty of urbanization (McGee, 2001). The greater urban population results an increasing rural-urban regions as a consequence of the expansion of urban activity surrounding the core cities in many countries in Asia (McGee, 1995).

Furthermore a growing industrial sector in urban areas as the impact of globalization in developing countries are not able to provide a trickle-down effect to the rural areas, so the tendency is increasingly widening social and spatial disparities between cities and the countryside. Poverty caused by the existence of this gap occurs mainly in rural areas in Asia. And the income gap and disparities of both rural and city worsen the welfare of the population in rural areas. In the end, the villagers who have low ability move to the city in the hope to get a better life and as its consequence the number of city people and needs are increasing. And a growing formal sector in urban areas are not able to absorb labor with their low-skilled abilities so that they work in the informal sector such as labor, a traditional activity on a small scale, street vendors, and so on. This informal sector does not have the opportunity to enter the market economy. It tends to have a small income, so that there is no flow of capital from the city to the village.

## **Literature Review**

Poverty is often associated with limitations of the population in obtaining basic services in meeting their needs. Indicators of these limitations are often indicated by the level of welfare of the population consisting of income level, living environment, and health conditions. The indicators are also often used as an indicator of poverty. The level of population welfare is also influenced by the social conditions formed the community and

will provide the characteristics of different poverty between regions to one another (Baharoglu and Kessides, 2001). The idea about poverty changes overtime, but basically it is related to the inability to meet basic needs (Mikelsen, 2003).

According to Cox (2004) other causes of poverty are as follows: (1) Poverty caused by globalization in the form of the dominance of developed countries against developing countries ; (2) Poverty is related to development in the form of low participation in development and the marginalization of the development process; (3) social poverty experienced by women, children and minorities because of their helplessness ; and (4) poverty due to external factors such as conflicts, natural disasters, environmental degradation and the high number of people.

While Sharp et. Al. in Kuncoro (2004) tries to identify the cause of poverty seen from an economic stand point. First, inequality of resource ownership patterns leads to an unequal distribution of income. Second, differences in the quality of human resources are associated with productivity and low wages. Third, poverty arises due to differences in access to capital. The causes of poverty by the poor themselves are the lack of capital, education, skills, and employment opportunities; and low income.

Sahdan (2005) states that the causes of poverty in the village always become major pocket of poverties where 60% of poor people in Indonesia live in rural areas. The main causes of rural poverty are: (1) low education; (2) inequality of capital ownership and agricultural land; (3) The inequality of investment in the agricultural sector; (4) a limited budget allocation of credit; (5) the limited availability of basic necessities; (6) management of traditional economics; (7) low productivity and capital formation; (8) the culture of saving is underdeveloped; (9) the absence of social security for rural communities; and (10) lack health insurance.

The latest World Bank's poverty agenda are: 1) Opening economic opportunities to the poor through labor-intensive programs and increase the productivity of small businesses and small farmers; 2) The investment in human resources, especially the improvement of education and health services; 3) Providing a safety net to protect livelihoods. (Mikkelsen, 2003: 1997). Poverty reduction strategy was also expressed by the United Nations Economic and Social Commission for Asia Pacific (UNESCAP, 2000), the poverty reduction strategy consisted of poverty reduction money; poverty access to economic, social and cultural; and the alleviation of poverty on access to power and information.

The newest Indonesia's poverty alleviation policy stipulates in Presidential Regulation No.7 of 2005 on the National Medium Term Development Plan, which states that poverty reduction policies include: policy fulfillment of basic rights and regional development policies to support the fulfillment of basic rights.

## **Research Methodology**

The method used was a survey research in which data were collected from a sample on the population to represent the entire population. The population in this study was all districts and households located in South Tapanuli Regency. 510 households were taken as samples. The sample was selected by using a multi-stage sampling method.

Based on the conceptual framework of research in this study, some variables used namely:

1. Variable of Income (X) consisted of four aspects: Poor Group (X1) and Non-poor Group (X 2).
2. Variable of Area Development (Y) consisted of four aspects: Community Participation (Y1), Education Participation (Y2) Nutritional Adequacy (Y3), and Health Accessibility (Y4)

Collecting data using a questionnaire firstly tested the validity and reliability testing. Data were analyzed using multiple regressions by first classical assumption.

## Result

### 1. The Regression Test Result of Effect Revenues for the Rural Area Development

#### a. Income Level Effect Test to People's Participation.

Based on an overview of the level of participation of respondents in rural development, in an attempt to find out how much the level of significance influence income levels of respondents to the level of participation researchers conducted statistical tests with regression testing tool. The test result was shown in Table 1 below.

**Table 1. Regression Test Result of the Family Income Levels Effect to Participation Level in Rural Development**

Respondent Category	Model	Standardized Coefficients	t-test	Sig	F-count	Sig
Non- Poor Household	(Constant)	19.710	4.851	0.000	4.654	0.019
	Y	0.082E-2	2.089	0.042		
Poor Household	(Constant)	16.815	3.963	0.000	0.347	0.556
	Y	-1.031E-5	0589	0.556		

*Source: The test results of primary data (2013) in SPSS 20*

From the test results as listed in Table 1, the level of income had a significant effect on the level of participation of respondents to the rural development. It could be seen from a comparison of the value of the t test and F test among respondents from poor and non-poor households. For non-poor households, income levels had a significant effect on the level of participation in rural development. It could be seen from the above regression test results which the value of Sig (0.042) < alpha (0.050).

Otherwise income level of poor households did not have a positive influence on the level of participation in rural development. It could be seen from the value  $t\text{-value} (0.589) < t\text{-table} (1.965)$  and  $\text{Sig} (0.556) > \alpha (0.050)$ .

### **b. Income Level Effect Test to Children's Education Level.**

In line with the above explanation, the researcher also suspected that the low average formal education of rural communities in South Tapanuli caused by low income levels, especially for poor families. The complete results could be seen in the table below.

**Table 2. Regression Test Result of Income Family Level to Children Education in the Family**

Respondent Category	Model	Standardized Coefficients	t-count	Sig	F-count	Sig
Non-Poor Household	(Constant)	10.848	4.851	0.000	3.86	0.000
	Y	5.034E-6	2.089	0.000		
Poor Household	(Constant)	8.166	3.963	0.000	2.318	0.128
	Y	6.212	0.589	0.128		

*Source: Test Results of primary data (2013) in SPSS 20*

From the test results as the data shown in Table 2, it appeared clearly that the level of income had a significant effect on the level of education of children in the family. It could be seen from a comparison of the value of the t test and F test among respondents from poor and non-poor households. For non-poor households, income levels had a significant effect on the level of education of children in the family. It could be seen from the above regression test results in which the value of  $\text{Sig} (0.000) < \alpha (0.050)$ . On the contrary level of income of poor households did not have a positive influence on the level of education of children in the family. It could be seen from the  $\text{Sig} (0.128) > \alpha (0.050)$ .

### **c. Income Level Effect Test on the Level of Nutritional Adequacy**

Beside the income level was supposed to influence the level of participation and education of children, the researcher suspected that the low income levels would lead to lower one's ability to obtain food that could fulfill the nutritional adequacy for healthy living. Results can be seen in full in Table 3 below.

**Table 3. Regression Test Result of the Family Income Effect to the Level of Nutritional Adequacy of Food**

Respondent Category	Model	Standardized Coefficients	t-count	Sig	F-count	Sig
Non-Poor Household	(Constant)	17.316	5.948	0.000	4.332	0.004
	Y	6.773E-8	2.576	0.024		
Poor Household	(Constant)	7.249	4.745	0.000	2.521	0.565
	Y	-1.838E-5	-2.919	0.174		

*Source: Test Results of primary data (2013) in SPSS 20*

From the test results as the data contained in table 3, it appeared clearly that the level of income had a significant effect on the level of nutritional adequacy of the food. For non-poor households, income levels had a significant effect on the level of nutritional adequacy of the food. It could be seen from the above regression test results in which the value of Sig (0.024) < alpha (0.050). Conversely the level of income of poor households did not have a positive influence on the level of nutritional adequacy of the food. It could be seen from the Sig (0.174) > alpha (0.050), from regression test result above it could be concluded that the level of people's income had a significant effect on the level of nutritional adequacy of the food.

### **d. Effect of Income Level Test on Health Services**

A discussion of health was related to the ability to pay for treatment when the people got ill. It should be recognized that the level of income of a person or household really influenced the level of ability to pay the treatment when they got ill. In general, poor people still prioritized spending needs for

provision of food and if there was still residual income then for the supply of medicines when they suffered from disease.

In line with the above description, the researcher also suspected that the low level of income would lead to lower one's ability to seek treatment when they got ill. Data processing results could be seen in Table 4 below:

**Table 4. Regression Test Result of Family Income Effect to Health Family Members**

Respondent Category	Model	Standardized Coefficients	t-count	Sig	F-count	Sig
Non-Poor Household	(Constant)	7.597	8.648	0.000	9.521	0.000
	Y	2.232E-6	2.531	0.000		
Poor Household	(Constant)	9.208	6.658	0.000	3.86	0.350
	Y	5.335E-6	0.936	0.350		

*Source: The test resultsof primary data(2013) in SPSS20 Program*

From the test results in Table 4, it appeared clearly that the level of income had a significant effect on the level of health of respondents, especially when they get ill. It could be seen from the comparison of t-test and F-test among respondents from poor and non-poor households. For non-poor households, income levels had significant effect on the health level. It could be seen from the above regression test results in which the value of Sig (0.000) < alpha (0.050). Otherwise the income levels of poor households did not have a positive effect on the level of participation in rural development. It could be seen from the Sig (0.350) > alpha (0,050). From the results of the regression test above, a conclusion could be drawn that the level of people's income had significant effect on the level of health, especially in the treatment when they suffered from a bad disease.

## **Discussion**

### **1. Analysis of Income Effect to Rural Regional Development**

#### **a. Income Effect on Community Participation of Rural Development**

Simply participation related to "the involvement of a party to the activities carried out by other parties". Ndraha (1999), says that participation means participation of a person or group of people in an activity consciously. Jnabrabota Bhattacharyya (in Ndraha, 1999) defines participation as taking part in activities together. Participation is a process whereby the community as stakeholder gets involved in influencing and controlling the development in their place respectively.

As one of the executors of development, the community participation is becoming as one of the factors that has a great effect on the rate of growth of development in the village. The higher the participation level of rural communities the higher the growth rate and development in the village, and vice versa. In fact, high-low level of participation is influenced by many factors. Generally the factors referred to can be grouped into two factors: internal and external factors. The factors derived from the internal such as: age, sex, knowledge and skills, employment and income levels. While the external factors are all interested parties which have an influence on the next development program.

Form of community participation expected in the process of rural development is costs support, labor, equipment and contributing ideas. However, the availability of all forms of participation expected from society is largely determined by the level of community income itself. Therefore, the high and low levels of public participation in the process of rural development are largely determined by the level of income of the community itself.

In accordance to the above description, the researcher also suspected that income levels affected to the society participation level in the process of rural development. Based on data obtained test results, in fact, its positive income levels had an effect on the level of community participation in the process of rural development. It could be seen from the test results data for respondents who were not classified as poor in which the value of Sig (0.042) > alpha (0.050). Conversely the test results data from poor households resulted Sig (0.556) > alpha (0.050).

Based on the above test results, it could be concluded that the level of income of poor households did not have a significant effect on the level of community participations in rural development. Conversely level of income of poor households did not have a significant effect on the level of society in the rural development process. Respondents the poor household respondents were notable to provide assistance due to the development costs low income levels.

Based on data from Community Empowerment Board and Village Government South Tapanuli, from 212 villages in South Tapanuli there were as many as 119 classified under developed villages and 23 classified as very under developed villages. Then from the same source showed that the numerous of poor people in South Tapanuli were found in the under developed and extremely under developed villages. From these data indicated that the more poor people lived in villages the slower development of the villages concerned.

### **b. Income Effect on Children's Education Level**

Education was as one of the basic capitals expected to increase human dignity as well as improve the quality of human resources. Education taken by the child actually was becoming family responsibilities. In addition, providing education was one of the government's obligations as an organizer of providing education, as well as mandated in the Constitution of 1945.

Therefore, in an effort to improve the quality of human resources especially for children at school age, the cooperation between the parents and government was needed.

In the provision of education for children, it was needed an adequate cost so that children could follow the education process well. Related to this, children's education expenses source came from earned income families. The proportion of the income of the family was a factor which could affect the level of children education. In other words, level of education taken by a child was influenced by the level of family income.

In accordance to the above description, the researcher also guessed that people's income level affected the people ability to continue formal education for children at the school age. Based on data obtained from the research, it showed that respondents from poor households had a low ability compared with respondents who were not poor in terms of medical treatment when they got ill. It could be seen from the test results data for respondents who were not classified as poor in which the value of Sig (0.000) < alpha (0.050). Vice versa the test results data from poor households resulted Sig (0.128) > alpha (0.050).

From the research results could be concluded that the low level of children education from low-income rural communities in South Tapanuli was caused by low income levels. Similarly, the participation of children for school was also influenced by the low income of their parents. Low levels of family income resulting costs could not be met all the school needs so many of the children of poor families quitted or did not to continue their education to a higher level.

Inability fact or to pay for school or economic factor was becoming the cause of high dropout rates. That fact was proved by the high number of poor people in Indonesia whose children did not attend school or dropped out of school caused by internal aspect, that is no desire to go to school in the child, so that they decided to quit school.

### **c. Income Effect on the Nutritional Adequacy of Food**

One of the basic necessities for human life was food. Spending one's daily routine usually was spending to get the food in accordance with the level of need. To get the level of quantity and quality of food needs was determined by the level of income earned. Everyone was expecting that every food stuff consumed contained sufficient nutrient levels.

Nutritional adequacy was the amount of recommended daily food intake to meet the nutritional needs of healthy people. Daily nutritional adequacy was needed to support the growth and development of every person, especially for children under five. Nutritional adequacy of food for a person greatly affected the energy to do the job in order to meet the needs of everyday life.

To get sufficient nutrient food levels required fees in kind. For those who had a high income usually always bought food stuffs that contained high levels adequate nutrition so that they had a strong power daily. But for those who had low income levels were usually just enough to eat alone without regard to the adequacy of nutrition for healthy living. Sumodiningrat (1998) also notes that in general, poor people had not put sufficient levels of nutrients in foods consumed daily.

In accordance to the above description, the researcher also guessed that the low level of income would lead to lower one's ability to obtain food that could meet the nutritional adequacy for decent healthy life. Based on test results obtained in fact positively income levels had an influence on the level of adequacy of nutrition for rural communities. It could be seen from the test results data for respondents who were not classified as poor in which the value of Sig (0.024) > alpha (0.050). On the contrary test results data from respondents poor households obtained value Sig (0.174) > alpha (0.050).

Based on the test results above, it could be concluded that the level of income of poor household respondents had no significant immediate effect on the level of nutritional adequacy of food for villagers in South Tapanuli. Otherwise level of income of poor households had a negative effect on it every day.

#### **d. Income Effect on Health Care**

Increasing consumption of goods and health implicated for the growing prosperity of individual. Health consumption rate was determined by income level. The size of the amount of income would be able to affect health. For example in low-income communities, the first priority was sufficient for the goods firstly, once it was fulfilled, they would consume health then. Research also guessed that people's income level greatly affected the public's ability to obtain needed goods or when they suffered from disease.

In accordance to the above description, the researchers also supposed that the low level of income would lead to lower one's ability for treatment when they were ill. Based on data obtained from the research it was seen that respondents from poor households had a low ability compared with respondents who were not poor in terms of medical treatment when they got ill. It could be seen from the test results data for respondents who were not classified as poor in which the value of Sig (0.000) < alpha (0.050). On the contrary the test results data from poor households resulted Sig (0.350) > alpha (0.050).

Based on the above test results, it could be concluded that the level of income of poor households did not significantly affect the ability of respondents to treatment when they got ill. Otherwise income level of poor households did not significantly affect the ability of respondents to treatment.

## **Conclusion**

1. Non-poor households income has a significant effect on the level of public participation in rural development. Otherwise poor households income level does not have a significant effect on it.
2. Low level of education of children from low-income rural communities is in due to low income levels. Similarly, the participation of children to school is also influenced by the low income of their parents.
3. Income of non-poor households effects significantly to the level of nutritional adequacy of food for villagers in South Tapanuli. Instead level of income of poor households has a negative influence on it.
4. Income of non-poor households effects significantly on people's ability to access health services, while the income of poor households does not significantly effect on it.

## **Suggestion**

1. Preparation of strategies and policies for poverty reduction in South Tapanuli must be adapted to the factors of main cause of poverty. That's the culture of life.
2. The program of poverty reduction through the provision of cash form should be reduced and more directed to improve the empowerment of the poor in order to spur independence.
3. Provision of free medical facilities that is easily accessible , supplementary feeding in order to improve public nutrition, eliminating the cost of education and empowering communities to engage in development in the form of non-financial, will be able to reduce poverty

and in turn trigger the development of the region in South Tapanuli.

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