How the Poor Survive FromVulnerability:
A Study of Poor Households in Aceh, Indonesia

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ABSTRACT
This study aims to examine how the poor in North Aceh increase their empowerment and survive in conditions of vulnerability. This study uses primary data sourced from a survey of 250 poor households. The sampling technique is carried out by non-probability sampling, specifically purposive sampling. Using SEM analysis, it was found that the variables tested for social capital and human capital had a significant effect on increasing empowerment and the ability to survive vulnerabilities. The social capital variable in this study has a strong relationship in increasing the empowerment and ability of the poor to survive. All the indicators used in explaining the construct of social capital, there are three indicators that have a high loading indicator value, that is networking, solidarity and cooperation. A high indicator value indicates that the indicator has a major contribution in shaping social capital. While the indicators that have a high score on the human capital variable are education and skill. Social capital is an asset owned by the people of Aceh that can provide a way to survive and escape from poverty or at least still survive in vulnarability. Networking or involvement in the organization facilitates access to resources, while trust and cooperation can provide a temporary solution to vulnerability. In this case, social capital becomes a strength or potential that can be developed to empower the poor.

Keywords*: Social capital, Vulnerability, Poverty, Human capital*

1. INTRODUCTION

Vulnerability and poverty are problems in development. Poverty is characterized by underdevelopment, unemployment and economic inequality,[1] Poverty is a measure of the success of development. Poverty is a low standard of living, namely the level of material shortages in the number or group of people compared to the standard of living that generally applies in the community concerned, [2].

The problem of poverty is caused by very complex and diverse problems, not only influenced by human resource factors, but other factors such as nature, politics, culture and law. These factors are mutually reinforcing in aggravating poverty if not handled properly. The problem of vulnerability cannot only be analyzed with economic or monetary problems, but with an expanded measure of poverty, [3]. Poverty analysis has included factors of social inclusion, lack of goods and risk vulnerability. This concept is known as multidimensional poverty.[4] Research on poverty has attracted a lot of attention from researchers around the world, [5] [All of which aim to find solutions to the problem of poverty.

Basically the poor have great potential such as social capital that can make them survive and get out of poverty. The problem of poverty needs to be understood properly. The formulation of the problem of poverty and the design of appropriate strategies are needed to accelerate the improvement of the empowerment of the poor, [6]. The problem of poverty is like a spider's web. The roots of the problem of poverty are internal and external, each of which has various effects on poverty.

Many studies place social capital as a potential variable in surviving poverty. [7];[8];[9] . Social capital, generally characterized by trust, social relationships, and networks is important in their lives and as a way for them to survive. Even social capital is an important determinant of poverty. [10] describes how the emergence of the concept of social capital is the relationship between economic actors and their relationship with economic institutions. Social capital is related to the level of educational participation, good health, and involvement in decision making, [11]; [12].

2. THEORETICAL REVIEW

1.1. The Theory Of Poverty

Poverty is defined as a low standard of living, like a lack of material compared to the general standard of living in society. The Experts, They was extend the view of poverty beyond traditional views. Since then, the problem of poverty is generally accepted worldwide that the concept of poverty should include many things including economic deprivation, as well as social exclusion, low access to public services, and vulnerability or risk exposure. As a result, poverty measurement has evolved from one-dimensional to multi-dimensional income measurement.

The concept of poverty is no longer limited to seeing the inability to fulfill basic needs such as food, health, education, employment, housing, clean water, natural resources, the environment, security, but also seeing the inability of the community to fulfill their needs for social and economic rights and political. Recognition of equality is one of the basic rights related to human rights. Limited access to economic resources or even no access causes people to suffer from poverty and underdevelopment. In underdeveloped countries, human resources are generally very low. Market asymmetry hinders the optimal allocation and utilization of natural resources, the result is underdevelopment and in turn leads to poverty.

Theoretically the concept of poverty can be measured from several perspectives: namely: monetary approach, capability approach, social exclusion approach. Poverty that occurs in many countries is often associated with low human capital, education for children and parents which is sufficient to determine the aspect of productivity. Furthermore, the level of public education is highly correlated with economic growth in the long term, the chances of success in children's education are low, which will affect the chances of success as in adults, socially isolated and unemployed [13]. Furthermore, [14], stated that education and health have an impact on poverty alleviation. The provision of educational infrastructure by the government is very important [15];[16] said that empowerment is a variable in increasing community empowerment. Also with the provision of infrastructure, the provision of infrastructure is directly related to economic growth and increased empowerment, [16] [17].

1.2. Social Capital And Human Capital

Social capital can be defined as norms and social relations that are integrated into the structure of society and allow people to work together and act to achieve goals [18]. Social capital such as trust, norms and networks that can increase the efficiency of society by facilitating the coordination of actions. Social capital as an ability that comes from general trust in society or a particular part of society. Many studies place social capital as a potential asset in surviving poverty. [8];[11]. Social capital, which is generally characterized by trust, social relationships, and networks, is essential for well-being. Even

social capital is also a determinant in poverty alleviation. Social capital is the glue for each individual, in the form of norms, beliefs and networks, so that mutually beneficial cooperation occurs to achieve common goals.

Social capital is also related to the level of participation in education and health, and involvement in decision-making. [11]; [12] While defining social capital as something that includes horizontal linkages within the local community as well as vertical linkages.

Human capital is characterized by the ability of individuals and all family members to increase their capacity. Human capital is seen from the length of education taken, the skill possessed by family members, health and the level of income from work.

3. METHODOLOGY

3.1. Data Sources and Analysis Methods

The data in this study are primary data from a survey of poor households in northern Aceh. The sample used in this study was 250. Data was collected by purvossive sampling method. Data analysis uses structural analysis equation modeling, because this analytical tool has the ability to measure variables that cannot be measured directly but through indicator estimation. This study examines two construct variables that determine the ability of the poor to survive and escape poverty. The use of SEM allows researchers to explicitly test the level of consistency of the measuring instrument and the internal consistency of the research model, which theoretically the structural relationship between latent variables can be estimated accurately [19] The research model is:

$$Emp = \alpha_1 Sos\_Cap + \alpha_2 Hum\_cap + \varepsilon \quad (1)$$

Where Soc_Cap is Social Capital, Hum_Cap is human capital. Emp is Household Empowerment. α_1, $\alpha_2$is the magnitude of the variable coefficient and ε is the error term. Social capital (SosCap) is a social norm and interconnection that is integrated into the structure of society so that they can work together to act to achieve goals. Social capital is measured using 5 dimensions [18], that are the group and network dimension (X1.1), the solidarity dimension (X1.2), the cooperation dimension (X1.3), the information and communication dimension (X1.4) and the cohesion and social inclusion (X1.5). The equation model for building social capital is:

$$X_{1.1} = \gamma_1 X_1 + e_{1.1};\ \boldsymbol{X_{1.2}} = \gamma_1 X_1 + e_{1.2};\quad \boldsymbol{X_{1.3}} = \gamma_1 X_1 + e_{1.3};\ \boldsymbol{X_{1.4}} = \gamma_1 X_1 + e_{1.4};\ \boldsymbol{X_{1.5}} = \gamma_1 X_1 + e_{1.5} \quad (2)$$

Hum_Cap is the capacity of poor households, the indicators used to measure capacity are education (X2.1), skills (X2.2), experience (X2.3), income (X2.4), assets owned (X2 .5) and individual characteristics (X2.6).

$$X_{2.1} = \beta_1 X_2 + e_{2.1};\ X_{2.2} = \beta_1 X_2 + e_{2.2};\ X_{2.3} = \beta_1 X_2 + e_{2.3};\ X_{2.4} = \beta_1 X_2 + e_{2.4}$$
$$X_{2.5} = \beta_1 X_2 + e_{2.5};\ X_{2.6} = \beta_1 X_2 + e_{2.6} \quad (3)$$

Household empowerment (Empower) is the condition of the community that has the ability to meet minimum needs, both material and non-material needs. Empowerment is measured using 5 dimensional indicators, that are dimensions of increasing knowledge and skills (Y1.1), dimensions of increasing accessibility (Y1.2), dimensions of increasing participation and cooperation (Y1.3), dimensions of increasing consumption (Y1.4) and dimensions of asset enhancement (Y1.5). The relationship between the construct model of household empowerment is

$$Y_{1.1} = \gamma_1 Y_1 + e_{3.1};\ Y_{1.2} = \gamma_1 Y_1 + e_{3.2}\quad Y_{1.3} = \gamma_1 Y_1 + e_{3.3};\ Y_{1.4} = \gamma_1 Y_1 + e_{3.4}\quad Y_{1.5} = \gamma_1 Y_1 + e_{3.5} \quad (4)$$

All variables were measured using a Likert scale, this was intended to compare scores with the normative group. To assess whether the instrument is able to explain the actual conditions, validity and reliability tests will be carried out beforehand. After the instrument is said to meet the validity and reliability requirements, a statistical test will be carried out on the model.

4. FINDINGS AND DISCUSSION

The fit index test must be carried out first. Before the structural model test is carried out, if the tested model does not meet the criteria, a modification of the fit index (MI) must be carried out. In the modified index, it is recommended to correlate error terms that have a high MI value or eliminate some indicators so that the model really fits,[20] [21] In the structural model equation 1 above, the model is declared fit after the modification process by eliminating several indicators. The index fit test was carried out with several tests, although only one test met the criteria, namely the model was declared to meet the fit index criteria, [21] . In this test all criteria tests meet the fit index, so there is no difference between the covariance matrix of the population and the sample covariance matrix.

Table 1. Structural index (GOF) fit test results

Criteria	Results	Cut-off Value	Evaluation model
CMIN/DF	2,114	≤ 3,00	Fit
RMSEA	0,057	≤ 0.08	Fit
GFI	0,901	≥ 0,90	Fit

AGFI	0,869	≥ 0,90	Marginal Fit
TLI	0,923	≥ 0,90	Fit

Structural model testing is carried out after the model meets the fit index, meaning that there is no difference between the sample covariance matrix and the population covariance matrix. the point is to see the contribution of each indicator to the variable and the effect of the exogenous variable on the indogen variable.

Table 2. Relationship coefficients between exogenous and indogeneous variables

Corelation variable	Estimate	Standar error.	Critical Ratio.	P-value
Soc_cap (X1) ----------→Emp (Y1)	0.322	0.067	5.220	0.000 **
Hum_cap (X2) --------→Emp (Y1)	0.610	0.080	6,560	0.000 **

Note : **) significance at level 0,01
*) significance at level 0,10

An indicator can explain a variable if it has a value above 0.5, [20]. The structural model testing aims to see the effect of the variable tested on the level of empowerment of the poor, of all the variables tested, all variables have a significant effect on empowerment (see table 2)

These results support the initial hypothesis that exogenous variables have a positive and significant effect on the empowerment of the poor in North Aceh, indicated by the probability value of p≤ 0.05 and the critical ratio value, [20]. This effect can be seen from the estimated value of each variable.

The contribution of each variable for empowerment can be seen from the estimation variables, all variables have a fairly large contribution as shown in the table 3. below

Table 3. Value of loading indicators, Critical ratio indicators that affect empowerment

Variable	Indicator	Estimate	CR	Probability
Social capital	Network	,668		
	Solidarity	,765	8,789	***
	Cooperations	,660	8,079	***
Human Capital	Education	,671		
	Skill	,645	8,410	***
	Household Income	,611	7,058	***

Note. ***) significance at 5 percent

The indicator value for each variable can be used as an indicator that can be intervened to improve the empowerment of the poor. The indicator with a high value indicates the magnitude of the contribution in forming the variable. The social capital variable has 3 high indicator values, namely networking, a sense of solidarity and cooperation, while the indicators that make up the capacity of poor households with high values are education, skills and household income.

The high indicator value shows the large contribution of the indicator to the variable. Network, solidarity and cooperation indicators are indicators that can increase the empowerment of the poor. The poor survive in vulnerability by creates of cooperation to strengthen networks within the community and the level of solidarity between communities. Connectivity patterns are the dimensions that make up social capital so that group members can work together to produce something big. Accumulated knowledge will be more quickly divided into groups or networks, knowledge will be distributed more quickly, network members will deliberately share their knowledge and experiences with other group members.

Household participation in groups or networks also provides economic benefits. Their problems are resolved more quickly with the help of the group. They have easier access to economic resources, such as capital resources. The pattern of

Connectivity in society is built on a sense of solidarity and trust. A high sense of solidarity in society helps them to solve their financial problems.

Loans for urgent needs are easier to obtain from members of other groups on the basis of a sense of solidarity and trust. A sense of solidarity and trust helps them from economic vulnerability.

5. CONCLUSION

The ability to survive from vulnerability is measured by the high level of social capital they have. Households that have good social capital have better survival and are able to increase their empowerment. The indicators of social capital they have are measured by patterns of connectivity or networks, a high sense of solidarity between community members and cooperation in the community. Households that have good networks or are members of groups can solve problems easily, both economically and non-economically. Strong solidarity in society can help poor people solve problems, especially financial problems. Likewise with the increase in human capital, this is in line with several previous studies, which state that capacity building is correlated with economic growth and is very important to increase empowerment. This study has several limitations, such as the number of variables and indicators in the study is still limited. In fact, there are still many variables and indicators that can be included to test their effect in increasing empowerment and the ability to survive from economic vulnerabilities.

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