

## Social Capital and Poverty Reduction: A Case Study of the Integrated Social Service Program in Madiun

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**ABSTRACT:** Regional government policies in general in poverty reduction in Madiun Regency still use an economic approach, such as infrastructure development (physical capital), credit assistance (financial capital), and education and health assistance (human capital). The problem of poverty is a complex problem, involving many resources including one of them is social capital. This study analyzed the role of social capital in poverty reduction in rural households in Madiun. Social capital is measured based on the dimensions of social capital index (mutual trust, norms, mutual cooperation, participation in social activities, and social networking), while poverty is measured by per capita household expenditure. The method of analysis used was multiple linear regression models in a sample of 3,473 households. The source of the data obtained from the results of the BPS survey of Madiun Regency, namely Susenasin 2018. The results of the analysis show that the average index of household social capital in rural areas is 52.18 (maximum 100). The component that most plays a role in the formation of social capital for poor households is mutual trust. The results of the analysis show that social capital together with human capital, financial capital, and physical capital have a positive effect on household per capita expenditures, which can reduce poverty. This illustrates that social capital has an important role in poverty reduction in rural areas.

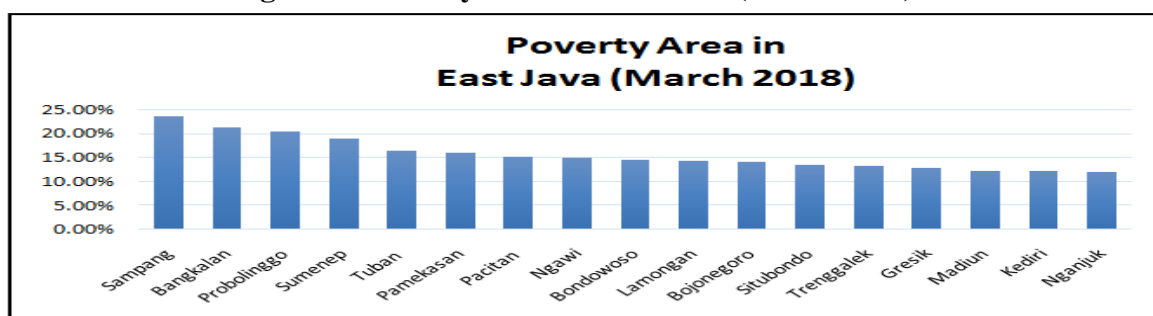
**KEYWORDS:** Social Capital, Poverty, Rural Area

### I. INTRODUCTION

This integrated social service program activity is one of the activities in the context of poverty reduction in the region. This is in accordance with Madiun District Regulation No. 5 of 2013 concerning Poverty Reduction, "that in order for poverty reduction to run optimally, effectively, efficiently, programmed in an integrated and sustainable manner, regulations for local government administrators, businesses and all components are needed community". In article 13 point (a) Regional Regulation of Madiun Regency Number 5 of 2013, one of them stated that "poverty reduction programs consist of: integrated social assistance program groups and family-based entrepreneurship development, aimed at fulfilling basic rights, reducing living burdens, and improving the quality of life of the poor".

The area of poverty in East Java until March 2018, as many as 17 of the 39 districts / cities in East Java Province have poverty levels above the provincial poverty average. Based on data from the Central Statistics Agency, the percentage of poor people in East Java in March 2018 was 11.77%, meaning that 11.77% of the East Java population still lives below the poverty line. For Madiun Regency is ranked 15th with a poverty rate of 12.28%. The following is a graph of the poverty bag in East Java.

**Figure 1.1 Poverty Area in East Java (Maret 2018)**



Source: BPS, 2018

The percentage of poor people in Madiun until 2018 is 12.28%, although the Integrated Social Service Program is carried out from village to village each month, this figure is still high, if you look at the neighboring districts in the west, namely Magetan by 10.48%, for the southern part of Ponorogo at 11.39%, for the east side of Nganjuk Regency at 11.98%, while for the poverty rate for East Java Province it was 11.77%. A little better than Ngawi Regency for 14.91% of the poor population. Paying attention to the difference in the percentage of poor people with the surrounding neighboring regions above, Madiun is still relatively high, the average difference is 0.99% with the three regions, namely Nganjuk Regency, Ponorogo Regency and Magetan.

The high rate of poverty indicates that development in rural areas has not optimally utilized various existing resources (Rustiadi et al. 2009). In fact, the three main capital of development, namely human capital, natural capital, and social capital are mostly located in rural areas (Rustiadi 2009). Another reason is the lack of optimal rural development due to the occurrence of backwash effects, namely the flow of various resources (natural capital, human capital, and financial capital) from rural to urban areas (Rustiadi 2009).

The problem of poverty is related to the nature and pattern of development of a region. Regional development can be realized due to changes in social organization and value systems (Rustiadi2009). Meanwhile, the productivity of an economic system and resource management is conditioned by the culture and institutions that exist in the local community (Hayami 2001). Thus, the implementation of development in rural areas needs to encourage the development of social institutions that enable the formation of social capital that has the potential to alleviate poverty in rural areas (Rustiadi2009).

Social capital has proven to be a potential source of economic growth and poverty reduction (Putnam 1995). Some research results in developing countries show the important role of social capital in reducing poverty (Hassan and Birungi 2011). Different results were found by Abdelhak et al. (2012), where social capital had no effect on increasing income. Abdelhak et al. (2012) found that this condition occurred due to lack of even no social organization in rural areas and the majority of the households studied were in poor condition (homogeneous poor).

In order to see the role of social capital in poverty reduction in rural households in Madiun, quantitative assessment is needed. Understanding the role of social capital in poverty can be knowledge in developing policies for poverty reduction programs in the Madiun Regency. For this reason, this study has two objectives, namely (1) analyzing the effect of social capital on reducing poverty in rural households and (2) analyzing the factors of development of social capital in rural areas.

## II. THEORITICALFRAMEWORK

The concept of social capital regarding interpersonal social interaction has become a major subject in several research fields. Although there is still much debate, the role of social capital in social and economic aspects is a new paradigm in inclusive development. Inclusive development itself, namely development that supports job creation, provides social access and economic access that includes all communities in a sustainable manner to reduce poverty (Cook 2006). Social interaction occurs because of mutual assistance between individuals, between communities, and between groups to achieve common goals. Although the definition of social capital is still diverse and understood differently, there has been convergence towards social networks (networks), norms (norms), and values (values) that facilitate collective action (Healy & Hampshire, 2002). Social networking is the relationship of individuals who know each other as family, friends, or neighbors to a group (Putnam, 1995). Norms are unwritten rules that describe the values of a group (Coleman, 1988). Communication and interaction between individuals is strongly influenced by certain rules and social norms in the local community. Interactions between individuals in groups show mutual trust (Nasution, 2015). Mutual trust can be created and developed through education and relatively diverse individual interactions (Uslaner, 2004).

Social capital can influence the reduction of household poverty through three types of positive externalities (Collier, 2002). First, social capital facilitates the transmission of knowledge about other people's behavior, reduces the problem of opportunism through repeated interactions, and builds mutual trust among members. Second, social capital facilitates the transmission of knowledge about technology and markets, reduces information failure (information asymmetry). Knowledge transmission can occur by gathering information in the context of social networks, both one-way interactions and reciprocal interactions. Both of these externalities can reduce opportunism, which is achieved through repetitive transactions and reputation. Repeated transactions have the effect of preventing the entry of other people (free riders) who tend to harm poor households. The reputation will increase profits from recurring transactions. Repeated transactions generate trust in reciprocity, while reputation allows poor households to gain trust in increasing access to transactions or economic resources.

Third, by relying on norms and rules, social capital reduces free rider problems, thus facilitating collective action in achieving common goals (reducing poverty). Thus, the effect of this third externality is collective action. Collective action is achieved through agreed norms and rules that apply to all group members. Social capital is more beneficial for poor households to substitute human capital, financial capital, and physical

capital. Social capital facilitates poor households to receive benefits from their membership in social groups. If the cost of membership in arisan is time, then the poor have an advantage, because it will incur lower costs compared to rich households. Poor households will continue to feel themselves protected, even if they cannot afford security or hygiene contributions in the presence of local norms and rules. Thus, the existence of social capital of poor households gets many benefits from other members in increasing income. Poor households will have many incentives compared to non-poor households when participating in social groups as instruments of social capital.

Social groups need leaders, who may be dominated by higher income households. Usually, high income households or community leaders are more respected by poor households (Collier, 2002). Thus, the costs required to initiate joint actions are lower, because collective action initiatives by community leaders tend to generate income (income) for poor households. Furthermore, the norms and rules initiated by community leaders tend to attract rich households to join. This shows that social capital provides economic benefits for poor households participating in groups that have heterogeneous socio-economic status (Abdelhak, et al., 2012).

### III. RESEARCH METHOD

The data in this study was obtained from primary data, the Madiun Regency People's Welfare Statistics (Susenas) data in 2018 from the Madiun Regency Central Bureau of Statistics and village infrastructure data in 2018 from the Madiun Regency Regional Planning Agency. The People's Welfare Statistics data collects information about demographic characteristics, socio-economic characteristics, and household expenditure, and information about social capital for each household. Whereas, data from the Regional Planning Agency collects data on infrastructure in the village, but in this study it takes information related to instruments or social capital formation only, the existence of a permanent rural market in Madiun.

The analytical method uses a framework that has been carried out by Ellis (1998) and Grootaert (1999). This study assumes that every rural household has access to 'conventional' capital (human capital, physical capital, and financial capital) and social capital. Rural households use this capital in making decisions about labor offers that are combined with the demand for goods and services in productive activities (generating income). The price of inputs for goods and services in productive activities in each rural household is assumed to be fixed and exogenous. That is, there is no change during observation. This assumption is used because besides non-available data also uses one-year cross section data (2012). Rural household demand for goods and services is combined with labor supply in generating income. Here, social capital is also one of the assets that determines that decision. So that social capital combined with human capital, physical capital, and financial capital is used in these productive activities. Furthermore, consumption and savings are a function of the level of rural household income. The estimation model of income level equations as measured by rural household per capita expenditure as a proxy for poverty is formulated as follows:

$$\ln(E_{ij}) = \alpha + \beta_1 SC_{ij} + \beta_2 HC_{ij} + \beta_3 OC_{ij} + \beta_4 X_{ij} + \beta_5 Z_j + \mu_{ij} \dots (1)$$

where:  $E_{ij}$  : household per capita expenditure ke-i village ke-j;

$SC_{ij}$  : household social capital index ke-i village ke-j;

$HC_{ij}$  : human capital as measured by the length of school the head of the household ke-i village ke-j;

$OC_{ij}$  : household assets ke-i village ke-j;

$X_{ij}$  : household socio-economic characteristics ke-i village ke-j;

$Z_j$  : the existence of a permanent market in the village ke-j (dummy);

$\alpha, \beta$  : is an estimate of the parameter merupakan dugaan bagi parameter;

$\mu_{ij}$  : bias (error term).

The equation above was used to analyze the direct influence of social capital on the poverty of rural households. The estimation uses the method of ordinary least squares (OLS).

### IV. RESULT AND DISCUSSION

#### 4.1 Descriptive statistics

In general, the heads of rural households in Madiun Regency are on average around 64 years old, educated at the primary school level, more dominated by female sex (63 percent) and married (78 percent). The status of home ownership is generally self-owned (88 percent) and more than 50 percent have major jobs in the agricultural sector. The average number of household members is around 4 people with an average per capita household expenditure of Rp. 552.73 thousand per month. The average index of household social capital in rural areas is 52.18 (maximum 100). Social capital and its components are greater in rich households (Quintile 5) than poor households (Quintile 1). The dimensions of social capital that most play a role in poor households is mutual trust. The component that contributes most to trust is trust in religious leaders, community leaders and neighbors. In general, rural households still believe in entrusting children, borrowing and borrowing money/goods, and feeling safe leaving their homes to their neighbors. Rasa percayaterhadap tokoh masyarakat jugarelatif tinggi, di manaperantokoh masyarakat cukup besar dalam mendorong keterlibatan masyarakat untuk kegiatan gotong-royong

(kegiatan yang dilakukan secara bersama). The trust of poor households to community leaders is higher than that of rich households. Thus, there is a need for policies to increase the leadership capacity of community leaders in order to guide poor households, especially utilizing various economic resources to increase income.

#### 4.2 The Role of Social Capital on Poverty

Poverty variables use indicators of household per capita expenditure. To estimate the effect of social capital on poverty using a regression model with the Ordinary Least Squares (OLS) method. The Ordinary Least Squares (OLS) model used shows that household expenditure is a function of ownership of social capital and other exogenous factors, assuming that the economic benefits of social capital can be measured. Estimates of per capita household expenditure are carried out in two stages, first without social capital (Table 4.1) and with social capital (Table 4.2). The results of the estimation show that all the results of the estimates of the exogenous variable coefficients are significant in explaining the variation in changes in per capita household expenditure.

Human capital as measured by the school age of the head of the household has a positive and significant effect on household per capita expenditure, thus reducing poverty. An increase in one year of schooling of the head of the household will affect the increase in per capita household expenditure by 4.5 percent. These findings indicate that human capital in the old form of schooling can increase access to information and knowledge including the labor market, thus providing better employment opportunities, thereby increasing income. The size of the household is found to have an inverse relationship with household expenditure, so it has a positive relationship with being poor. The increase in one unit of household size measured by the number of household members influences the decrease in household per capita expenditure by 12.87 percent. This result shows that the number of household members greatly determines the number of household needs. The more members of the household, the more household needs that must be met (reducing household income). These findings indicate that larger size households tend to be poorer than smaller households, especially in rural areas (Anyanwu, 2014).

The age of the heads of rural households is positively related to household per capita expenditure. This shows an increase in the age of rural household heads related to increased income. In rural Indonesia, older heads of households have better access to productive assets than the younger ones in increasing household expenditures, but the age squares of household heads are negative. These findings indicate that income increases along with the increasing age of household heads. However, after exceeding a certain age limit (productive age limit), the increase in the age of the head of the household will reduce household expenditure as productivity decreases.

Interesting results show that agricultural households in rural areas have a negative and significant relationship to household expenditure. That is, non-agricultural sector households tend to be more prosperous than agricultural households. This finding indicates, even though in rural areas economic activity is highly dependent on agriculture (on farm), the non-agricultural sector remains an important source of income for rural households. To increase income, rural households need to be encouraged to have access to work in non-agriculture, especially those that are still related to the agricultural sector (off farm), for example the agricultural processing industry (Rustiadi, et al., 2009).

The following table shows results of estimation of rural per capita household expenditure without social capital:

**Table 4.1 The Results of Estimation of Per Capita Expenditure of Rural Household without Social Capital**

Independenvariable	Dependent Variables Logarithm Natural (Ln) Household Expenditures		
	Koef.	T	Sig.
School period (years)	0,0446***	53,53	0,000
Gender (1=male)	0,1535***	13,31	0,000
Age (year)	0,0204***	17,45	0,000
Quadratic age	-0,0002***	-17,63	0,000
Marital status (1 = married)	-0,1416***	-0,13	0,000
Household size	-0,1287***	-81,52	0,000
Business credit (1 = accept)	0,0885***	10,51	0,000
Main job (1 = agriculture)	-0,1066***	-19,99	0,000
House status (1 = self-owned)	-0,0841***	-10,44	0,000
Floor (m2)	0,0024***	36,52	0,000

Permanent market (1 = existing)	0,0444***	7,33	0,000
Constant	12,6880***	439,01	0,000
Observation	3.473		
Adjusted R <sup>2</sup>	26,12 percent		

Explanation: \*\*\* significant at the level of 1 percent

Source: analyzed from the People's Welfare Statistics of Madiun (Susenas 2018)

In addition, there are also interesting results, it is necessary for the next study on estimating the relationship of home ownership with household expenditure different from the hypothesis. There is an interesting phenomenon in the rural area of Madiun Regency, some households are shared by several families living in one house by using the kitchen together, so that per capita household expenditure tends to be relatively small. The use of one kitchen together (which results in a relatively small per capita household expenditure), therefore, the possibility of home ownership itself has a negative relationship to household per capita expenditure.

The existence of a permanent market in the village has a positive effect on the increase in per capita household expenditure in rural Madiun. This can be interpreted that the existence of a permanent market in rural areas provides opportunities for poor households to participate in buying and selling activities in the market. The participation of poor households in economic transactions in these markets can provide additional income in an effort to increase family income, so that the opportunity to get out of poverty is great.

The next analysis was by incorporating social capital variables into the model of estimating household per capita expenditure (Table 4.2). After entering the social capital variable in the estimation model equation, the results slightly increase the strength of exogenous variables in explaining variations in per capita household expenditure. This shows that social capital together with other variables gives a slight increase in explaining variations in rural per capita expenditure.

Table 4.2 shows, after entering the variable social capital in the estimation model of household per capita expenditure, it shows that most of the predictions of independent variables have a hypothesis that is consistent and consistent. However, the magnitude of the coefficients of several variables, for example school years and age has decreased.

**Table 4.2 The Results of Estimation Per Capita Expenditures of Rural Households with Social Capital**

Independenvariable	Dependent Variables Logarithm Natural (Ln) Household Expenditures		
	Koef.	T	Sig.
	Social capital index	0,0026***	12,78
School period (years)	0,0432***	52,21	0,0000
Gender (1 = male)	0,1478***	12,83	0,0000
Age (years)	0,0192***	16,37	0,0000
Quadratic age	-0,0002***	-16,61	0,0000
Marital status (1 = married)	-0,1470***	-13,51	0,0000
Household size	-0,1290***	-81,84	0,0000
Business credit (1 = accept)	0,0801***	9,50	0,0000
Main job (1 = agriculture)	-0,1101***	-20,99	0,0000
House status (1 = self-owned)	-0,0896***	-11,12	0,0000
Floor (m2)	0,0022***	34,52	0,0000
Permanent market (1 = existing)	0,0453***	7,51	0,0000
Constant	12,6151***	428,01	0,0000
Observation	3.473		
Adjusted R <sup>2</sup>	26,41 percent		

Explanation: \*\*\* significant at the level of 1 percent

Source: Analyzed from the People's Welfare Statistics of Madiun (Susenas 2018)

The estimation results in Table 4.2 show that the social capital index significantly affects the per capita expenditure of rural households. Each increase in one unit of social capital index influences the increase in rural



household income by 0.3 percent. These findings are consistent with previous research at the household micro level, which found that social capital has a positive and significant influence on income as measured by household per capita income.

However, the results above contradict the findings of Van Ha N. (2004) which shows that social capital measured by membership association does not have an impact on increasing household expenditure on certain communities. Abdelhak, et al. (2012) also found that social capital (households that received assistance) did not significantly affect household income. After further investigation, because households are in a community that tends to be homogeneous, poor and not found in social organizations in the community.

The results of the analysis above show that access to social capital is relevant and important in increasing household income (per capita expenditure) and poverty reduction. Therefore, poverty alleviation is not only related to meeting economic needs, but also expanding access to living resources facilitated by social capital.

## V. CONCLUSION

In general, poor households in rural areas have human capital, financial capital, and education which are relatively low compared to rich households. In addition, poor households also have limited access to business credit assistance. The dimension of social capital that contributes highest to the formation of social capital of poor households is trust, norms and mutual cooperation. Meanwhile, the dimensions of social capital that are still lacking are participation in social activities and social networks.

Social capital has a positive relationship to household per capita expenditure, thereby reducing poverty. This means that the accumulation of social capital can increase access to other capital (human capital, financial capital, and physical capital) related to increasing the income of poor households. The findings indicate that social capital plays an important role in poverty reduction. Poverty reduction policies are not only related to increasing economic capital, but also expanding access to social capital. Access to poor households on social capital can facilitate increased access to economic capital through information transmission, cooperation opportunities (expansion of social networks), and mutual trust.

Information transmission in increasing the availability of information for poor households and reducing costs to access economic resources, so that the opportunity to increase productivity and income. Availability of information, encourages participation of poor households in joint activities and increases mutual trust between rural households. Furthermore, mutual trust will make it easier for each group, both poor households and non-poor households, to cooperate with each other in productive activities to increase income, so that they can overcome rural poverty in Madiun.

## VI. ACKNOWLEDGEMENTS

On this occasion I would like to express my gratitude to the Government of Madiun Regency as the location of the study, as well as the supervisors who have guided well, so that this journal can be arranged.

This study has identified non-economic pathways for rural household poverty reduction, namely information transmission, cooperation opportunities, and increased mutual trust. These three pathways can increase access to human capital and financial capital, however, potentially have endogenous problems. The emergence of the problem of endogenous since social capital is an activity in leisure time (leisure), so the demand for leisure is expected to increase along with the increase in income. This study has not considered the problem of endogeneity, therefore, further research is expected to need to address the problem of endogeneity.

## REFERENCES

- [1] BPS. (2018). Statistik Kesejahteraan Rakyat Kabupaten Madiun 2018. Madiun: BPS.
- [2] Rustiadi, E. (2009). Perencanaan dan pengembangan wilayah. Jakarta: Yayasan Obor Indonesia.
- [3] Hayami, Y. (2009). Social capital, human capital and the community mechanism: Toward a conceptual framework for economists. *Journal of development Studies*, 45(1), 96-123.
- [4] Putnam, R. (1995). Bowling alone. *Journal of Democracy*, 6(1), 65-78.
- [5] Hassan & Birungi (2011). Social capital and poverty in Uganda. *Development Southern Africa*, 28(1), 19-37.
- [6] Abdelhak, S., Sulaiman, J., & Mohd, S. (2012). The role of assets in the enhancement of households' income: A study of poverty alleviation among rural communities of Kelantan and Terengganu. *Asian Social Science*, 8(12), 145-153.
- [7] Cook, S. (2006). Structural change, growth and poverty reduction in Asia: Pathways to inclusive development. *Development Policy Review*, 24(s1), s51-80.
- [8] Healy, K & Hampshire (2002). Social capital: A useful concept for social work. *Australian Social Work*, 55(3), 227-238.
- [9] Coleman, J.S (1998). Social capital in the creation of human capital. *American journal of sociology*, S95-S120.

- [10] Nasution, A. (2015). Peran modal sosial pengurangan kemiskinan rumah tangga perdesaan di Indonesia. Desertasi. Program Pascasarjana. IPB. Bogor.
- [11] Uslaner, E (2004). Trust and Social Bonds: Faith in others and policy outcomes reconsidered. *Political Research Quarterly*, 57(3), 501-507.
- [12] Collier, P. (2002). Modal Sosial dan Kemiskinan: Perspektif Mikroekonomi. *Perkembangan Modal Sosial*.
- [13] Ellis, F. (1998). Household strategies and rural livelihood diversification. *The journal of development studies*, 35(1), 1-38.
- [14] Grootaert (1999). Social capital, household welfare, and poverty in Indonesia. *World bank Policy Research Working paper* (2148).
- [15] Anyanwu, J.C (2014). Marital status, household size and poverty in Nigeria: Evidence from the 2009/2010 survey data. *African Development Review*, 118-137.
- [16] Van Ha N. (2004). The contribution of social capital to household welfare in a paper-recycling craft village in vietnam. *The Journal of Environment & Development*, 13(4), 371-399.