

# SOCIAL CAPITAL IDENTIFICATION AND ITS EFFECT ON CORN FARMING PRODUCTIVITY IN SIMALUNGUN DISTRICT

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## ABSTRACT

This study aims to identify and analyze the influence of social capital on farm productivity that is managed by corn farmers in ManikMaraja Village, Sidamanik District, Simalungun District. Social capital is the capital owned by farmers including social trust, the level of participation in community activities, cooperative networks and social norms that prevail in the midst of society which as a whole can be a bridge in the creation of mutually beneficial cooperation especially for farmers. The data used is primary data obtained from 50 sample farmers using quantitative linear regression analysis. The results showed that simultaneously, social capital significantly affected farm productivity. While partially, social capital that significantly affects farm productivity is participation and farmers' networks.

**Keywords:** social capital, productivity, farming

## A. INTRODUCTION

Miraza (2010) states that the goal of development is the realization of community welfare. In line with this opinion Soekirno (1985) stated that economic growth is one indicator of development success. Where the higher economic growth is usually the higher the welfare of society. To see the fluctuations in economic growth in a region in real terms from year to year is illustrated through the presentation of Gross Regional Domestic Product (GRDP) on consumer prices at regular intervals, where positive growth indicates an increase in the economy, on the contrary if negative means showing a decline (Sirojuzilam, 2015).

In calculating the Gross Regional Domestic Product of North Sumatra Province according to the business field, the sector (agriculture, forestry and fisheries) plays an important role by contributing 23.26% of the total Gross Regional Domestic Product. Facts on the ground show that the agricultural sector is indeed the largest contributor to the regional economy in Indonesia, especially North Sumatra, but the level of production, productivity and income of farmers is still very low.

The agricultural sector itself is also a very important sector in driving the national economy. The agricultural sector has always been the largest sector in employment, where the agricultural sector is able to absorb national labor which reaches 35.9%. This is much higher compared to other sectors. This indicates that the majority of the population in Indonesia work as farmers. The assumption which states that the agricultural sector has become a poverty slope is very ironic when compared to its position in the broader foreign exchange or economic

contributor and as the only food supply sector for the entire society at large. (BPS, 2016).

Rural communities generally depend on agriculture for their livelihoods. The fact that must be acknowledged that the agricultural sector in Indonesia is mostly farmers with a relatively small business scale. The small scale of agricultural business prevents farmers from increasing their income so that it is difficult to get out of poverty. Poverty that occurs to farmers because of the narrow area of farmland, is also caused by low productivity, limited infrastructure, low accessibility to capital, technology and information.

In UUD 1945 Pasal 33 stipulates that every Indonesian citizen has the right to a prosperous life. In fact, social welfare has not been achieved until now. Where even distribution of development leaves many problems and inequality.

This implies that the problem faced today is not how to improve economic growth, but how to make economic growth grow and be enjoyed fairly and equitably. If uneven economic growth will lead to inequality in the rate of economic growth and inequality in the level of income of the community which will ultimately have an impact on social and cultural changes in Indonesia, including in terms of social capital capacity.

Social capital is a series of processes of human relations that are supported by networks, social norms and beliefs that enable efficiency and effectiveness of coordination and cooperation for mutual benefit (Hasbullah, 2006). Whereas Putnam (1993) stated social capital is a feature of social organizations such as networks, social norms and beliefs that facilitate mutual coordination and

cooperation. Meanwhile, according to Fukuyama, social capital is the ability that arises from the existence of trust in a community. This is in line with the understanding of the World Bank (1999) for social capital.

Social capital in a community, organization, or group is an accumulation of individual capital which is then incorporated into collective capital that can be utilized by all members of the community. Relationship networks (relational / network) are a central point in the theory of social capital, which with that network will be able to provide collective capital ownership for members of the organization (Permadi, 2002)

Nations that have high social capital will tend to be more efficient and effective in carrying out various policies to prosper and advance the lives of their people and vice versa. Communities that have high social capital will open up the possibility of solving problems more easily. This makes it possible for people who are accustomed to living with a high sense of mutual trust (Putnam, 2000). With increased social capital, relations between communities can be productive as far as expected and mutual trust between one another.

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Especially in Indonesia, the World Bank reports that social capital has a contribution and has a positive influence on improving household welfare (Grootaert, 1999). This study shows a positive relationship between social capital and household welfare, where households with high social capital also have high per capita income, increased assets, increased savings, and more access to credit. Improving the welfare of the community comes from the willingness of the community, meaning that if the desire of the community to increase social capital is higher, it will have an impact on improving their welfare, as well as the willingness to improve family quality and family income.

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Fukuyama (2002) states that social capital that grows in a community based on shared norms will be very helpful in strengthening these community entities. Social capital is different from other forms of capital, one of which is the ability to create and transfer ideas, thoughts, and the like.

Putnam (2002) states that high social capital will have an impact on the high participation of civil society in various forms. The condition of social capital in rural areas is different from social capital in urban areas. This difference is characterized by rural communities life systems usually group on the basis of a family system different from urban communities who generally can take care of themselves without having to depend on others (Soekanto, 2013)

Within community groups there are of course applicable norms that maintain social relations between group members or fellow community members. With a large number of people participating in various kinds of participation, it will be easier to get access to information, which information will be more easily obtained if you have a large network (Putnam, 2000).

Social capital can be explained as a product of human relations with each other, especially intimate and consistent relationships. Social capital refers to networks, norms and trusts that have the potential for community productivity. Social capital is cumulative and increases by itself (Suharto 2010) Slightly different from Putnam (2000) Social capital is measured on the basis of (1) generalized trust, (2) norms, (3) reciprocity, and (4) networks. Where Generalized trust is the core of social capital. Generalized trust is an indication of the potential readiness of the community to cooperate with each other. Agree with this opinion (Uslainer, 1999). Trust with others is a key factor in shaping various types of participation. Such participation can be in the form of volunteerism in becoming a member of an association or groups

#### 1) Trust

That trust is maintained by norms that bind parties who interact (Salim, 2008). According to Lawang (2004) trust is "a relationship between two or more parties that contains hope that benefits one party or both parties through social interaction". Grootaert, et al (2004) stated that trust is the input of social capital because of the mutual trust between individuals is the basis for the establishment of social interaction that leads to closer social relations between community members. On the other hand, (Damsar, 2011) the quantity and quality of social interactions such as the length of social relations that have been established will increase trust between individuals. Everyone has

limitations in estimating something, to overcome these uncertainties, he must establish a relationship of trust with others

## 2) Participation

Mubyarto (in Ndraha, 1987) defines participation as a willingness to help the success of each program according to the ability of each person without means of sacrificing self-interest. Participation according to Soetrisno (1995) is a close collaboration between planning and the community in planning, carrying out conserving and developing the results of development achieved. Newton and Montero in Guillen, et al (2010) identified 5 types of social participation, namely social gatherings, helping behavior, voluntary participation in organizations, conventional political participation and political protest behavior. Whereas the form of participation consists of vertical participation & horizontal participation TaliziduhuNdraha (1987: 102). The factors that influence the level of participation According to Angell (in Ross, 1967) are: Age, Gender, Education, Employment and Income and Duration of Stay.

## 3) Network

One of the keys to success in building social capital lies in the ability of a group of people in an organization or association to involve themselves in a social network relationship (Hasbullah, 2006). The central idea of social capital is that social networks are a valuable asset (Field, 2003).

## 4. Social Norms

Simply stated, norms are guidelines or standards of behavior derived from values because it is based on abstract conceptions of what is good and what is bad (Soleman, 1984) It can be said that norms are concrete manifestations of guiding values which contains necessity, skill and a prohibition. (Damsar, 2011: 215). Norms are born because of social interaction in an individual group. Individual groups, or these communities need or play social arrangements that govern them to achieve the expected atmosphere. To achieve this, norms are established as guidelines that can be used.

## B. RESEARCH METHODS

### *Method of Determination of Research Areas*

This research was conducted in ManikMaraja Village, Sidamanik District, Simalungun Regency. Determination of the location of the research was carried out deliberately (purposive) with the consideration that Sidamanik District was one of the biggest corn producing districts in Simalungun Regency.

### *Sampling Method*

The population in this study were farmers who carried out corn farming in ManikMaraja Village, Sidamanik District, Simalungun Regency with 335 farmers. With a sample size of 15% precision, the number of samples in this study ranged from 50 farmers

### *Method of Collecting Data*

The data collected in this study consists of primary and secondary data. Primary data was obtained by using the field research method, namely going directly to the field and interviewing respondents using questionnaires, observations and documentation. While secondary data is obtained through literature studies such as the Central Statistics Agency, the Simalungun District Agriculture Service, the Office of ManikMaraja Village Head, and other supporting sources.

### *Data Analysis Method*

In this study the data analysis technique used to identify social capital that applies to corn farmers in ManikMaraja Village is a qualitative descriptive analysis that begins with reading, studying, and analyzing the data collected. After the data is collected, the data is formulated, processed and interpreted for temporary conclusions. Whereas to see the influence of the social capital on farm income is used the Multiple Linear Regression model with the following formula:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Where:

$$Y = \text{Produktivitas/ Productivity (Kw/Ha)}$$

$X_1$ =Kepercayaan ( Trust )

$X_2$ =Partisipasi (Participation )

$X_3$ =Jaringan( Network )

$X_4$ =Norma Sosial(Social Norms)

## C. RESULT AND DISCUSSION

### **Identification of Farmer's Social Capital**

#### a. Trust

Mutual trust between farmers in ManikMaraja Village towards other farmers is in the medium category with a percentage of 72%. The highest trust between farmers manifests in the trust of farmers to lend corn seeds to other farmers who need them when the planting season arrives. Where farmers who leave their previous crops to be used as seeds will provide the remainder of the use of seeds that are not used to be borrowed by other farmers and returned in the harvest season later with the reason better borrowed than damaged if stored for too long. Forms of trust that exist among farmers are also realized in terms of providing assistance to other farmers who are being overwritten by both moral and material assistance

even without being asked. In addition to this, the majority of the people of ManikMaraja Village, who are Moslems, strongly believe that when the call to prayer reigns, they will stop the farming activities for a while. So far, the trust in the midst of farmers and communities in ManikMaraja Village is well maintained. Where community leaders, religious leaders, village / nagori devices are still people who are trusted by farmers in the village.

**b. Participation**

The level of participation of farmers in each activity held by both village / nagori devices. extension agents, heads of farmer groups and other social activities are in the medium category with a percentage of 54%. The highest participation of farmers is shown in agricultural extension activities. Although there are times when the initiative of the meeting with the instructor comes from the farmer himself. The meeting with the extension staff is usually scheduled monthly and carried out in the saung that was established jointly by the farmers and is located close to the fields where the farmers do farming.

**Effect of Social Capital on Corn Farming Productivity**

From the results of data processing, the results of the influence of social capital on corn farming productivity are as follows:

**c. Network**

Relationships or networks between farmers and other supporting institutions, both at the village and sub-district levels are in the medium category with a percentage of 48%. Relations and networks carried out by farmers are still limited to joining farmer groups in order to facilitate access to assistance and subsidies from the government.

**d. Social Norms**

The harmony of the community, especially corn farmers in ManikMaraja Village, can be said to be well maintained and well developed, this is because each farmer still maintains the norms and rules that apply in the village. This is what causes infrequent disputes in addition to a strong sense of brotherhood and awareness of mutual respect and mutual reciprocity between them. This level of understanding and actualization of social norms is in the high category with a percentage of 46%.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.829 <sup>a</sup>	.688	.660	1.68277	.688	24.802	4	45	.000

a. Predictors: (Constant), X4, X1, X2, X3

Based on the results of data processing obtained that simultaneously there is a correlation between independent variables: trust (X<sub>1</sub>), participation (X<sub>2</sub>), network (X<sub>3</sub>) and social norms (X<sub>4</sub>) to the level of corn farming productivity in ManikMaraja Village of 82.90% with value the significance of F-Sig is 0.000

which means that the independent variable (X) has a very significant influence on the dependent variable (Y). While the value of R-Square shows that farm productivity can be explained by social capital of 68.80%. This shows that 31.20% of farm productivity is influenced by other variables.

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	20.929	5.339		3.920	.000	10.176	31.682
	X1	.277	.154	.215	1.801	.078	-.033	.587
	X2	.312	.100	.316	3.139	.003	.112	.513
	X3	.319	.107	.384	2.979	.005	.103	.534
	X4	.154	.139	.104	1.108	.274	-.126	.435

a. Dependent Variable: Y

From the results of data processing, multiple linear regression equation is obtained as follows:

$$Y = 20,929 + 0,277 X_1 + 0,312 X_2 + 0,319 X_3 + 0,154 X_4 + e$$

Partially testing of each variable of trust, participation, networks and social norms can be described as follows:

#### Effect of Trust on Farming Productivity

The trust variable ( $X_1$ ) has a regression coefficient of 0.277 with a significance value of t-sig of 0.078. This shows that  $H_0$  is accepted and  $H_1$  is rejected, meaning that the confidence variable has no significant effect on the productivity of corn farmers in ManikMaraja Village. Based on the field data, the farmers' trust categories are obtained as follows

No	Score	F	Percentage (%)	Category
1	39 - 42	4	8	High
2	35 - 38	36	72	Medium
3	31 - 34	10	20	Low
Total		50	100%	

From the table it can be seen that of the 50 farmers sampled, the highest trust scores held by farmers were in the range of 35-38 with a total sample (frequency) of 36 farmers and a percentage of 72%.

#### Effect of Participation on Farming Productivity

The participation variable ( $X_2$ ) has a regression coefficient of 0.312 with a significance value of t-sig of 0.003. This shows that  $H_1$  is accepted and  $H_0$  is rejected, meaning participation variables have a positive and significant effect on productivity. Where the higher the participation, the higher the productivity of corn farming in ManikMaraja Village. Based on the field data, the farmers participation category is obtained as follows:

No	Score	F	Percentage (%)	Category
1	39 - 42	7	14	High
2	35 - 38	27	54	Medium
3	31 - 34	16	32	Low
Total		50	100%	

From the table it can be seen that of the 50 farmers sampled, the highest participation score owned by farmers was in the range of 35-38 with a total sample (frequency) of 27 farmers and a percentage of 54%. In addition to being active in counseling activities, farmers in the village are also actively carrying out mutual cooperation activities both in supporting the smooth running of farming, such as cleaning the farm road to facilitate road access and smoothing in terms of transporting crops. The active participation of farmers is also manifested in society, such as at

weddings and festivals, so farmers as members of the community will help in the form of energy, thought and money. For farmers, activities like this are often used as a forum for gathering and conducting discussions or just sharing information about various things and no exception about farming. Of course that will greatly affect the management of the farm they are doing.

#### Effect of the Network on the Productivity of Farming

The network variable ( $X_3$ ) has a regression coefficient of 0.319 with a significance value of t-sig of 0.005. This shows that  $H_1$  is accepted and  $H_0$  is rejected, meaning that the farmer working network variable has a positive and significant effect on productivity. Where the higher the work network, the higher the productivity of corn farming in ManikMaraja Village. Based on the data in the field, the following categories of farmer networks are obtained:

No	Score	F	Percentage (%)	Category
1	35 - 40	6	12	High
2	30 - 34	24	48	Medium
3	24 - 29	20	40	Low
Total		50	100%	

From the table it can be seen that of the 50 farmers sampled, the highest network score owned by farmers is in the range of 30-34 with a total sample of 24 farmers and a percentage of 48%. The participation of farmers in farmer groups will help reduce the costs of farming that must be spent in each planting season. One of the benefits of membership in farmer groups is to get assistance in production inputs such as seeds, agricultural equipment and subsidized fertilizers. But sometimes farmers tend to be active only when they get help, this can be seen from the percentage level in the low category of 40%. From this situation it can be assumed that if activeness in organizing especially in farmer groups is higher and more solid, it will make it easier for farmers to open new networks both inside and outside the village.

#### Effect of Social Norms on Farming Productivity

The social norms variable ( $X_4$ ) has a regression coefficient of 0.154 with a significance value of t-sig of 0.274. This shows that  $H_0$  is accepted and  $H_1$  is rejected, meaning that social norm variables have no significant effect on the productivity of corn farmers in ManikMaraja Village. Based on field data,

the following categories of farmers' social norms were obtained:

No	Score	F	Percentage (%)	Category
1	33 - 36	23	46	High
2	30 - 32	22	44	Medium
3	27 - 29	5	10	Low
Total		50	100%	

From the table it can be seen that out of 50 farmers sampled, the highest social norms owned by farmers are in the range of 33-36 with a number of samples (frequency) of 23 farmers and a percentage of 46%.

#### D. CONCLUSION

Based on the discussion and analysis of the identification and influence of social capital on the productivity of corn farming, several conclusions can be drawn, including:

1. Each variable of social capital identified is in the midst of farmers' lives. Where the variables of trust ( $X_1$ ), participation ( $X_2$ ) and the farmers' work network ( $X_3$ ) are in the medium category with a number of percentages in a sequence of 72%, 54% and 48%. While social norm variables ( $X_4$ ) are in the high category with a percentage of 46%.
2. Simultaneously the social capital variables of trust ( $X_1$ ), participation ( $X_2$ ), network ( $X_3$ ) and social norms ( $X_4$ ) have a significant effect on farm productivity by 68.80%. Partially, only the participation variables ( $X_2$ ) and networks ( $X_3$ ) have significant influence while the trust variables ( $X_1$ ) and social norms ( $X_4$ ) do not significantly affect the productivity of corn farming in ManikMaraja Village.

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