Journal of Indonesian Economy and Business
Volume 33, Number 1, 2018, 65 – 76

THE EFFECT OF SOCIAL CAPITAL ON WELFARE IN INDONESIA

Jumirah

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ABSTRACT

Studies into the impact of social capital on welfare are currently growing. However, studies for the case of the developing countries, including Indonesia, are still very rare. Therefore, this paper aims to analyse the impact of social capital on welfare in Indonesia. In this study, social capital is measured by three indicators, namely, trust, cooperativeness and the social network (a person's participation in community activities).Welfare is measured by household expenditure for food and non-food items. The data are acquired from the Indonesian Family Life Surveys for the years 2007 (IFLS4) and 2014 (IFLS5). This research uses instrumental variables to address the endogeneity issue on social networking (participation in community activities), which is a potential two-way causal relationship. It means that individuals with higher welfare (income) have a higher possibility of participating in community activities, since their participation in community activities is a leisure activity and the utilisation of leisure is higher for higher income people. Using the Instrumental Variables (IV) method and marital status as an instrument, the study found that social capital has a significant impact on welfare. An increased participation in community activities will improve ones welfare by 11.7 percent. Moreover, an increase of cooperativeness by one percent, would increase the welfare by 0.2 percent. On the other hand, trust has a negative relationship with welfare. It means that an increase in trust among individuals by one percent will cause household expenditure on food and non-food items to drop by 0.3 percent. It may imply that higher trust will cause lower transaction costs, which will reduce the expense of individuals buying food and non-food items. Since the coefficient of IV is larger than the coefficient in the OLS estimation, it indicates the absence of reversed causality. The results of this study have an implication for policy decision making which suggests that the policy decision makers should consider the impact of social capital on welfare and support the increase of individuals' participating in community activities.

Keywords: social capital, welfare, Instrumental Variable (IV), endogeneity, IFLS

JEL Classification: E24, I31, I38, B55

INTRODUCTION

Social welfare is one indicator of the success of a government in carrying out development. To improve social welfare and poverty reduction, the government has conducted various programmes in the form of the development of physical capital (infrastructure), credit assistance, and the development of human capital. For the process of economic development, social capital has a key role. Social capital can be in the form of trust, cooperativeness and/or networking. Trust can reduce transaction costs while cooperation can make economic transactions easier.

Coleman (1988) identifies three main elements as the pillars of social capital. First, the obligations and expectations arising from a sense of trust in the social environment. A sense of trust raises expectations and obligations in a social environment. Second, a healthy flow of information in the social structure which is important to encourage the development of community activities. Lastly, the norms that must be adhered to by the society, enforced with clear and effective sanctions.

Putnam (1995) states that the underlying idea of social capital is the interrelated value of norms and networks. This allows people who follow social networks to benefit from the networks that they follow. This may imply that social capital can be one of the inputs for economic development and improving the welfare of a country.

Fukuyama (2001) argues that cooperation is important to explain the differences in the patterns of national economic performance. Trust is the result of an exploration of the relationship between the behavior of believing in each other and cooperation. Economic transactions conducted with a person who is trusted can reduce the cost of the negotiations as well as reducing the risk of failure. Giving trust to each other will make economic transactions more efficient, as this will reduce the risks of contract failures, litigation, law enforcement and bureaucracy.

Wetterberg (2005) found that the greater the number of social ties that the members of society have, the greater the potential is to earn a lot more resources. For example, women's participation in the Family Welfare Program or *Program Kesejahteraan Keluarga (PKK)* can lead to a better chance of receiving government aid when it is available, compared to when women pursue such aid individually. This certainly can affect the welfare of households. Participation in other community organisations mandated by the government, such as *Dasawisma, Karang Taruna, Lembaga Masyarakat Desa (LMD)* and *Lembaga Pemberdayaan Masyarakat Desa (LPMD)*, is expected to have the same result: an increased chance of receiving government aid.

Wetterberg's findings are in line with Grootaert (1999), who found that there is a positive relationship between social capital and household welfare. He focuses on how participating in civic activities could affect household welfare and consumption. Households with high social capital tend to have higher per capita spending, more assets, more savings and better access to loans. Social capital is measured with 6 dimensions: the amount of participation in community activities, the heterogeneity index, attendance at community activities meetings, participation in decision making, the value of ones contribution (in labour), and the community's orientation.

Tampubolon (2007) examined the effects of a crisis, such as the Asian financial crisis and its relation to health distribution and access. Furthermore, he also assessed how social capital, owned both by the rich and the poor, bridges this

relationship. Using data from the Indonesian Family Life Survey (IFLS), he concludes that there is evidence that shows the advantages of participating in social community activities. Participation in such social activities has a positive effect in terms of a persons access to health facilities in times of crisis.

Gomez, Fuchs & Perdana (2006) reached different conclusions to Tampubolon (2007). Gomez et al. (2006) analysed whether participating in community activities, both formal and informal, could assist households in Indonesia to overcome the impacts of the 1998 economic crisis by using IFLS data from 1997 and 2000. He found that participation in civic activities did not help households relieve the shocks during the 1998 crisis. This was due to the fact that the community being studied had a limited capacity to secure spending during the crisis.

Nasution, Rustiadi, Juanda & Hadi (2014) found that social networks could help an individual to get more information. Other benefits of social networks include access to credit and access to other factors that increase household productivity. In an effort to increase productivity, less productive households will tend to interact with more productive households to add resources (e.g. information). In other words, more productive households can work together with less productive households to mutually increase their productivity.

According to Dasgupta and Serageldin (2001) on a microeconomic level, economists assume that social capital can improve the market mechanisms. On the other hand, at the macroeconomic level, economists pay attention to how macroeconomic performance is influenced by institutions, any legal frameworks and the role of the government. The economists assume that the per capita income gap between countries can not only be explained by the distribution of per capita productive resources, but also by institutions and other forms of social capital such as trust, cooperativeness and social networks.

Dasgupta and Serageldin (2001) state that the influence of social capital on the performance of the economy can be explained by several mechanisms, such as:

1. a high level of trust which reduces transaction costs;
2. social networks can serve as a risk sharing mechanism, where risks can be socially borne - not only borne by one group or individual;
3. an effective social capital network can help the process of disseminating information among its members, therefore, reducing the inequality of information
4. a social capital network can provide incentives to its members by allowing them to be able to solve collective problems more easily

In Indonesia, the forms of social capital are very diverse and include the formal institutions, such as the *LPMD, PKK, Karang Taruna, Dharmawanita*, and *Dasawisma* and the informal, such as an *arisan*. The interaction of human relationships in the form of trust, cooperativeness and social networks is suspected to have a role in welfare's improvement. Trust, although based on Putnam's (1995) definition of social capital is not part of the social capital, however it is a close proxy for one form of indicator for social capital. Cooperativeness, in the form of altruism (doing good for other people) is also a less direct measure of social capital, based on Putnam (1995). However, this altruism has a strong relationship with social connectedness that may influence an individual's welfare (Putnam, 1995). Furthermore, Dasgupta (2002) explains that people interact with each other and the interaction creates mutual benefits

for them. They have reached agreement with each other, for example, over exchanges of reprocity (I help you now when you need it, and I hope that you will help me when I need it). Dasgupta (2002) includes this mutual benefit as a form of cooperative venture.

However, the existing research has not measured the magnitude of the effect of social capital on welfare in Indonesia, which has different socio-economic characteristcs to the other countries in previous studies.Therefore, this research was conducted to find out whether social capital consisting of trust, cooperativeness and social networks has an impact on welfare in Indonesia.

DATA AND METHOD

1. Data

The data used in this research is obtained from the RAND Corporation (www.rand.org/ labor/FLS/IFLS). This research was conducted in Indonesia by utilising data from the Indonesian Family Life Surveys (IFLS) of 2007 (IFLS4) and 2014 (IFLS5). The IFLS is a national survey that provides a rich dataset at three levels (individual, household and communities). The survey is a representation of more than 80 percent of Indonesia's population.

The dependent variable in this research is household welfare, which is derived from the data on the total expenditure for food and non-food items. Meanwhile, social capital is measured by three indicators, namely, the trust index, the cooperativeness index and social networks. The following list explains each of these three indicators.

1. Trust index

The list of questions for the measurement variable trust is contained in Table 1.

Each of the indicators in the variable trust is summed to create the index. Calculation of the index refers to Nasution et al. (2014).

$$\text{Social Capital Index} = \frac{(score\ observed - lowest\ scoring)}{(highest\ score - lowest\ scoring)} \times 100 \quad (1)$$

Table 1. List of Trust question

Code	Question
TR02	In this village I have to be alert or someone is likely to take advantage of me.
TR03	Taking into account the diversity of ethnicities in the village, I trust people with the same ethnicity as mine more.
TR04	I would be willing to leave my children with my neighbors for a few hours if I cannot bring my children with along.
TR05	I would be willing to ask my neighbors to look after their house if I leave for a few days?
TR06	How safe do you consider this village?
TR07	In most parts of the village, is it safe for you to walk alone at night?
TR23	Taking into account the diversity of religions in the village, I trust people with thesame religion as mine more.
TR24	How do you feel if someone with different faith from you lives in your village?
TR25	How do you feel if someone with different faith from you lives in your neighborhood?
TR26	How do you feel if someone with different faith from you rent a room from you?

2. Cooperativeness variable

The cooperativeness variable is obtained from the question "I am willing to help people in this village if they need it" and its original responses which are 1 (strongly agree), 2 (agree), 3 (disagree), 4 (strongly disagree). Furthermore, to accommodate the calculation of the index, the answers for this question will be indexed in reverse; so, "strongly agree" will be coded as 4 while "strongly disagree" will be coded as 1.

3. Social networks variable

The social networks variable is obtained from the question "During the last 12 months did you participate in or use (community activities?)". Again, to accommodate the calculation of the index the answer "yes" will be coded as one and the answer "no" will be coded 0, as opposed to the original coding which was the opposite.

The control variables used in this research consist of the number of years in education, age of the individual, a dummy for gender which is equal to one if the individual is male and 0 otherwise, household size (number of household members), a dummy for urban that is equal to one if the individual lives in an urban area and 0 otherwise and a dummy for Java that is equal to one if the individual lives in Java and 0 otherwise. The dummy variables urban and Java are included in the model as control variables for the development of differences between urban and rural areas and between Java and the other islands.

2. Method

This research uses pooled cross sectional data, which is the data from the IFLS 2007 (IFLS4) and IFLS 2014 (IFLS5). The model used in this study refers to the model used by Grootaert (1999), in which the model is:

$$LogE_i = \alpha + \beta SC_i + \gamma HC_i + \sum X_i + Z_i + u_i \quad (2)$$

where:

LnE_i = household expenditure (as a logarithm)
SC_i = social capital measured by three indicators, namely, the trust index, cooperativeness index and social network (number of participations in programmes/community activities)
HC_i = human capital (years in education)
X_i = household characteristics (age (years), male (gender dummy), household size (number of family members))
Zi = residential characteristics (urban (dummy), Java (dummy))
u_i = error term

Grootaert (1999), in his research, suggested that social capital and welfare have a two-way relationship. Social capital allegedly is endogenous social networking (participating in programmes/community activities); as is the case with capital, social capital is also a consumer good. Participating in programmes/ community activities provides leisure, which is a luxury item. The demand for leisure by individuals increases as his/her revenue increases. This shows that the higher a person's income gets, then it is more likely that this person will participate in the programme/ activity. This led to a reverse causality i.e. welfare affects social capital, instead of social capital affecting welfare. If this is the case, the coefficient on the social capital will be biased.

An endogenity test can be done by inserting the values of the residual endogenous variables into the model in the initial regression (Cameron & Trivedi, 2005). In this study, the test has been done using a Wu-Hausman test. The results show that the p value is 0.0372, which is smaller than α = 5%. It means that H_0 is rejected, meaning that there is endogeneity, where H_0 is the variable that is considered exogenous. From this result, it can be said that the variable of

social networking (participating in programme/ community activities) is endogenous.

One way to address the problem of endogeneity is the use of Variable Instruments (VI) or the smallest squares estimation of the two-stage method (Two Stage Least Square or 2SLS). Nasution et al. (2014) addressed the endogeneity problem by the variable instruments method to isolate the impact of endogenous social capital against the households' spending. In this paper, the instruments that are used should be correlated with social capital, but not correlated with household spending. In this case, the model of social capital can be defined as follows:

$$SC_i = \gamma + \delta_1 W_i + \delta_2 HC_i + \delta_3 X_i + \delta_4 Z_i + u_i \quad (3)$$

where Wi is the variable instruments, γ and δ_1 are the parameters being estimated and u_i is the residual. In this study, marital status is choosen as an instrument. A persons marital status may influence them to participate in the community's activities, meanwhile it will not influence his/her welfare. The estimated variable of social capital will be included in the welfare equation (2) to estimate the factors that may influence the welfare.

RESULT

1. Descriptive statistics

This research was conducted in Indonesia by utilising data from the Indonesian Family Life Surveys (IFLS) from 2007 (IFLS4) and 2014 (IFLS5). The sample size is 24,175 individuals. Table 2 shows the summary of the sample.

2. Regression result

The Instrumental Variable (IV) can be used to solve the problem of endogeneity of one or more independent variables. The instrumental variable can be used to get a consistent estimator from the variables that are ignored. The instrumental variable method can also be used to troubleshoot errors in variables with certain assumptions (Wooldridge, 2010).

The instrumental variable used in this study is marital status. The variable validity test is carried out to prove that the instrumental variable does influence the endogenous variables, but not the dependent variable. Sobal and Hanson (2010) found that marital status will affect someone doing physical activities such as jogging, or gardening, as well as taking part in community activities. Someone who is married will have more energy to do physical activities,

Table 2. Summary of Descriptive Statistics

Variable	Observation	Mean	Standard Dev.	Minimal	Maximal
Expenditure	24,175	2,241,402	2,799,222	103,200	84,500,000
Participation	24,175	1,710	1,553	0	10
Trust Index	24,175	52,332	8,253	13,333	90
Cooperativeness Index	24,175	73,795	14,366	0	100
Education	24,175	8,307	3,963	0	18
Age	24,175	38,253	12,835	15	89
Male	24,175	0.464	0.498	0	1
HHsize	24,175	4.732	1.724	2	15
Java	24,175	0.576	0.494	0	1
Urban	24,175	0.531	0.499	0	1
Marital status	24,175	0.855	0.352	0	1

Source: Authors' calculation based on data from IFLS4 (2007) and 5 (2014).

compared to an unmarried person. The validity test carried out in this study proved that marital status has an effect on the endogenous variable, i.e. networking (participation in community activities), but it does not have an effect on the dependent variable i.e. household spending. Tables 3 and 4 show the results.

Table 3. Validity Test of Instrumental Variable

Ln Exp	coefficient	T	p>(t)
Marital status	0.013	0.85	0.397
Constant	14.250***	1,033.20	0.000
Prob > F = 0.397			

****** significant at 1% level, ** significant at 5% level, * significant at 10% level
Source: Authors' calculation based on data from IFLS4 (2007) and 5 (2014)

Table 4. Validity Test of Instrumental Variable

Participation	Coefficient	T	p>(t)
Marital status	0.462***	16.37	0.000
Constant	1.315***	50.41	0.000
Prob > F = 0.0000			

*** significant at 1% level, ** significant at 5% level, * significant at 10% level
Source: Authors' calculation based on data from IFLS4 (2007) and 5 (2014)

With the value of p being 0.397 (see Table 3), it can be concluded that marital status has no siginificant effect on household spending. Moreover, with a p value of 0.000 (see Table 4), it can also be concluded that marital status significantly influences people's participation. Based on this result, it can be said that marital status is a valid instrumental variable.

DISCUSSION

1. The Impact of Social Capital on Welfare

In this study, welfare is measured by a household's expenditure on food and non-food items. This can be affected by several factors. Table 5 shows the results of the estimation model of Equation 2.2.

Table 5 Estimation with Instrumental Variable

Variable	First stage regression	IV
Trust Index	-0.002**	-0.003***
Cooperativeness Index	0.009***	0.002***
Years in Education	0.054***	0.055***
Age	0.019***	0.004***
Male	0.721***	-0.127***
Household size	-0.024***	0.105***
Urban	-0.193***	0.291***
Java	0.319***	-0.125***
Participation		0.117***
Marital status	0.334***	
Constant	-0.632***	12.954***
Observation	24,175	24,175
R^2	0.1296	0.1693
Adjusted R^2	0.1292	

*** significant at 1% level, ** significant at 5% level, * significant at 10% level
Source: Authors' calculation based on data from IFLS4 (2007) and 5 (2014)

In the first-stage regression, the value of the F test for excluded instruments is 155.05, which is larger than Stock-Yogo's critical values for all levels of significance. Therefore, it can be said that the excluded instruments have a strong correlation to the endogenous variables. To see whether the parameters can be identified properly, the underidentification test (Mayoral, 2015) is used. Based on the test, with a p-value of 0.0000, which is smaller than $\alpha = 5\%$, it can be said that the parameters have been properly identified and the marital status variable is a good instrument. This supports the results of the validity test for the instrument that is presented in Table 3.

Table 6 shows the regression results. The regression is also conducted using the Ordinary Least Square (OLS) method as a comparison. This table shows that the value of the coefficient of participation from the IV method is larger than the value of the participation coefficient

from the OLS, which is 0.117 compared to 0.033 respectively. This may indicate that there is no reverse causality relationship (Adepoju and Oni, 2012). Therefore, the IV model is more appropriate than the OLS model for the case in this paper.

This is in line with research conducted by Grootaert (1999) who found that the value of the coefficient of the social capital index, using the instrumental variable method, is higher than the coefficient using the OLS models. This indicates that social capital was an exogenous determinant of household welfare. In a case of reverse causality, the value of the coefficient of the social capital index in a 2SLS regression should be lower than the value of the OLS coefficient. Narayan and Pritchett (1999) also found the same result. They found that the estimation value of the IV method is greater than that of OLS. All this supports the result of the study in this paper, that social capital is the exogenous determinant of income.

Table 6. Regression Results – OLS and IV methods

Variable	OLS	IV
Participation	0.033***	0.117***
Trust Index	-0.004***	-0.003***
Cooperativeness index	0.003***	0.002***
Education	0.059***	0.055***
Age	0.006***	0.004***
Male	-0.065***	-0.127***
Household size	0.102***	0.105***
Urban	0.273***	0.291***
Java	-0.098***	-0.125***
Constant	12.920***	12.954***
Observation	24,175	24,175
R^2	0.1919	0.1693
Adjusted R^2	0.1916	

*** significant at 1% level, ** significant at 5% level, * significant at 10% level

Source: Authors' calculation based on data from IFLS4 (2007) and 5 (2014)

1.1. Social Network

Social networks, proxied by the participation in community activities, have a significant positive influence towards welfare. Based on the IV method, an increase in participation by one unit will improve welfare by 11.7 percent, if the other factors remain fixed. This result is larger when compared to the results from the OLS regression, where an increase in participation by one unit will improve welfare by 3.3 percent, after controlling for other factors.

Participation in community activities is proved to be positively correlated to welfare. These activities include community meetings, *dasa wisma, LMD/LKMD*, *kerja bakti*, village improvement programmes, youth group activities, religious activities, *siskamling, posyandu,* and *PKK*. This happens because individuals who participate more frequently in their community's activities will have greater opportunities to gain access to information, such as job vacancies, government assistance and access to credit that can be used to enhance the individual's welfare.

These results are in line with Wetterberg (2005) who concluded that individuals who had more social ties will have easier access to resources compared to those who had less social ties. The impact of having a wide range of social ties can be the ability to access resources. In addition, the role of organisations which were formed based on the mandate from the government can significantly help the communities to effectively access government assistance.

1.2. Cooperativeness

Cooperativeness is one of the indicators of social capital that is measured by the willingness of individuals to cooperate with others. The study found that after controlling for other factors, an increase in cooperation by one unit would increase welfare by 0.2 percent.

Fukuyama (2001) argued that cooperation in very important for explaining the differences in the patterns of economic performance, since cooperation may lead to easier economic transactions. This cooperation is also supported by a special cultural behaviour, trust, that finally may support improvements in the relationship between cooperation and trust, which then leads to improvements in people's welfare.

1.3. Trust

Trust is measured by the level of trust an individual has in the other individuals in his/her society. Trust is measured using the index in Equation 2.1. The study found that an increase in trust by one unit will cause household expenditure for food and non-food items to drop by 0.3 percent. This result supports the framework described earlier, where the greater trust is, the lower any transaction cost is.

According to Coleman (1988), a sense of trust can reduce risk in economic activities. The higher the level of trust there is in someone, then the risk of them failing to repay what is owed can be reduced. People prefer to trade with people who are known and trusted, as this will reduce the risk of failure in the transaction.

Besides that, trust can reduce negotiation costs. Economic transactions made by people who trust each other have lower negotiation costs as well as reduced risks of failure. Trust makes economic transactions more efficient because it will reduce the risk of failure of the contract, litigation, law enforcement and bureaucracy (Fukuyama, 2001).

1.4. Human Capital (years in education)

Human capital is measured by the number of years spent in education by the individuals. The relationship between educational levels and participation in community activities can be seen in Table 7.

Table 7 shows that participation in community activities is dominated by individuals who have 6 years of education, which is equivalent to elementary school graduates. This is followed by individuals who have 10-12 years of education, equivalent to high school graduates. This indicates that individuals with low levels of education participate more frequently in community activities than more educated people do. It may also suggest that individuals with less education gain more information through their participation (that can be treated as informal schooling) than more educated individuals do.

This result is supported by Beard (2005) who found that women who have a low level of education and a low level of literacy are more likely to participate in community activities. Meanwhile, men who have a higher education tend to reduce their participation in community activities.

Table 7. Years in Education and Participation

Yearsof Education	amount	percentage
≤ 6 years	10,363	42.87
7 – 9	5,165	21.37
10 – 12	6,596	27.28
≥ 13	2,051	8.48
Amount	24,175	100

Source: Authors' calculation based on data from IFLS4 (2007) and 5 (2014)

However, although the data in this study shows that individuals with lower education levels participate more that those who are better educated do, this study found that an increase in the years of schooling by one year will improve welfare by 5.5 percent, ceteris paribus. It may indicate that information gained from formal education plays a greater role in affecting people's welfare than that of information learnt from informal education, such as from participating in community organisations. This result is in line with Adepoju and Oni (2012) who found that the higher a person's level of

education is, the higher their welfare is. Higher levels of education will give individuals a greater chance of getting a job or selecting their job.

1.5. Households' Characteristics

This study found that an increase in age by one year will increase the spending by 0.4 percent, after controlling for other factors. This is because during their productive years, people will allocate their resources more optimally. This result is in line with Nasution et al. (2014) where the increase in an individual's age will improve their welfare. People will have more energy to work and will optimise their resource better during their productive years.

Moreover, this study found that males have a lower expenditure, by 12.7 percent compared to women, ceteris paribus. It is supported in a study by Pangaribowo (2012) who found that women had a positive influence on expenses. Women play a role in the decisions on expenditure for food ingredients that are rich in nutrients, such as meat, fish and milk. In other words women play an important role, in terms of the distribution of their household's spending, in improving the well-being of the family.

Furthermore, this study found that an increase in the number of family members by one person will cause the expenditure to increase by 10.5 percent, the other factors remaining constant. This indicates that any increase in the number of family members, will increase expenditure.

For the regional characteristics, the study found that people who live in urban areas have 29.1 percent better welfare, compared to those who live in the countryside. This finding is in line with the study by Nasution et al. (2014) who found that someone who lives close to a market will have higher welfare compared to those who live in a place where there is no market in their vicinity. It is easier for someone who lives near a market to gain access to resources compared to those who live elsewhere. This study also concludes that the people who stay in urban areas have higher welfare compared to those that stay in rural areas, due to the ease of access to resources in urban areas.

Another regional characteristic used in this study is whether an individual lives in Java or not. People who live in Java spend 12.5 percent less for food and non-food items than those who stay on the other islands outside Java. From the perspective of the average value of spending, it is clear that the average spending for food and non-food items in Java is lower compared to the other regions outside of Java. This can be seen in Table 8. It may be because the prices for food and non-food goods and services outside Java are relatively higher than they are in Java, due to such items and services being less available and accessible outside Java.

Table 8. Mean Expenditure

Region	Mean Expenditure (rupiah)
Java	2,170,345
Outside Java	2,338,117

Source: Authors' calculation based on data from IFLS4 (2007) and 5 (2014)

2. Robustness Model

In this study, we test the robustness of the model by including the interaction term in the model. The addition of an interaction term in the regression will allow a better understanding of the relationship between the variables in the model and check the robustness of the first model. The result of the interaction term can be seen in Table 9.

From Table 9 it can be seen that the coefficient of all the variables in the model with the interaction term is not much different from the one found by estimation without an interaction term, both in its direction and in the

magnitude of the coefficients. It indicates that the estimation without an interaction term is robust.

Table 9. Interaction term

Variable	IV	IV with *interaction term*
Participation	0.117***	0.232**
Trust Index	-0.003***	-0.003***
Cooperativeness index	0.002***	0.002***
Education	0.055***	0.054***
Age	0.004***	0.004***
Male	-0.127***	-0.151***
Household size	0.105***	0.104***
Urban	0.291***	0.625***
Java	-0.125***	-0.121***
Constant	12.954***	12.773***
Participation*urban		-0.194**
Observation	24,175	24,175
R^2	0.1693	0.1356

*** significant at 1% level, ** significant at 5% level, * significant at 10% level

Source: Authors' calculation based on data from IFLS4 (2007) and 5 (2014)

In general, the results of the model that includes the interaction term are similar to the results of the model without an interaction term, in terms of the signs and the significance of the coefficients being estimated. Specifically, the value of the interaction term between urban living and participation is -0.194. This shows that the participation of individuals who live in urban areas is lower compared to individuals who live in rural areas by 19.4 percent. It implies that community activities have a more effective impact on welfare in rural area. This finding is supported by the study of Krishna and Shrader (1999), who found that social capital levels were significantly higher in rural areas compared to urban areas. Communities with high levels of social capital in rural areas are more likely to receive help from Non Government Organisations (NGO) and nearly four times more likely to receive help from the government, which may imply an increase in their welfare.

CONCLUSION

Studies into the impact of social capital on welfare are currently growing. However, studies in the case of developing countries, including Indonesia, are still very rare. Therefore, this paper aims to analyse the impact of social capital on welfare in Indonesia. The study found that from the perspective of social networking indicators, social capital has a significantly positive influence on households' welfare. Individuals who take part in more community activities will have a higher level of welfare. In terms of cooperativeness, the more a person is willing to work together with another person, the higher the person's welfare is. Subsequently, social capital in the form of trust has a significant negative influence against expenditure for food and non-food items. This indicates that social capital in the form of trust can reduce the transaction costs, which is indicated by a reduction in the expenditure on food and non-food items. Trust can reduce other transaction costs, such as the cost of negotiations. An increase in a person's participation in community activities by one unit will increase welfare by 11.7 percent, after controlling for other factors. An increase in cooperation by one unit will increase welfare by about 0.2 percent and an increase in trust of one unit will cause household expenditure for food and non-food items to drop by about 0.3 percent, ceteris paribus.

Based on the results of this research, social capital has a significant influence towards welfare. It may imply that participating in community activities is able to improve people's welfare, therefore, policy decision makers are expected to play an important role by encouraging participation in community

activities, to improve the welfare and development of the society.

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