The Influence of Social Capital on Vegetable Farmer Productivity (Case Study on a Balinese Farmer Group, Waterfall Village, Medan Marelan District, Medan City)

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ABSTRACT

This study aims to determine the description of the social capital of vegetable farmers in the Bali Farmers Group and to find out how social capital influence productivity of vegetable farmers in the Bali Farmers Group. The sampling method used purposive sampling with a sample of 32 vegetable farmers. The data collected is primary and secondary data. The data analysis method used is descriptive quantitative. Based on the results of the study, it is known that the description of the social capital of vegetable farmers in the Bali Farmers Group already exists and already attached to the farmers themselves the results of statistical tests for R2 variables of trust, participation, network and social norms have an influence of 55.1% on productivity variables while the remaining 44.9% is explained by other factors outside of this study.Then the variables of trust, participation, network and social norms together significantly affect the productivity of vegetable farmers in the Bali Farmer Group and furthermore that the variables of trust, participation have a significant positive effect, while the network and social norms variables have a significant negative effect.

Keywords: *Social capital, trust, participation, social norms and productivity of vegetable farmers*

INTRODUCTION

The agricultural sector in general is a sector that excels in terms of the national economy, both in terms of contribution to national income, then in the provision of employment (employment), and also as a contributor to foreign exchange in other words that the agricultural sector has a very important role in improving people's welfare. In 2014 the population of people in Indonesia was 252,020 million people and in 2020 as many as 270,020 million people (Central Bureau of Statistics, 2020). In this case, the population in Indonesia has increased significantly. The increase in the population in Indonesia has an impact on the agricultural sector so that it is necessary to provide the needs of the Indonesian population, especially for vegetable crops, which generally people in Indonesia consume vegetables. Quality agricultural commodities cannot be separated from the aspect of human resources engaged in the agricultural sector. The role of social capital can help increase productivity for farmers, but not many people admit that increasing human capital and social capital will increase productivity (Mubyarto, 1986 in Kholifah, 2016).

Table 1. Total Production of Indonesian Vegetable Crops in 2020

Province	Vegetable Crop Production		
	Mustard (Tons) 2020	Water spinach (Tons) 2020	Spinach (Tons) 2020
West Java	189,354	62.504	31,371
Central Java	87,597	29,108	10,469
East Java	77.716	29,064	14,036
North Sumatra	75.424	16,996	12,786

Source: Indonesian Central Statistics Agency, 2021

North Sumatra Province is the 4th highest province in the amount of vegetable production for mustard greens, kale and

spinach.Based on these data, it is known that North Sumatra Province has the potential for production of Chinese cabbage, kale, and spinach. This of course does not escape the role of farmers in increasing productivity.The high value of social capital owned by an area can help farmers in terms of production, distribution and innovation. Institutions that exist within the farmer's environment are an important aspect as a forum for farmers to develop their potential and increase their knowledge and insight. The institutions that can encourage farmer productivity are farmer groups. However, through unequal economic growth, it will result in inequality in the rate of economic growth at the regional level and inequality in the income level of citizens which in the end will also have an impact on social change, including in terms of social capital capacity.

The relationship between the role of social capital in the agricultural sector in encouraging economic growth can be seen from the process of production, distribution and innovation of agricultural products (Barki, 2017). Medan City is the capital city of North Sumatra Province, this city is also referred to as a Metropolitan City which is also the only city outside Java Island which is included in the top five most populous cities in Indonesia (Husni, 2022).

According to Fauzan (2019) Medan City is a relatively narrow city, thus indirectly the city of Medan has land that is not large enough coupled with a fairly dense population so that the role of farmers is needed in producing vegetables so that the community's needs for consumption are fulfilled. vegetables. Based on BPS data from the city of Medan (2021) that the city of Medan is not a city that has the potential for Vegetable Crop Production, but this city from 2019 to 2020 for the amount of Spinach, Kangkung and Mustard production has increased. This is because the City of Medan has an Agribusiness area for vegetable production centers, namely the Medan Marelan District supported by BPS data from Medan City (2018) that where lowland vegetables commodity mustard, kale, spinach are the largest and smallest planting area for total productivity. The presence of a concept of social capital in farmer groups is expected to help increase the number of people who increase so that it is necessary to provide the need for vegetable crops with limited land that is classified as narrow but to maintain the sustainability of increasing the amount of vegetable production requires the role of farmer groups so that this can build a relationship between each other and keep it together so that it continues to be together so that community participation in the local government grows and is used as a driver for every increase in productivity and helps solve challenges in the agricultural sector in farmer groups. The purpose of this study is to see the description of social capital and the effect of social capital on the productivity of Vegetable Farmers in the Bali Farmers Group.

MATERIAL AND METHODS

This research is a quantitative descriptive study, the time of the research is 28 June – 29 July 2022 with a research sample of 32 respondents. This research was conducted at the Bali Kleurahan Falls Farmers Group, Medan Marelan District, Medan City, using a Likert scale in its measurement. This research method uses multiple linear regression test.

RESULTS AND DISCUSSION

Social Capital Overview

Social capital is a series of processes of human relations that are supported by trust, participation, networks and social norms that enable efficiency, effectiveness, coordination and cooperation for mutual benefit. The existence of social capital for farmers in the Bali Farmer Group is very

beneficial, in addition to achieving common goals, it is also closer to each other in the farmer group. The problems that are often faced by members of farmer groups are during the rainy season, vegetables are susceptible to disease, plus there are several locations where farmers grow low, which makes the water easy to stagnate when it rains. at harvest.

Characteristics of Respondents

Characteristics of respondents are used to determine the diversity of respondents based on gender, age, number of dependents, land ownership, land area, farming experience and education. The characteristics of the respondents were carried out directly to the farmers in the Bali Farmers Group. This is expected to provide a fairly clear picture of the condition of the sample and its relation to the problems and objectives of this study

Table 2. Respondent Characteristics

No	Characteristics Respondent	Dominant	Amount	Percentage(%)
1	Gender	Man	30	93.75
2	Age	49-56	14	43.75
3	The number of dependents	>3	23	71.88
4	Land Ownership Status	Cultivator	16	50
5	Land area	0.12-016 ha	14	43.73
6	Experience	17-23	19	59.37
7	Education	JUNIOR HIGH SCHOOL	15	46.87

Source: Personally Processed Data, 2022

Productivity Overview

Farmers in the Bali Farmers Group on average have an area of 0.12 – 0.16 ha or the same as 3 to 4 rante or the total productivity is around 38 kw/ha. Farmers carry out harvesting activities once a month, this is due to the growing power of mustard greens, spinach and kale which can be harvested in 1 month DST (Planting Day). Mustard greens, kale and spinach have similarities in their growing period, which is 30 days or 1 month after planting, they can be harvested. In addition, in the Bali Farmers Group the number of vegetable farmers is dominated by male sex with as many as 30 farmers, then based on age, age 49- 56 is the highest number of ages with 14 farmers, and the highest land ownership status, namely cultivators as many as 16 vegetable farmers and the highest farming experience of 17-23 years with a total of 19 people. Factors from gender, age, land ownership status, and farming experience have a relationship with productivity where the male gender has a strong enough power in farming so that productivity also increases, then 49-56 years old is the highest age for farmers. vegetables in the Bali Farmer Group, age is very influential on farming activities, especially in physical ability and mindset so that age can affect productivity, besides land ownership status can affect productivity where land ownership status in Bali Farmers Group is cultivator,

Trust Picture

The trust contained in the Balinese Farmer Group is fellow farmer group members who trust each other and help each other when there is a problem. The relationship among members of farmer groups is very good because they have known each other for a long time so that it is like a family when they are asked for help such as time, energy and money, farmers are willing to lend according to their abilities. If one farmer is having an accident at harvest time, another farmer is willing to replace him for harvesting. The hope of farmers is that fellow members of farmer groups must be able to maintain the trust of other farmers so that they always have good relations. In addition, providing information to other farmers when information arrives regarding

agricultural problems so that other farmers do not miss the latest information and fellow farmers must share information with each other. Based on the conditions in the Balinese Farmer Group with the most dominant male gender, the relationship of trust between farmers is getting closer where the sense of trust in the male gender is very high. In addition, the age factor is also included in the trust in farmers because the age interval of 49-56 years is enough to be said to be mature in terms of trust, so trust is very close between the Balinese Farmer Group. Furthermore, related to the number of dependents in the family where the number of dependents is above 3 as many as 23 farmers, this makes it quite convincing that farmers have confidence in the internal family as in their children, this makes there very no doubt about trust among fellow farmers because in internal factors only farmers have trust towards his son. Land ownership status is also a factor in the picture of trust where the most dominant is land ownership status with cultivator status where cultivator land is land owned by people without having to pay for the land to be used and there are no certain requirements to use the land, which is based on trust between two parties that can not be planted at any time. In this case, the trust of farmers has been formed at the beginning of farming, namely in land clearing. The land area of the respondents is the highest, around 0.12 – 0.16 ha, where farmers believe they can and are able to plant, harvest and market vegetables. Farmers also believe that when there are obstacles to planting, harvesting and marketing their vegetables to other farmers. The experience of farming and the level of education of farmers also creates a sense of trust because the good experience is supported by the theory gained with practice that has been carried out for 17-23 years with the latest education at the junior high school level making this trust sustainable. harvesting to marketing vegetables. Farmers also believe that when there are obstacles to planting, harvesting and marketing their vegetables to other farmers. The experience of farming and the level of education of farmers also creates a sense of trust because good experience is supported by the theory gained by practice that has been carried out for 17-23 years with the latest education at the junior high school level making this sustainable for trust. harvesting to marketing vegetables. Farmers also believe that when there are obstacles to planting, harvesting and marketing their vegetables to other farmers. The experience of farming and the level of education of farmers also creates a sense of trust because good experience is supported by the theory gained by practice that has been carried out for 17-23 years with the latest education at the junior high school level making this sustainable for trust.

Participation Overview

The level of participation in the research area is quite high because if there are other farmers who want to develop their farms, other farmers support and give advice about good agricultural land. Then if there are farmers who are affected by the disaster, other farmers help to ease the burden on the farmer. When carrying out mutual cooperation, farmers must participate because it is for the common interest. The attitude of helping fellow farmers already exists in each group member so that this is the most important thing that exists in each farmer making the participation of farmer group members in the Bali Farmer Group is quite high. 16 ha and a long experience of 17-23 years with the dominant education of SMP make the spirit of farmer participation increase so that they can help each other regarding facilities and infrastructure between farmers with a common goal of increasing productivity results. Network Overview

Farmers who are members of farmer groups already know each other well and are like family because each member of the farmer group maintains good relations with each other. The reason farmers join farmer groups is to increase their production. In addition, to get more information about how to cultivate vegetable land in order to increase so that vegetable production is also increasing. The network description of the Bali Farmers Group can also be seen when one member of the farmer group is loosening the soil using the traditional method, namely by hoeing because the farmer does not have a tractor, then the farmer who has a tractor lends his tractor for soil loosening activities to farmers who do not have a tractor. have a tractor. In addition to network farming tools, there is involvement between farmers and local institutions such as perwiritan and the Mosque Prosperity Agency where the farmers live. The network relationship in the Balinese Farmer Group on the male gender binds the relationship by itself, the male gender who in fact becomes the leader so that his identity has been formed a leadership spirit that makes him have to know each other, plus at the age of 49-56 farmers already know enough people in their profession so that farmers can exchange ideas about technology and new ways of farming. The number of dependents is above 3, with cultivator's land ownership status, followed by the dominant farmer's land area of 0.12 - 0.16 ha. The Bali Farmers Group is enough to reflect that farmers have quite extensive connections, marked by the status of cultivator's land ownership with an area of 0.12 - 0.16 ha, so that farmers can plant and market their vegetable products. The increase in experience also increases the knowledge gained, this reflects the dominant experience of the Balinese Farmer Group, namely 17-23 years with the last education of junior high school, making mutual assistance between farmers very felt, the Bali Farmer Group believes when it has a fairly wide connection or network gives us the opportunity to get free facilities and infrastructure to support productivity.

Overview of Social Norms

Social norms found in Balinese farmer groups are rules that are made to be obeyed and followed by all members of the farmer group where these rules must be made clear and firm. Such as farmer groups have to pay dues when there is a quote. Then there are sanctions when making mistakes, sanctions can be light and heavy. Farmers will also get justice if they are slandered and farmer groups must be fair to all members of the farmer group who violate the rules of non-favouritism and make the right decision to impose sanctions. In addition, there is also the willingness of the community to help if other residents have difficulty this is an instinct from social norms when farmers experience difficulties, other farmers who help this also create a sense of togetherness, kinship arises naturally so as to create harmony between farmers. In the Bali Farmers Group, a picture that illustrates the form of social norms, namely farmers with male gender, age 49-56 years, number of dependents above 3, cultivator land ownership status, land area 0.12 - 0.16 ha, farming experience 17- 23 years old, and the last education level is junior high school, this coverage is the most dominant in making the norms that exist in the Balinese Farmer Group such as maintaining and caring for the goods that have been lent, paying the loan money that has been lent on time, mutual respect between group members and most importantly Bali Farmers Group always provides support among farmers, this is what makes social norms have an influence on the productivity of vegetable farmers.

Classic assumption test

Normality test

Normality test is a test carried out with the aim of assessing the distribution of data in a group of data or variables,
whether the distribution of the data is normally distributed or not. If significant > 0.05 then the data in the variable is normally distributed (Sugiyono, 2017). The normality of the data used in this study is the Kolmogrove-Smirnov Test which is said to be normally distributed.

Table 3. Normality and Multicolliniearity Test

Variables	normality test (sig.)	Multicollinieearity Test (VIF)	Glacier test (sig.)
Trust	0.148	4.712	0.399
Participation	0.200	2.280	0.469
Network	0.193	4.674	0.447
Social Norms	0.200	2.309	0.402
Productivity	0.060		

Multicollinearity Test

The multicollinearity assumption test is intended to prove or test whether there is a linear relationship between the independent variable (Trust, Participation. Network and Social Norms) in a multiple linear regression model. (VIF). If the resulting VIF is between 1-10, there is no multicollinearity. Based on the summary of table 3 above, it shows that the VIF value for each variable is smaller than 10, while the tolerance value of all independent variables is more than 0.10 which means that there is no correlation between the independent variables whose value is 90%, thus it can be concluded that there is no correlation between the independent variables. there are symptoms of multicollinearity (homocedasticity) between independent variables in the regression model.

Hereoscedasticity Test

Heteroscedasticity test aims to test whether in the regression model there is an inequality of variance from the residual of one observation to another. The method we use is the glacier test which was showed the significance of independent variables was more than 0.05 so it can be said that there is no c in the research data (heteroscedasticity assumption has been met).

Multi Linear Regression Test

Based on the summary of the table 4, the results of the multiple linear regression equation can be interpreted in the following multiple linear regression equation Y= 18.809 + 0.965X1 + 1.0665X2 – 0.908X3 – 0.601X4. it can be seen also that the results of testing the F test hypothesis (partial) show that all independent variables have a significant influence on the dependent variable (p value = 0.000). it means that each the independent variable has a significant effect on the dependent variable. Furthermore, it is explained that the value of the coefficient of determination (RSquare) the value of R square is 0.551, this shows that all independent or independent variables simultaneously have an influence of 55.1% on the Y variable (Vegetable Farmer Productivity), while the rest is equal to 44.9% is explained by other factors outside of this study.

Table 4. Multi Linear Regression Test

	Coefficient B	Tcount	Significant
Constant	18.809	1.974	0.059
Trust	0.965	2.890	0.008*
Participation	1.066	4.618	0.000*
Network	-0.908	-2.544	0.017*
Social norms	-0.601	-3.170	0.004*
F	8.283		0.000*
R	0.742		
R^2	0.551		

The Effect of Trust on the Productivity of Vegetable Farmers

Mutual trust between members in a group greatly determines cooperation between members which will ultimately determine the outcome of a group's output. This is in line with the opinion of Rydin and Pennington (2010) that trust between farmers is an important factor for collective action. More specifically, social trust with strong internal ties and ties is helpful in developing small-scale local initiatives (Woodhouse, 2006).

In this case, it is also supported by research by Kholifah (2016) that there is an influence of trust on farmer productivity in North Cilacap District, Cilacap Regency. This can be shown by the t-count value of 2.997, the regression coefficient (b1) of 0.438 and the significance value of 0.004. Because the significance value (p) < 0.05 and the regression coefficient has a positive value, it can be concluded that there is a positive effect of trust on farmer productivity in North Cilacap District, Cilacap Regency.

This is also in line with the results in the field that based on the results of the partial regression test, the effect of trust shows a regression coefficient of 0.965, at a level of 5% it can be seen that Tcount is 2.890 with a significant value of 0.008 because the regression coefficient is positive, it can be said that the more The higher the level of trust, the higher the productivity of vegetable farmers and vice versa, the lower the level of trust, the lower the productivity of vegetable farmers. Where in this study the significance value of trust (0.008) <0.05, which means that the trust variable has a significant influence on the productivity of vegetable farmers in the Bali Farmer Group. This is because farmers believe in the management of funds which will be used for the common good according to the existing agreement, this trust can be found when in a condition one farmer experiences obstacles to entrusting his harvest to another farmer to help market his vegetable crops. . The form of trust expressed by vegetable farmers in the Bali Farmers Group in the form of an action or activity such as helping farmers are willing to help other farmers without being given a reward. The existence of trust between fellow farmers and management will lead to cooperation so as to increase productivity. If farmers believe in an institution or program, farmers will easily work together in that institution or program to increase the productivity of vegetable farmers in the Bali Farmers Group so that farmers can have a good economy. Thus, there is a significant positive effect on the confidence variable on the productivity of vegetable farmers in the Bali Farmers Group.

Influence of Participation on Productivity of Vegetable Farmers

.Based on the partial test, the effect of participation shows a regression coefficient of 1, 0665. At a significant level of 5%, it can be seen that tcount is 4.618 with a significant value of 0.000, because the coefficient is positive and the significance value is <0.05, it can be said that the higher the level of farmer participation, the higher the productivity of vegetable farmers and vice versa, the higher the level of farmer participation will be. The lower the level of participation, the lower the productivity of vegetable farmers in the Bali Farmers Group. The application of the forms of participation that exist in the Bali Farmers Group, namely farmers are always present when asked to help other farmers, farmers routinely take part in activities carried out by farmer groups and counseling, farmers support other farmers to develop their agricultural land, farmers participate in helping when a disaster or disaster occurs in other farmer group members, then farmers are willing to help community activities related to infrastructure and facilities and lastly, farmers always cooperate in purchasing production facilities (fertilizer,

seeds, and medicines). Thus making farming activities more cost effective and relevant to the needs of various categories of farmers so that farmers can increase their productivity. Thus it can be said that participation has a significant positive effect on the productivity of vegetable farmers in the Bali Farmers Group.

The results of this study also strengthen the results of research conducted by Zita Kusuma Ariyanti (2008) with the title "The effect of social capital on labor productivity: a case study of PT. Pagilaran, Batang, Central Java" with the result that social participation has a significant effect on the labor productivity variable, the regression coefficient value (b1) is 0.00000171. At the 5% significance level, it can be seen that the t count is 2.834 with a significance value of 0.006, the regression coefficient has a positive value and a significance value (p) <0.05.

The Effect of Networks on Vegetable Farmers' Productivity

According to Coleman (1988) information is very important as a basis for action. But be aware that information is expensive and not free. Individuals who have a wider network will find it easier and cheaper to obtain information.

This is because based on field conditions that when other farmers do not have agricultural tools to loosen the soil (mini tractors) then farmers will borrow from farmers who have agricultural equipment but farmers will lend when farmers who have (mini tractors) have finished using mini tractors in terms of This is what makes the productivity of vegetable farmers decrease because borrowing makes them feel less comfortable in farming, such as using loan tools, they must be careful, use the tools slowly so that it takes time to make productivity also decrease. Thus, there is a significant negative effect on the network on the productivity of vegetable farmers in the Bali Farmers Group.

Effect of Social Norms on Productivity of Vegetable Farmers

The role of norms is closely related to the level of trust. This is shown by Arrow in Bjornskov and Meon (2010) which states that a higher level of trust will reduce transaction costs because having a high level of trust allows a person to comply with the norms that have been created. If the applicable norms are violated, transaction costs will increase and of course there will be costs that must be paid for violating these norms and productivity will decrease. This theory is in accordance with Sahnan's research (2019) that in this study only social norm variables had a significant effect on farmer productivity because the probability value was 0.009 < 0.05, the rest all other independent variables (trust, participation and network) had no significant effect on farmer productivity (Case Study in Serbajadi District, Serdang Bedagai District). This is also in line with this study that based on the results of the partial regression test, the effect of social capital shows a regression coefficient of -0.601, at a significance level of 5% it can be seen that tcount is -3.170 with a significance value of 0.004, because the coefficient value is negative, it can be concluded that It is said that the higher the level of social norms, the lower the level of productivity of vegetable farmers and vice versa, the lower the level of social norms of farmers, the higher the productivity of vegetable farmers. Social norms can regulate behavior through an individual's likelihood of punishment for disobedience and rewards for compliance (Schwartz and Howard, 1981). Why social norms do not have a positive influence is because farmers do not respect each other because they have known each other for a long time besides that farmers often violate the rules that have been set and apply, this

is what makes an impact on the productivity produced by each individual. Social norms can regulate behavior through an individual's likelihood of punishment for disobedience and rewards for compliance (Schwartz and Howard, 1981). Why social norms do not have a positive influence is because farmers do not respect each other because they have known each other for a long time besides that farmers often violate the rules that have been set and apply, this is what makes an impact on the productivity produced by each individual. Social norms can regulate behavior through an individual's likelihood of punishment for disobedience and rewards for compliance (Schwartz and Howard, 1981). Why social norms do not have a positive influence is because farmers do not respect each other because they have known each other for a long time besides that farmers often violate the rules that have been set and apply, this is what makes an impact on the productivity produced by each individual**.**

CONCLUSION

Based on research conducted at the Bali Farmers Group, Waterfall Village, Medan Marelan District, Medan City, it can be concluded that

1. Description of Social Capital in Bali Farmer Groups in terms of trust that farmers trust each other, then in terms of participation farmers always participate in an activity carried out, then in farmer networks establish good relations with each other and link to social norms that farmers have regulations applicable.
2. The effect of social capital on the productivity of vegetable farmers in the Bali Farmer Group that trust and participation have a significant positive effect on the productivity of the Bali Farmer Group's vegetable farmers, while conversely networks and social norms have a significant negative effect on the productivity of the Balinese vegetable farmer groups.

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