




Household Participations and Sustainable Development Programs: Social Impact of Government Assistance in Indonesia



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ABSTRACT

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This study aims to evaluate the impact of government funding on household members' participation in social activities. The data used in this study comes from the publication of the Indonesia Family Life Survey (IFLS) which contains information on aspects of household life in Indonesia, including social activities. The main problem in household economic analysis is too many determinants of social activity at both the household and community levels. As a result, there are many confounding factors at the household and community level. Therefore, to isolate the effect of un-observed heterogeneity at the household level, this study uses a First-Difference approach. Meanwhile, to overcome the possibility of bias at the community level, this study uses a community-level Fixed-Effect approach. The combination of First Difference (FD) and Fixed Effect (FE) to isolate various external determinants in the model is an important innovation in this research. The results of the study show that households that receive government assistance are more involved in social activities. For this reason, appropriate government assistance can be used to increase community participation in development. This research in the future can still be developed by expanding the scope of social activities analyzed.

1. INTRODUCTION

One of the features that plays an important role in development is the social capital owned by a community. Experts have realized the importance of social capital in the formation of civil society [1]. The existence of social capital is also important not only as a support for government effectiveness, but also contributes to income growth and other economic indicators [2]. Several researchers have also tested empirically the impact of social capital on the economic performance of development.

The importance of social capital as a basic element in development should be one of the considerations in implementing government programs. As the implementation of government programs in poverty alleviation began to become rampant, attention to the social effects of the program began to increase. Babajanian [3] examines the social impact of implementing government programs in the form of providing cash assistance in several African countries. The results of his study show that cash transfers prevent household members from moving to another place, maintain family and community ties and cause household members to become more active in social actions and ceremonial events in the community. Public transfers also have positive implications for gender equality and the expansion of opportunities for girls to attend school.

So far, empirical studies related to the social impact of public transfers often face serious estimation problems. First, a fairly broad definition of social capital makes it difficult to obtain general indicators that are representative enough to

represent the concept of social capital. One of the indicators used is individual or household activities in community activities. In a society with varying intensity of social activities, the types of social activities carried out will certainly vary widely and are unique between communities.

Another problem that is also very vital is the decision of household members to engage in social activities is also based on factors that are difficult to measure empirically. Social activities are more influenced by individual awareness of the responsibility to maintain environmental safety and comfort. There are no legal sanctions that bind a person to be involved in social activities. Households with a high level of social awareness will be actively involved in community activities. On the other hand, relatively selfish households tend to avoid social activities.

These two problems in the empirical study can be overcome if there is data in households that are rich enough in information on the involvement of household members in various community activities. In addition, the household data also has a panel structure which is indispensable for applying relevant methods to control for important unobservable factors. Types of micro data with a panel structure that have complete information about community activities are available in the publication of the Indonesia Family Life Survey (IFLS). In IFLS-4 (2007), data on government transfer programs such as Direct Cash Transfer Assistance and Rice for Poor Households program are also available.

The main objective of this research is to examine the impact of government assistance on social activities. If the hypothesis of a positive relationship between government assistance and

social activities can be proven, then it can be said that government assistance gets a positive response from the community. Thus, it is hoped that the development carried out will be sustainable.

The availability of household level micro data allows this research to be carried out with two important contributions. First, conduct an analysis of the social impact of public transfers using several indicators of community participation more specifically. Second, using an appropriate methodology to control for unobserved household characteristics that are closely related to community participation as well as whether or not government assistance is available. As an illustration, households that tend to be selfish or individualistic tend not to be active in community activities. The household will also without feeling guilty receive government assistance which should not be their right. Without controlling for the unobserved heterogeneity, the estimated regression coefficients between program variables and various indicators of community participation are potentially biased.

To be able to control for the effect of unobserved factors at the household level, a household panel data is used that is representative enough to provide information about community participation activities. The data panel used is the result of a survey by the Indonesia Family Life Survey (IFLS) published in 2000 and 2007. The 2007 IFLS publication includes information on government transfer programs in the form of Cash Transfer Assistance (CTA) which is a variable of interest in this study.

The combination of First Difference (FD) and Fixed Effect (FE) to isolate various external determinants in the model is an important innovation in this research. This innovative approach can be implemented because IFLS provides panel data with very high re-contact. In addition, the existing data structure has multilevel analysis which makes it possible to control un-observed variables at various levels.

Several important findings were obtained in this study. Without controlling for the unobserved factor at the household level, there are indications that CTA has a negative relationship with several types of community activities such as regular community meetings and cooperative activities. If the unobserved factor is controlled (with First Difference), then there is strong evidence that households that received CTA were relatively more active in village cooperative activities. In other words, there is a positive relationship between public transfers and the participation of household members in social activities.

2. LITERATURE REVIEW

A comprehensive policy impact evaluation study was conducted by Hidrobo et al. [4] in Latin America. Researchers also specifically examined the impact of providing various public transfers in the form of cash, food vouchers and food aid on three important indicators of social capital, namely mutual trust, discrimination and community participation. The results showed that public transfers were negatively correlated with discrimination and positively related to community participation. Other studies that discuss social capital in Indonesia and the calculation of the social capital index are summarized in Table 1.

Empirical studies on the social impact of transfer grants are also starting to be carried out in several developing Asian countries, including Indonesia. Taking a slightly different

point of view, Cameron and Shah [5] examined the social effects of cash assistance if leakage was found in the distribution of aid. More specifically, the researchers examined the linkage of Cash Transfer Assistance (CTA) leaks in Indonesia with the crime rate. Using Indonesia Household Social Economic Survey 2006 data, the researchers showed that targeting errors in CTA, especially leakage, were positively associated with increased crime experienced by households. Researchers also confirmed that the existence of CTA leakage was negatively correlated with household members' participation in community activities.

The importance of social capital as a determinant of the economic development of a society has long been discussed by several experts. Conceptually, social capital is often associated with social values prevailing in society, mutual trust and the participation of individuals or households in activities or social organizations. Ponthieux [6] critically reviews the concept of social capital starting from Coleman's social structure, participation in organizations according to Putnam to the concept of trust by Fukuyama.

In empirical studies, experts have also introduced the concept of calculation related to social capital from the household to the community level [7]. Several other researchers such as Hjollund and Svendsen [8] specifically introduced a calculation method to create a kind of social capital index using a factor analysis approach. In this case the researcher limits the concept of social capital to the dimensions of trust, cooperation and social networks. In general, the dimensions of social capital are summarized in two major indicators, namely trust indicators and voluntary organization indicators. In the aspect of group collaboration, the researcher uses Putnam's concept of social capital which is formulated as the number of memberships in social organizations.

Table 1. Summary of some previous research

No.	Author	Article	Main Results/Studies
1	Cameron and Shah [5]	Can Mistargeting Destroy Social Capital and Stimulate Crime? Evidence from Cash Transfer Program in Indonesia	Targeting error of cash transfer increase the rate of crime
2	Hjollund and Svendsen [8]	Social Capital: A Standard Method of Measurement	Calculation of the social capital index
3	García et al. [9]	Measurement of Social Capital and Growth: An Economic Methodology	Social capital can drive local economic growth
4	Miguel et al. [10]	Did Industrialization Destroy Social Capital in Indonesia	Industrialized and social capital
5	Grootaert [11]	Social Capital, Household Welfare and Poverty in Indonesia	Social capital can improve household expenditure

The relationship between social capital and aggregate economic growth is analyzed by García et al. [9]. Using time series data from 1970 to 2001 for 23 OECD countries, researchers found a positive and significant relationship between social capital and economic growth. Social capital

accounts for 7 to 10 percent of the economic growth of the sample countries. This finding further emphasizes the importance of the contribution of social capital to economic growth in addition to other explanatory factors.

Basically, research on social capital in Indonesia has also been carried out since the early decades of 2000. Miguel et al. [10] used SUPAS, PODES and SUSENAS data to examine the impact of industrialization on social capital in Indonesia with the study period between 1985 and 1997. The results of the study found that industrialized districts had relatively high indicators of social capital. Meanwhile, districts located near industrialized areas experienced a decline in observed social capital indicators, such as the number of out-migration and relatively little community participation in community gathering activities.

Other research related to social capital in Indonesia was conducted by Grootaert [11] using data from a Local Level Institution survey in three provinces: Jambi, Central Java and East Nusa Tenggara. The data used consists of multilevel levels starting from the household, community to district levels. Several indicators of social capital used are membership density, heterogeneity index, meeting attendance and decision-making index. The results found that households with higher social capital enjoyed higher expenditure, had more assets, had more savings and had higher access to credit. Researchers also found a mechanism for the positive effects of social capital on welfare indicators through three channels, namely (1) sharing information among activity group members, (2) reducing opportunistic behavior and (3) improving group decision-making processes.

So far, studies on social capital are still concerned with the issue of measuring and calculating the impact of social capital on welfare indicators and poverty indicators. The results of the study largely reinforce the hypothesis that social capital with the various indicators used is proven to have a positive impact on household welfare and the economy more generally. In line with the increasing number of government programs in various developing countries, studies on the indirect effects of public transfers have been carried out.

The evaluation of the impact of public transfers in the form of cash transfers has been widely studied, including the effects of mistargeting of beneficiaries. Stoffler [12] conducted a simulation to test the effect of cash transfers on farmer household consumption and production using Taiwanese household data. The results of several simulations show that transfers have a positive impact on increasing consumption and production. The positive effects of transfers were also felt by non-recipient (non-target) households and recipient households even though they were not poor (mistarget).

Regarding target errors, Weiss [13] identified that this phenomenon is commonplace in developing countries, including countries that have implemented poverty alleviation programs for a long time, such as India and the People's Republic of China (PRC). The existence of leakage and undercover is also found in countries that are relatively new to implementing public transfer programs such as Indonesia and Thailand. In general, it is concluded that despite the leakage, poverty alleviation programs have had a positive impact.

In a broader scope, Coady et al. [14] conducted a review of the targeting program in several developing countries. Several targeting methods are discussed in detail and indexed to measure targeting performance in several countries (including Indonesia) [15]. Evaluation is carried out not only for the transfer program but also includes subsidy programs and job

creation programs.

The evaluation of the impact of the Direct Cash Assistance (CTA) program which was implemented in 2005 to 2006 was comprehensively carried out by Bazzi et al. [16]. Although CTA was explicitly provided to anticipate the impact of rising world oil prices, several other welfare indicators such as education, health and employment were also evaluated. The provision of public transfers in the form of cash to some extent has a positive effect on the welfare indicators tested.

The impact of public transfers is not only evaluated on household welfare indicators such as consumption expenditure, health and education. Several researchers have also examined the indirect impact of providing public transfers on social capital. Attanasio et al. [17] with an experimental approach found evidence that the level of community cooperation who received the program was relatively higher than those who did not get the program. Meanwhile, Ressler [18] with a qualitative approach found evidence that public transfers actually strengthened existing social networks. Researchers found this evidence after conducting interviews with several urban and rural households in Kenya.

The indirect effect of public transfer policies on non-recipient households but in the program, areas was reported to be positive. Angelucci and De Giorgi [19] found that public transfers increased the consumption of non-recipient households by 10 percent. This increase occurred through increasing loans, private transfers between families and families and through a decrease in savings.

Previous studies so far have found evidence that poverty alleviation programs in the form of cash transfers have a positive effect on recipient households. This positive influence can also be felt by non-recipient households. The positive effect of the public transfer program is not only in the form of increasing the level of welfare of recipient households, but also in the form of strengthening social capital, which is shown by the increasing participation of the community in formal and informal activities.

One of the problems encountered in the public transfer program is the existence of target errors in the form of leaks and undercover. The target error will certainly cause the effectiveness of achieving the program to be not optimal. How does the target error affect social capital in the community? Research on this topic is relatively rare. One of the studies using household micro data in Indonesia was conducted by Cameron and Shah [20]. By using SUSENAS and IFLS data, the researcher stated that the target error, especially the leakage, would result in an increase in crime. Furthermore, the researchers also found a negative relationship between leakage and undercover with community participation.

The main problem with the estimation method used by Cameron and Shah [20] is that there is no control over the unobserved nature of the household but it has an important effect on the relationship between social capital and public transfers. This problem can be resolved if a household data panel is available that contains data on household behavior related to community participation and the status of receiving public transfers [21].

3. METHODS

The basic estimation model used in this study is to follow the model used by Cameron and Shah [20] with several modifications. The variable of public participation (PM) is

explained by explanatory variables at the household level such as income, consumption and policy variables.

$$PH_{ivt} = \alpha_0 + \alpha_1 X_{ivt} + \alpha_2 INS_v + \alpha_3 CTA_v + \pi_i + \mu_d + e_{ivt} \quad (1)$$

In this case:

PH is the participation of household members in community activities

X is a vector of household characteristics

INS is a vector of institutional characteristics (village)

CTA is the CTA variable

π is the unobserved household characteristic variable

μ is a variable that represents the characteristics of the district

e is a random error term

i is the individual households

v is the village (enumerator area)

t is the time of collecting data.

The main problem in estimating model (1) is the existence of unobserved factors that affect community participation as well as targeting CTA. As an illustration, households that are less socialized tend to be inactive in social activities and escape the sharing of public transfers (under coverages). Another example, individualist households do not want to cooperate but without feeling guilty in accepting public transfers even though they are considered economically capable (leakages). Ignoring the effects of unobserved heterogeneity at the household level will bias the CTA coefficient as well as the associated CTA targeting.

If it is assumed that the unobservable character remains over time, then the use of the First Difference (FD) technique will isolate the impact of these fixed variables. The difference process will produce the following equation:

$$\Delta PM_{iv} = \alpha_1 \Delta X_{iv} + \alpha_2 \Delta INS_v + \alpha_3 \Delta BLT_v + \mu_d + e_{iv} \quad (2)$$

The use of FD would isolate the effect of the household level factors which remained constant over time. Household level variables were represented by variables of household income and household status that received or did not receive CTA. Meanwhile, village institutions take the form of village facilities such as the existence of terminals, markets, telephone shops and post offices. The variety of institutions may not be limited to the rural level. Certain conditions at the district or city / regency level are very likely to influence the estimation results. To solve this problem, the city / district level Fixed Effect (FE) estimation technique is used. The estimation model will briefly be as follows:

$$\Delta PH_{iv} = \alpha_1 \Delta X_{iv} + \alpha_2 \Delta INS_v + \alpha_3 \Delta CTA_v + e_{iv} \quad (3)$$

Following Cameron and Shah [20], calculations of leakage and under coverages were carried out at the village level. By definition, leakage or leakage is calculated based on the share of non-poor households that received CTA in one village. Meanwhile, under coverages were calculated based on the portion of poor households that did not receive CTA in one village. The determination of poor households is based on the criteria for the average household expenditure per month of Rp. 175,000, -. Households with expenses under Rp. 175,000 per capita per month are categorized as poor households. With data on the status of public transfer recipient households ($CTA = 1$, others = 0), the calculation of leakage and under coverages

for each village can be calculated.

As a comparison, the calculation of leakages and under coverages in this study will also follow the Poverty Line (GK) limit issued by the Government [22]. Based on SUSENAS data, BPS determined the poverty line for 2007 to be Rp. 166,697, - per capita per month.

4. RESULT AND DISCUSSION

4.1 Result

The data used in this study were the publication of the survey of IFLS wave 3 (2000) and IFLS wave 4 (year 2007). IFLS-4 has specifically provided a questionnaire regarding government programs including Direct Cash Assistance (CTA). As many as 12,979 households were surveyed, almost a quarter (22.35 percent to be exact) stated that they received CTA. By using the per capita monthly expenditure limit of Rp. 175.000, - for the category of poor households, then about 7 percent of the households surveyed were categorized as poor households. Of the 2,901 households that received CTA, 2,436 were not included as poor households (around 18.76 percent of total households). Meanwhile, there were around 449 poor households that had not received CTA (around 3.4 percent of total households). This shows that cases of leakages are more dominant than cases that have not received assistance (under coverages).

Some household data related to this study can be seen in Table 2. The data used basically consists of two units of analysis, namely at the household level and the community (village) level. At the household level, it consists of data regarding the status of obtaining CTA (yes or no), income level, age of the head of the household, gender of the head of the household and marital status (married or not). The data regarding household participation in social activities is calculated based on the number of household members involved in community participation activities such as ROSCAS, community meetings, cooperative activities, community service and activities in the context of village improvement.

At the village level, the character of the village is represented by variables that indicate village infrastructure such as the presence of terminals, articles, telecommunications stalls and post offices. One of the important explanatory variables in this study are leakages and under coverages. Leakage is calculated based on the share of non-poor households that received CTA. Meanwhile under coverages were the portion of poor households that did not receive CTA. These two main indicators are calculated at the village level.

According to the methodology used, household panel data is required to isolate the effects of unobservable factors. For this reason, the third wave of household data (IFLS-3) and fourth (IFLS-4) is used to compile the household panel data. Data on household participation is available for both IFLS waves so it is very suitable for the analysis needs. To control the determinants of community participation at the community level, Fixed Effect techniques will be used at the appropriate community level. In this case the Fixed Effect will be carried out at the village level (Enumeration Area). Given that leakage and under coverages variables are measured at the village level, the use of the village level Fixed Effect (FE) will cause these two important variables to be removed from the model (omitted). For this reason, besides at the village level, the FE

approach will also be applied at higher community levels such as the district / city (district) level.

Table 2. Statistical description of some variables

Variables	Average	Std. Deviation
Household Level		
CTA (yes=1, no=0)	0.223	0.416
Cooperative	0.058	0.265
Income (log)	13.92	5.861
Age of Household Head (year)	44.29	15.38
Gender of Household Head (female=1)	0.184	0.388
Marital Status of Household Head (married=1)	0.787	0.408
Village Level		
Leakages	0.179	0.117
Under coverages	0.033	0.041
Bus Station (yes=1)	0.258	0.438
Village Market Pasar (yes=1)	0.407	0.491
telecommunication facilities (yes=1)	0.702	0.457
Post Office (yes=1)	0.190	0.392

Table 3 presents the results of estimating the impact of CTA on cooperative activities using different control variables. Column (1) and column (2) display the OLS estimation results. The first-row column (1) shows that there is a negative correlation between BLT households and cooperative activities. This negative correlation disappears after controlling for influencing factors at the village level (note column 2). Column (3) presents the FD estimation results for the same case. As a result, CTA households were positively correlated with cooperative activities. After controlling for the influence of other factors at the village level, this positive effect becomes stronger (more significant with a higher coefficient).

The estimation results indicate that apart from being influenced by the character of the household itself, cooperative activities are also very much determined by the facilities available in each area (village). CTA households were more active in participating in village cooperative activities. This shows the positive impact of the public transfer program on community participation activities.

Furthermore, testing the social impact of CTA was also carried out for other types of community participation activities, namely community service. The first row shows that the cash transfer program has no significant impact on community service activities. Factors that consistently influence household activities following cooperative activities are the age of the head of the household, the gender of the head of the household, the number of household members and the level of income. More household members will participate in voluntary work if the household head is older. Households with fewer female heads of household participate in community service activities. Community service activities increase if there are more household members. Finally, household income is also an important factor in determining household activity in community service activities.

Similar results can be found in the estimation of the social impact of CTA on community participation in the form of village improvement program activities. There was no indication that CTA had a significant impact on these activities. Several factors that have a significant influence on village improvement activities are the age and sex of the head of the household and the number of household members concerned.

The estimation results are relatively consistent using both the OLS and FD approaches and the use of control over other factors at the village level which are time-invariant in nature.

To further examine the link between public transfers and community participation, the same model estimation was carried out but in a slightly different setting. The public transfer program is not only viewed in terms of the status of CTA households and not CTA households, but from the leakages and under coverages of this program. As already mentioned, leakage is calculated based on the ratio of non-poor CTA recipient households to all households in a village. While under coverages are calculated based on the ratio of poor non-CTA households to all households in the village.

Table 3. Impact of CTA on community participation (cooperatives)

	OLS		First Difference ⁺	
	(1)	(2)	(3)	(4)
CTA (yes=1)	-0.013** (0.006)	-0.003 (0.007)	0.017* (0.009)	0.023** (0.010)
Age of Household Head	0.001*** (0.0001)	0.001*** (0.0002)	0.001** (0.0005)	0.001** (0.0005)
Gender of Household Head	-	-	-	-
Marital Status of Household Head	0.023*** (0.006)	0.024*** (0.007)	0.066*** (0.015)	0.062*** (0.016)
Education of Household Head	0.017** (0.008)	0.012 (0.008)	-0.025* (0.015)	-0.026* (0.014)
Primary School	0.028*** (0.007)	0.024*** (0.008)	-0.0003 (0.010)	-0.009 (0.010)
Junior High School	0.050*** (0.011)	0.044*** (0.012)	0.010 (0.018)	0.002 (0.020)
Senior High School	0.074*** (0.010)	0.061*** (0.012)	0.020 (0.024)	0.012 (0.023)
Collage	0.095*** (0.012)	0.073*** (0.015)	-0.027 (0.036)	-0.038 (0.033)
Household Size	0.007*** (0.002)	0.008*** (0.002)	0.014*** (0.003)	0.012*** (0.003)
Income	0.0009* (0.0005)	0.0005 (0.0005)	0.0008 (0.0009)	0.001 (0.0009)
Constant	0.100*** (0.015)	0.077*** (0.020)	0.020*** (0.006)	0.022*** (0.004)
Fixed Effect (EA)	No	Yes	No	Yes
R-Square	0.021	0.020	0.010	0.010
Observation	10.765	10.765	7.381	7.381

Note: Figures in parentheses are a robust standard error. (***), (**), (*) indicate the level of significance of 1 percent, 5 percent and 10 percent, respectively.

The existence of leakage and under coverages is an indication of mistargeting in the distribution of CTA. The OLS test results show a negative relationship between CTA leakage and cooperative activities. However, this result tends to be biased because it has not controlled for unobserved factors at the household level. After controlling for this factor, evidence can be found that the leakage of CTA has actually caused a large number of household members to join the village activities. Not only that, the phenomenon of under coverages also resulted in the same conclusion, namely that there was a positive relationship between village activities and the number

of poor households that had not been reached by CTA.

This finding is actually interesting to note, considering that the impact of providing public transfers in the form of cash will increase the involvement of household members in participating in village activities even though there is a leak in the distribution of CTA. Table 4 presents the estimated impact of the CTA leakage on other types of social activities, namely cooperative activities. In the absence of control for unobserved factors, a negative association was found between BLT leakage and cooperative participation. After controlling for all relevant factors, evidence is found that there is no significant impact of CTA leakage on cooperative activities. With leaks and under coverages, CTA recipient households are still relatively more actively involved in cooperative activities. In essence, cooperative activities are not disturbed by leaks in the distribution of CTA funds.

4.2 Discussion

As discussed in the previous section, in general this study supports the finding that there is a positive relationship between public transfers and beneficiary social activities. With an experimental approach, Attanasio et al. [17] found a significant relationship between public transfers and social activities. The results of Ressler's [18] interviews with the Kenyan community also found evidence that public transfers strengthen existing social networks.

The results of recent studies using household micro data also yield roughly the same general conclusions. In the case of several African countries, Babajanian [3] found that public transfers are positively related to individual behavior in social activities. The same finding was also reported by Hidrobo et al. [4] in the case of Latin American countries. Empirical evidence shows that there is a positive relationship between recipients of public transfers and community participation.

This research specifically examines the effect of public transfers in the form of Cash Transfer Assistance (CTA) on several community participation activities such as community meeting activities, cooperative activities and so on. The results showed that CTA recipient households were more active in participating in village meeting. The relationship between CTA and village meeting is a new finding, although previously there has been research on village meeting behavior in Indonesia using IFLS data. Unlike the approach used in previous research, this study uses a consistent approach to isolate all observed and unobservable determinants of village meeting. Vanadharajan's [23] research used IFLS-2 (1997) cross-section data, while Lasagni and Lollo [24] used IFLS-3 (2000) and IFLS-4 (2007). The two studies on village meeting in Indonesia did not anticipate the possibility of an unobserved factor effect that could potentially produce a biased estimator.

In theory, the determinants of village meeting can also come from unobserved factors such as social sanctions [25] and the nature of households that tend to be individualistic (selfish families) or tend to socialize with the surrounding community. The characteristics of the household can influence the decision to participate in village meeting and can also correlate with the status of the household in obtaining public transfers. To isolate the influence of these unobserved factors, this study uses a First Difference (FD) approach with a combination of Fixed Effects (FE) at the community level. The test results consistently show that CTA has a positive relationship with village activity.

Table 4. Impact of leakage CTA on participation in cooperative activities

	OLS		First Difference ⁺	
	(1)	(2)	(3)	(4)
Leakages of CTA	-0.108*** (0.023)	-0.076 (0.052)	-0.030 (0.039)	0.082 (0.084)
Under coverages CTA (yes=1)	0.139*** (0.052)	0.390*** (0.114)	0.030 (0.085)	0.066 (0.161)
Age of Household Head	-0.005 (0.006)	-0.006 (0.006)	0.020** (0.009)	0.023** (0.010)
Gender of Household Head	0.001*** (0.0002)	0.001*** (0.0002)	0.001** (0.0005)	0.001* (0.0006)
Marital Status of Household Head	-	-	-	-
Education of Household Head	0.024*** (0.006)	0.031*** (0.008)	0.066*** (0.015)	0.075*** (0.016)
Primary school	0.018** (0.008)	0.003 (0.009)	-0.024 (0.015)	-0.033* (0.017)
Junior high school	0.023*** (0.007)	0.023*** (0.008)	-0.0002 (0.010)	-0.006 (0.011)
Senior high school	0.041*** (0.011)	0.039*** (0.011)	0.010 (0.018)	-0.002 (0.021)
Collage	0.061*** (0.010)	0.062*** (0.012)	0.019 (0.024)	0.008 (0.024)
Household size	0.080*** (0.013)	0.080*** (0.014)	-0.028 (0.036)	-0.043 (0.038)
Income	0.007*** (0.002)	0.008*** (0.002)	0.014*** (0.003)	0.013*** (0.003)
Constant	0.0008* (0.0005)	0.0005 (0.0006)	0.0009 (0.0009)	0.0006 (0.0009)
Fixed Effect	-	-0.036* (0.021)	-0.016 (0.010)	-0.037** (0.015)
R-Square	No	Yes	No	Yes
Observation	0.023	0.021	0.010	0.009
	10.765	10.765	7.381	7.381

Note: Figures in parentheses are a robust standard error. (***), (**), (*) indicate the level of significance of 1 percent, 5 percent and 10 percent, respectively.

The finding of a positive correlation between CTA and village meeting is interesting to be investigated further. Several explanations can be proposed to describe the relationship between CTA and village meeting. First, it is in accordance with Geertz's [26] finding that village meeting is carried out to strengthen harmony between community members. The results of a qualitative study conducted by Hosain et al. [27] found that giving CTA to some community members inevitably caused social jealousy which could disturb the harmony of the local community. However, the social friction was only temporary in nature and was more of a vertical conflict between residents who did not receive CTA and local officials. Social friction does not lead to a significant increase in crime as found by Cameron and Shah [5]. Improve harmony between members of this community, village meeting can be used as a means of strengthening social ties that have been disturbed. Empirical evidence shows that the intensity of the social gathering is still high even though there were cases of mistargeting in the provision of CTA.

Second, as hypothesized in Ambec and Treich's [25] social pressure model, village meeting can be used by individuals to anticipate community pressure from "social obligations" to share income. Households that received CTA used village meeting as a medium for sharing with fellow citizens without having to lose a certain amount of money but had to be willing to postpone a portion of their current consumption expenditure to get bigger results in the future.

This research uses IFLS data from 2007. Is the IFLS questionnaire still relevant to answer research questions about the relationship between government assistance and social activities? Unfortunately, IFLS data is available until 2014, so it cannot be used to answer this question. To test the relevance of the research results, alternative data were used from the results of the Rural Household Survey (RHS) which was released in 2017. This survey was conducted by the Center for Population and Policy Studies at Gadjah Mada University. Like the IFLS, this survey also collects detailed data on Indonesian households. However, the scope of data taken is relatively more limited.

Using the same analysis model, the results of research using different alternative data can be presented in Table 5 as follows. The dependent variable used is the involvement of household members in social activities in the village. While the main independent variable is the status of households receiving government assistance. In addition, characteristic variables are also used as control variables.

Table 5. Impact of government assistance on social activities (RHS data 2017)

VARIABLES	(1)	(2)	(3)
	OLS	FIXED	RANDOM
Assistance	0.0295*** (0.0114)	0.0303** (0.0119)	0.0303*** (0.0116)
Age	0.000556 (0.000452)	0.000288 (0.000467)	0.000364 (0.000465)
Male	-0.0411** (0.0204)	-0.0395* (0.0237)	-0.0400* (0.0238)
Working	-0.0126 (0.00926)	-0.000526 (0.00897)	-0.00387 (0.00897)
Married	-0.0337*** (0.0121)	-0.0321** (0.0127)	-0.0326** (0.0128)
Constant	0.999*** (0.0424)	0.991*** (0.0488)	0.994*** (0.0495)
Observations	2,602	2,602	2,602
R-squared	0.006	0.005	
Number of EA		24	24

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

The results of the study show that by using more recent data, empirical evidence shows that there is a significant positive relationship between government assistance and social activities. Model estimation shows consistent results with several variations of estimation strategies: OLS, Fixed Effect (FIXED) and Random Effect (RANDOM). Thus, it can be shown that the results of the IFLS data review are still relevant for use in more recent cases. The estimation results in Table 5 also show interesting results. First, the role of women in social activities was more than that of men. Married household members have relatively reduced social activities. The variables of age and employment status do not have a significant impact on social activities.

5. CONCLUSIONS

Based on the results of calculations from the estimation of the social impact model of public transfers, it can be generally found that there are indications that CTA recipient households are more actively involved in community social activities. However, not all social activities are affected by the presence of the CTA. At least there are community participation activities that have a positive correlation with CTA, namely cooperative activities. Meanwhile, other types of social activities were not much affected, such as community meetings, community service and activities related to the village improvement program.

The finding of a positive correlation between the acquisition of CTA and cooperative activities should not be too surprising given that both activities are more related to cash flows. Meanwhile, other community participation activities such as community meetings and community service require more physical attendance so that they are less affected by the provision of direct cash assistance.

Another important thing that needs to be underlined in the findings of this study is that the impact of CTA on cooperative activities is still significant despite cases of leakage in the distribution of CTA. Regardless of the status of a poor household or non-poor household, public transfers in the form of financial injection to some extents have the effect of activating certain social activities such as cooperative activities. If social activities such as ROSCAS can strengthen social ties as well as strengthen social capital in society, then of course this is something positive.

The leak of the distribution of CTA has indeed becomes a fact. However, cases of leakage do not necessarily weaken the social solidarity that is formed. Leaks and cases of under coverages of CTA have nothing to do with crime. Anti-social measures in the form of criminal disorder may be more relevant in relation to more specific socio-economic inequality problems. Social gathering activities can be used as a medium to strengthen relationships or community ties that have been disturbed by social jealousy due to the provision of public transfers that may be perceived as unfair or an error has occurred in the target of providing transfers [28].

The results of this study contain quite important policy implications. The social capital owned by the community is undoubtedly an important element in community development [29]. Social capital is also very important in its role in the success of government programs. Strong social ties can reduce the turmoil that occurs due to mistargeting of transfers. On the other hand, government programs in the form of public transfers have also proven to have a positive impact on strengthening social capital, one of which is in the form of cooperative activities.

REFERENCES

- [1] Fukuyama, F. (2000). Social Capital. in Cultural Matters: How Values Shape Human Progress, New York, Basic Books, pp. 98-111.
- [2] Knack, S., Keefer, P. (1997). Does social capital have an economic payoff? A cross-country investigation. The Quarterly Journal of Economics, 112(4): 1251-1288. <https://doi.org/10.1162/003355300555475>

- [3] Babajanian, B. (2012). *Social Protection and Its Contribution to Social Cohesion and State Building*. Bonn: Deutsche Gesellschaft für Internationale Zusammenarbeit.
- [4] Hidrobo, M., Hoddinott, J., Margolies, A., Moreira, V., Peterman, A. (2012). *Impact evaluation of cash, food vouchers, and food transfers among Colombian refugees and poor Ecuadorians in Carchi and Sucumbíos*. Washington, DC: International Food Policy Research Institute.
- [5] Cameron, L., Shah, M. (2012). *Can mistargeting destroy social capital and stimulate crime? Evidence from cash transfer program in Indonesia*. Monash University, Victoria.
- [6] Ponthieux, S. (2004). *The concept of social capital: a critical review*. In 10th ACN Conference, Paris, pp. 21-23.
- [7] Stone, W. (2001). *Measuring Social Capital: Towards a Theoretically Informed Measurement Framework for Researching Social Capital in Family and Community Life*. Australian Institute of Family Studies, Melbourne.
- [8] Hjollund, L., Svendsen, G.T. (2000). *Social capital: A standard method of measurement (No. 00-9)*. The Aarhus School of Business, Aarhus.
- [9] García, F.P., Martínez, L.S., Santalucía, V.M., Fernandez, J. (2006). *Measurement of Social Capital and Growth: An Economic Methodology*. Fundación BBVA, Bilbao.
- [10] Miguel, E.A., Gertler, P., Levine, D.I. (2003). *Did industrialization destroy social capital in Indonesia?* UC Berkeley.
- [11] Grootaert, C. (1999). *Social Capital, Household Welfare and Poverty in Indonesia (No. 6)*. World Bank Publications.
- [12] Stoffer, Q. (2012). *The Impact of Unconditional Cash Transfer Programs on Farmers: Evidence from Ex-ante Simulations*. Department of Agricultural and Applied Economics, Virginia.
- [13] Weiss, J. (2004). *Reaching the Poor with Poverty Projects: What is the Evidence on Social Returns?* Asian Development Bank Institute.
- [14] Coady, D., Grosh, M., Hoddinott, J. (2004). *The Targeting of Transfers in Developing Countries: Review of Experience and Lesson*. World Bank, Washington, D. C.
- [15] Rasyid, M., Kristina, A., Yuliani, T. (2020). *Poverty conditions and patterns of consumption: An Engel function analysis in east java and Bali, Indonesia*. *Asian Economic and Financial Review*, 10(10): 1062-1076. <https://doi.org/10.18488/journal.aefr.2020.1010.1062.1076>
- [16] Bazzi, S., Sumarto, S., Suryahadi, A. (2021). *Evaluating Indonesia's Unconditional Cash Transfer Program, 2005-6*. International Initiative for Impact Evaluation.
- [17] Attanasio, O., Pellerano, L., Polania, S. (2008). *Building Trust: Conditional Cash Transfers and Social Capital*. The Institute for Fiscal Studies.
- [18] Ressler, P. (2008). *The Social Impact of Cash Transfers*. International Food Policy Research Institute.
- [19] Angelucci, M., De Giorgi, G. (2009). *Indirect effects of an aid program: How do cash transfers affect ineligibles' consumption?* *American Economic Review*, 99(1): 486-508. <https://doi.org/10.1257/aer.99.1.486>
- [20] Cameron, L., Shah, M. (2011). *Mistargeting of Cash Transfers, Social Capital Destruction and Crime in Indonesia*. Monash University, Victoria.
- [21] Abed, A.R., Mabdeh, S.N., Nassar, A. (2022). *Social sustainability in gated communities versus conventional communities: The case of Amman*. *Planning*, 17(7): 2141-2151. <https://doi.org/10.18280/ijdp.170714>
- [22] Badan Pusat Statistik. (2008). *Analisis dan Perhitungan Tingkat Kemiskinan 2008*, Jakarta: BPS.
- [23] Varadharajan, S. (2004). *Explaining Participation in Rotating Savings and Credit Associations (RoSCAs): Evidence from Indonesia*. Cornell University, New York.
- [24] Lasagni, A., Lollo, E. (2011). *Participation in Rotating Savings and Credit Associations in Indonesia: New Empirical Evidence on Social Capital*. *Economia e Politica Economica*.
- [25] Ambec, S., Treich, N. (2003). *Roscas as Financial Agreements to Cope with Social Pressure*. *Universita Degli Studi Di Salerno*.
- [26] Geertz, C. (1962). *The rotating credit association: A "middle rung" in development*. *Economic Development and Cultural Change*, 10(3): 241-263.
- [27] Hossain, N., Brook, S., Garbariono, S., Notosusanto, S., Noor, I.R., Seda, F. (2012). *Qualitative Assessment: The Social Impacts of Cash Transfer Programmes in Indonesia*. TNP2K, Jakarta.
- [28] Keefer, P., Knack, S. (2005). *Social Capital, Social Norms and the New Institutional Economics*. in *Handbook of New Institutional Economics*, Netherland, Springer, pp. 701-725.
- [29] Torvik, G. (2000). *Social capital and economic development: A plea for mechanisms*. *Rationality and Society*, 12(4): 451-476. <https://doi.org/10.1177/104346300012004005>