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Does Village Fund Transfer Address the Issue of Inequality and Poverty? A Lesson from Indonesia*

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Abstract

This study investigates the impact of fiscal transfer, specifically the Village Fund Transfer, on rural income inequality and rural poverty. Studies on fiscal transfer offers contrasting outcomes, some argues that fiscal transfer suppresses wealth disparity, while others argue that it tends to widen disparity. This study employs descriptive analysis in estimating the elasticity of income inequality and poverty rate before and after the Village Fund Transfer. It develops multiple regressions model on panel datasets of 33 provinces in Indonesia before and after the implementation of Village Fund Transfer. This study suggests that the elasticity of income inequality is higher after the implementation of village fund transfer. Rural poverty tends to decline annually, however, the elasticity changes is lower after the implementation of village fund transfer. Furthermore, this study suggests that village fund transfer is insignificant in coping with the issue of income inequality, while education and the level of labor productivity of agricultural sector appears to be the determinant factor in tackling the issue of income inequality in the rural areas. This study further reveals the significance of village fund transfer in suppressing the rural poverty rate. This study also highlights the significance of human resources quality and agricultural sector in reducing poverty rate in rural areas.

Keywords: Village Fund Transfer, Income Inequality, Rural Poverty

JEL Classification Code: H53, H76, H77, R51

1. Introduction

Indonesia's level of income inequality declined periodically. The national Gini ratio reached 4.08 in March 2015 and declined by 0.39 within five years (Statistics Indonesia, 2019). Despite declining national inequality level, provincial income inequality level varies. Within five years, 17 provinces experienced increasing inequality level, while other 15 provinces experienced declining inequality level. Furthermore, the majority of the population owns less than USD10,000 of assets, while only 0.1% of the population owns USD 1 million of assets in Indonesia. Therefore, we assume that the national income inequality level represents inconsistency and needs to be addressed for deeper understanding regarding the issue of inequality in Indonesia.

Unequal development among regions in Indonesia is evident. The Western part of Indonesia accounts for 80% of the nation's economy, while the Eastern part of Indonesia only contributed 20% to the economy. Furthermore, the inequality between rural and urban areas tend to widen, which also portrays villages' lack of development. Such inequality among regions in Indonesia would further affect poverty rate due to imbalances of natural resources and production factors (Fum and Hodler, 2010; Lessmann and Steinkrauss, 2017). As stated in previous findings, Bourguignon (2004) points out that high income inequality level hampers the decline in the poverty rate, while the income inequality hinders the function of economic growth from reducing the poverty rate significantly. Therefore, inequality tend to hamper the advantages of economic growth.

In Indonesia, the issue of rural poverty has been a major concern compared to the issue of urban poverty. In

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March 2019, the rate of urban poverty was only 6.69%, while rural poverty reaches 12.85%. The high poverty rate is caused by limited production and low production asset. This is in line with findings by Nguyen and Nguyen (2019), which emphasized the lack of capital and lack of means in production as the main causes of poverty in poor households. Thus, to address the issue of rural inequality and rural poverty, Indonesia's government established Law No.6/2015 on Villages, which regulate the issue of Village Fund Transfer. The Village Fund Program refers to fiscal policy where village apparatuses were given the authority to manage expenditure. The stimulant of the budget is assumed to boost economic activities in rural areas and create economic impacts, resulting in strong implications for the decline in inequality between rural and urban areas and rural poverty. The idea is in line with findings by Crudu (2015), which highlight the significance of fiscal transfer on income redistribution. Previous literature has concluded that the fiscal transfer can stimulate the improvement of income distribution and further decrease poverty rate (Checherita, et al., 2009; Agostini, et al., 2010). The policy, however, provided similar results with the New Order Era (centralized government system) in Indonesia despite 19 years of implementation. The transfer, along with autonomy for each region, is not regarded as the incentive to combat inequality among regions due to a high level of fiscal decentralization (Arham, 2014).

Studies on the correlation between fiscal transfer, income inequality, and poverty have been conducted, but with different implications. Some argue that fiscal transfer to the region is effective in suppressing wealth disparity (Yeeles, 2015a; Kyriacou, Muinelo-Gallo and Roca-Sagalés, 2017a; Enami, Lustig and Taqdiri, 2019a). On the other hand, other studies have found that the fiscal transfer has insignificant effect on inequality since it (Sacchi & Salotti, 2014; Aritenang & Sonn, 2018; Liu, et al., 2017a; Prawoto & Cahyani, 2020).

Different findings regarding the effect of the fiscal transfer on the poverty rate are also seen in some previous studies. There are studies reporting that fiscal transfer can help fight impoverishment (Slater, 2011; Enami, Lustig and Taqdiri, 2019b; Litschig & Morrison, 2013a). Others also imply that regional fiscal transfer increases the poverty rate (Su, Li, and Tao, 2019; 2004; Suharyadi & Izzati, 2018a).

Accordingly, this paper aims to investigate the impact of village fund transfer policy on inequality and rural poverty in Indonesia. The importance of this study lies in three aspects. First, this study would address the clashing findings regarding the impact of fiscal transfer on inequality and poverty rate. Second, Indonesia is the fourth most populous country with natural resources imbalances, which provided interesting discussion regarding the issue of inequality and rural poverty. Third, specific research focusing on village fund transfer on rural inequality and poverty is limited.

Thus, this study examines the provincial level data of 33 provinces in Indonesia from 2015 to 2019. This study also incorporates the discussions of previous studies by taking several determinant factors of inequality and poverty in Indonesia into account. The study further investigates the elasticity of inequality and poverty rate before and after the implementation of village fund transfer. This study also intends to investigate the extent to which the village fund transfer affects the income inequality and rural poverty rate during the implementation of the transfer policy. The paper is structured as follows. Section 2 reviews the existing literature on fiscal transfer, income inequality, and rural poverty. Section 3 provides the methodology. Section 4 provided results and discussions. Section 5 draws conclusion and recommendation of the research based on the findings.

2. Literature Review

The correlation of the central and regional finance in the form of a fiscal transfer (fiscal decentralization) is found in many countries. Such transfer is a consequence of the option of a decentralized government by granting authority to the regional government. According to Shah (2006) and Rosen (2008), fiscal transfer consists generally of two types: the first type is conditional grant, which refers to transfer that is opted to solve a particular issue regarded crucial by the central government, although the regional government has different opinions. The second type is an unconditional grant, in which the transfer of the fund can be spent in any way with no restrictions. The main justification of the central government to provide an unconditional grant to the province (region) is that the grant can be used to equalize different fiscal capacities of the regional government, which later functions to ensure the provision of standard services or public services.

Based on the above discussion, there are mainly two types of transfer in fiscal decentralization, namely, general allocation fund and specific allocation fund. The general allocation fund is provided by the central government as financial support without any specific prerequisites. Basically, the general allocation fund is intended to increase regional revenue. The conditional transfer is intended to provide incentives for regional government with specific programs. Both transfers, along with the special autonomy funds for Aceh, Papua, and West Papua, have been implemented since 2001 in Indonesia.

In 2015, the government regulated Village Fund Transfer policy under Law No.6/2014 regarding villages. The law emphasizes the importance of village decentralization, aiming at boosting the performance of service providers at the lowest administrative level and tackling the issue of social disparity and poverty (Lewis, 2015). The village fund transfer, perceived from the criteria and types of transfer, is categorized as general allocation fund as it is, by nature, unconditional. However, the allocation of village fund transfer is not specified.

Fiscal transfer, both for the general and specific fund, can cause the local spending by the regional government to rise. It is assumed that the more the increase in the spending of the regional government, the more the decline in the income inequality and poverty rate (Fan, Hazell, and Thorat, 2000; Fan, Yu and Jitsuchon, 2008; Lustiq, Pessino and Scott, 2014; Anderson et al., 2017). This notion still applies, although theoretically, the correlation between fiscal transfer (fiscal decentralization) and inequality and poverty issue are not significant as discussed by Von Braun and Grote (2000). Nonetheless, the correlation between transfers of the fund (fiscal decentralization, a type of village fund transfer) empirically has been cited by many to have an interrelation with the inequality of income distribution, despite different results. The contrasting results are categorized into three groups. The first group is the positive correlation between fiscal transfer and income distribution inequality (Huang and Chen, 2012; Liu, Martinez-Vazquez, 2017b). The second group reveals the negative correlation between fiscal transfer and income distribution (Yeeles, 2015b; Caminada, Goudswaard, Wang, 2019). The third group shows that the impact of the fiscal transfer is insignificant in coping with the issue of the income distribution, some state that the significance only applies to some areas (Suwanan and Sulistiani, 2009; Rodríguez-Pose and Ezcurra, 2010a; Hammond and Tosun, 2011; Kim and Samudro, 2017b).

Results show the correlation between fiscal transfer and poverty are different from one another. Two categories describe this situation. First, the fiscal transfer is significant to decrease the poverty rate (Litschig and Morrison, 2013b; Agostini and Brown, 2010a; Wu and Ramesh, 2014a; Park and Wang, 2010). Second, the fiscal transfer, both the general and specific purposes, is insignificant to tackle the issue of rural poverty (Rao and Das-Gupta, 1995). Despite varied research results regarding the correlation of fiscal transfer and income inequality and poverty, it goes without saying that fiscal transfer is necessary. The centralistic government system is inappropriate for a heterogeneous country, such as Indonesia. Therefore, the decentralization system is considered the most efficient system in providing public needs through the fiscal transfer.

3. Research Methods

This research employed a quantitative descriptive approach to examine the elasticity of changes in income distribution and poverty rate before and after village fund transfer. This study also aims to investigate the impact of the village fund transfer on the inequality and rural poverty by using a regression model and panel data approach on 33 provinces in Indonesia from 2015 to 2019. Jakarta was not included in the analysis unit since its economic characteristics are different from other provinces in Indonesia.

The data of this study were secondary data; these were from the State Budget from the Ministry of Finance of the Republic of Indonesia for the village fund transfer, general allocation fund, and specific allocation fund. In addition, the macroeconomic data were gathered from Statistics Indonesia. The model of village fund transfer on the inequality was adapted from a model by Kim & Samudro (2017), while the model of village fund transfer on the poverty rate was adapted from the basic model by Agostini & Brown (2010b). These models are as follows:

Correlation between Village Fund Transfer and Rural Inequality:

$$Ineq_{it} = \delta_0 + \delta_1 Growth_{it} + \delta_3 LnPop_{it} + \delta_4 ALS_{it} + \delta_5 Unemp_{it} + \delta_6 HDI_{it} + \delta_7 LPA_{it} + \delta_8 ShareAgri_{it} + \delta_9 ShareInd_{it} + \delta_{10} Infra_{it} + \delta_{11} TF_{it} + \varepsilon_{it} \quad (1)$$

Correlation between Village Fund Transfer and Rural Poverty:

$$Poverty_{it} = \gamma_0 + \gamma_1 Growth_{it} + \gamma_2 LnPop_{it} + \gamma_3 ALS_{it} + \gamma_4 Ineq_{it} + \gamma_5 Unemp_{it} + \gamma_6 HDI_{it} + \gamma_7 LPA_{it} + \gamma_8 ShareAgri_{it} + \gamma_9 AHS_{it} + \gamma_{10} Infra_{it} + \gamma_{11} Inf_{it} + \gamma_{12} TF_{it} + \varepsilon_{it} \quad (2)$$

where Ineq, Inequality of Income Distribution Calculated from rural Gini Ratio (Index); Poverty refers to the rural poverty (percentage); Growth, Level of economic growth of each province (Percentage); Pop, Total Population (Individual); ALS, Average years of schooling of each province (Percentage), Unemp, Unemployment rate (Percentage); HDI; Human development index (Index); LPA, Productivity of the workforce in the agricultural sector (Nominal); ShareAgri, Contribution of the agricultural sector to the economic development (Percentage); ShareInd, Contribution of the industrial sector to the economic development (Percentage); AHS, Average household members (Individual); Infra, The provision of infrastructure in terms of irrigation (KM); Inflation, the Inflation rate of each province (Percentage); and TF, Fiscal transfer in the form of general allocation fund and specific allocation fund (Rupiah), and ε is Error Term.

The result of model selection in panel data analysis was based on the statistical test, i.e., Hausman test and Chow test. From the result of the Hausman test and Chow test, the appropriate analysis to examine both equations (the inequality of income and rural poverty) was the fixed effect model through coefficient covariance white cross-section method weighting.

4. Results and Discussions

4.1. Descriptive Analysis

The descriptive analysis shows that, between 2010 and 2014 (prior to the implementation of village fund transfer), income inequality tends to fluctuate in majority of provinces in Indonesia. Despite the fluctuations, West Sumatera, Bali, East Kalimantan, North Sulawesi, Central Sulawesi, South Sumatera, Lampung, West Java, North Maluku, and West Papua experienced declining income inequality compared to other provinces in Indonesia. The fluctuation of income inequality in Indonesia is a consequence of the overdependence on agriculture sector. After the implementation of village fund transfer, Riau, Jambi, Bengkulu, East Java, Banten, West Nusa Tenggara, East Nusa Tenggara, Central Kalimantan, East Kalimantan, North Sulawesi, South Sulawesi, Gorontalo, Maluku, North Maluku, Papua, and West Papua experienced declining income inequality level.

The elasticity of changes in income equality before the village fund transfer occurs in several provinces. The results are provided in Table 1. The provinces with the highest to the lowest elasticity rate are West Nusa Tenggara (-0.19%), Banten (-0.17%), and South Kalimantan (-0.17%). After the implementation of village fund transfer, the list of provinces experiencing changes in the decline of inequality with high elasticity rate are West Papua (-0.43%), Papua (-0.40%), and Maluku (-0.29%). Evidently, the three provinces are located in the Eastern part of Indonesia. This analysis implies that village fund transfer contributes to changes in lower class. However, the result appears to be peculiar, since the decline of income inequality in rural areas has been sluggish after the implementation of village fund transfer.

The rural poverty rate of 33 provinces in Indonesia varies. According to the data by Statistics Indonesia, the highest poverty rate is dominated by provinces in the Eastern part of Indonesia. Papua (35.36%), West Papua (30.32%), Maluku (26.63%), East Nusa Tenggara (24.45%), and Gorontalo (23.57%) have the highest poverty rate in Indonesia. Arguably, high poverty rate is the effect of the lack of infrastructure. Lack of infrastructure hampers the effort in suppressing poverty rate due to low accessibility on basic services (Chatterjee and Turnovsky, 2012; Charlery, Qaim, Smith-Hall, 2015). Development of infrastructure including roads, bridges, ports, airports, education, and health tends to be centralized in Java Island or other industrial regions in Indonesia, which further widen the gap among regions in Indonesia.

The following discussion focuses on unraveling the issue of rural poverty in each province by comparing before and after implementation of village fund transfer in Indonesia. According to the result, four provinces, such as Jambi, South Sumatera, West Nusa Tenggara, and West Kalimantan, are the provinces suffering from fluctuation. Meanwhile, Riau is the only province with an increasing trend, and the poverty rates of the remaining provinces continuously drop in the period from 2010 to 2014. During this period, the most significant decline in the poverty rate could be found in Maluku (-9.66%), Yogyakarta (-8.19%), and West Papua (-6.50%). After the implementation of village fund transfer from 2015 to 2019, a rising trend on poverty rate is evident in several provinces, including West Sumatera, Bengkulu, Riau Islands, Banten, South Kalimantan, North Kalimantan, Central Sulawesi, and North Maluku. Such result intuitively imply that village fund transfer has insignificant effect and the utilization of the transfer is inefficient. Provinces with enormous changes in the poverty rate are West Java (-8.36%), West Papua (-4.75%), and Southeast Sulawesi (-2.80%).

The rural income inequality has declined for ten years. However, the result of the calculation of elasticity indicates a difference in the changes. The average elasticity rate prior to village fund transfer was 0.01. Upon the fund transfer, the inequality rate in rural areas increased to 0.02 on average. Meanwhile, the rural poverty rate undergoes a steady decline periodically, but the elasticity of the changes after the fund transfer is lower than the rural poverty rate before the village fund transfer; as seen in Figure 1. Note that the negative value represents the inequality of the rural income distribution that tends to fluctuate, while the positive value describes the consistent decline in the inequality rate.

The above results and analysis are peculiar, in which it highlights the sluggish inequality and rural poverty rate after the implementation of village fund transfer. Furthermore, we also found that village fund transfer tends to focus on development of physical infrastructure, which accounts for 83.9% of total expenditure. In comparison, village funds only account for 12% of total expenditure on empowerment programs and social activities. Moreover, the result of the study revealed that third parties mostly involve in the development of physical infrastructure in rural areas, which further increase corruption cases in rural areas. From 2015 to 2019, there have been 252 corruption cases of village fund transfer, ranging from fictitious reporting, distortion of budget allocation, the use of the fund for personal gain, and fictitious villages.

Table 1. Comparison of Changes of Income Inequality/Rural Poverty Before and After Village Fund Transfer

Province	Rural Inequality		Rural Poverty	
	Before Village Fund Transfer	After Village Fund Transfer	Before Village Fund Transfer	After Village Fund Transfer
	Δ Changes	Δ Changes	Δ Changes	Δ Changes
Aceh	-0.07	-0.05	-4.47	-1.09
North Sumatera	-0.12	-0.03	-1.27	-2.61
West Sumatera	-0.07	-0.04	-3.39	0.46
Riau	-0.03	-0.05	-0.14	-2.31
Jambi	-0.02	-0.03	1.08	-0.97
South Sumatera	-0.02	-0.02	0.62	-1.94
Lampung	-0.13	-0.02	-6.41	-0.34
Bengkulu	-0.06	-0.03	-0.14	0.57
Bangka Belitung	-0.11	-0.05	-1.50	-0.63
Riau Island	-0.02	-0.04	3.43	2.13
West Java	-0.06	-0.01	-3.31	-8.36
Central Java	0.04	-0.04	-3.29	-3.32
Special Region of Yogyakarta	-0.09	0.00	-8.19	-2.32
East Java	0.02	-0.00	-4.24	-1.26
Banten	- 0.17	0.07	-3.32	0.32
Bali	0.04	-0.03	-0.09	-1.74
West Nusa Tenggara	-0.19	0.02	0.07	-2.04
East Nusa Tenggara	-0.12	0.04	-2.36	-1.23
West Kalimantan	-0.11	-0.01	0.82	-0.95
Central Kalimantan	0.03	0.06	-2.41	-0.60
South Kalimantan	-0.16	-0.01	-0.73	0.41
East Kalimantan	-0.04	0.04	-3.79	-0.67
North Kalimantan	-	-0.01	-	0.03
North Sulawesi	-0.00	0.04	-2.09	-1.62
Central Sulawesi	0.02	-0.05	-5.64	0.06
South Sulawesi	0.02	0.03	-1.46	-1.63
Southeast Sulawesi	-0.10	-0.01	-3.76	-2.80
West Sulawesi	-0.06	-0.01	-2.98	-1.14
Gorontalo	0.07	0.07	-6.33	-1.86
Maluku	-0.06	-0.29	-9.66	-0.08
North Maluku	-0.01	-0.26	-3.95	0.14
Papua	0.05	-0.40	-5.18	-0.92
West Papua	0.03	-0.43	-6.50	-4.75

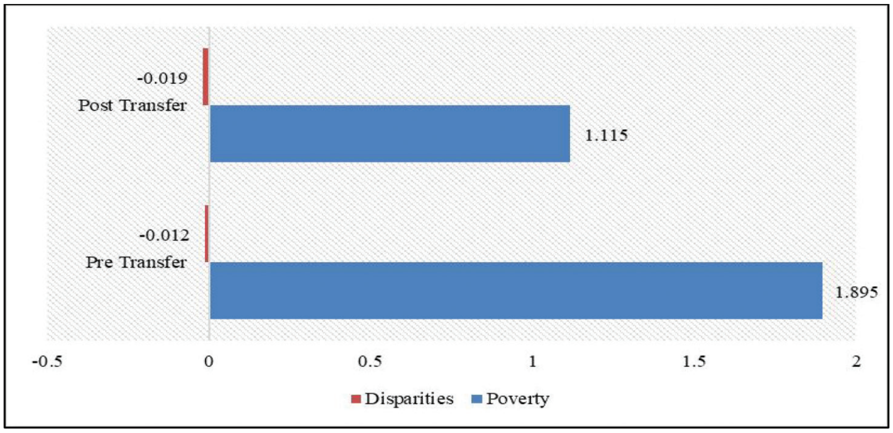

Figure 1: Comparison of Inequality and Rural Poverty Before and After Village Fund Transfer

4.2. Regression Analysis

As discussed in previous section, we incorporate two regression models in the analysis, as summarized in Table 3. The first model incorporates the correlation between village fund transfer and inequality, which excludes several variables such as Transfer of Block Grant (TBG) and Transfer of Specific Grant (TSG). The second model incorporates the correlation between village fund transfer and poverty, both TBG and TSF are included in the model. Such incorporation is included in the model to examine the differences in the effect of simultaneous and separated fiscal transfer.

The result of the regression of the first model regarding the inequality reveals that the village fund transfer is insignificant in coping with the issue of rural inequality. Although the fiscal balance fund is included, the result remains unchanged. Any addition in the village transfer fund that can contribute on balanced distribution of resources does not change the outcome. In other words, the major finding of this study is not in line with the general conclusion of previous research claiming that the fiscal transfer is capable in fixing the issue of the income distribution (Sepulveda and Martinez-Vazquez, 2011). Minimum impacts of fiscal transfer on the efforts to combat inequality issues are due to the fact that the fiscal transfer, both the block grant and specific grant, are more beneficial to the developed regions, with abundant natural resources, or the urban areas (Rodríguez-Pose and Ezcurra, 2010b; Lessmann, 2012).

The results of this study support findings by Kyriacou, Muinelo-Gallo, Sagalés (2017b), which suggested that the fiscal transfer is insufficient. Attempts in improving government quality are essential and effective in tackling the problems of inequality. In this context, the utilization of the village fund is not only to reinforce the regulation of monitoring by the involvement of inspectorate, judiciary bodies, and polices. The quality of the management of the village fund is also important. Also, central to the enhancement of the performance of the management of government and finance, including the improvement of the quality of planning and budget allocation, is through continuous training.

The World Bank has mentioned four causes of inequality in Indonesia. The first cause is the inequality of opportunity that is seen in the condition of children from lower-class families; they are affected by the situation of their environment and parent's education. The second cause is the inequality in the labor market, where those who have high skills receive more payment, leaving the others with no chance to shape their competencies. This condition further forces them to work in informal sectors with lower productivity rates and income. The third cause refers to the wealth concentration, in which all elites own financial assets, such as properties and stock; this fact worsens the inequality in the present day and the future. The fourth cause is the inequality in terms of coping with distortion, where poor people are the ones who are prone to suffer from the impact due to the situation. Distorted situations hinder them from earning money and from investing in health and education.

In accordance with the discussions, the government is obliged to increase the allocation of social assistance expenditure and the expense of the education sector to enhance the quality of human resources. As proven by the econometric analysis, the two control variables, i.e., the average years of schooling and productivity of labor in agricultural sector has significant association in reducing rural inequality. This finding is in line with studies by Kousar, et al. (2019), which emphasized the importance of education in reducing income inequality in the short and long term. At the same time, the government should boost the quality of inclusive economic growth continuously, given that the variable of growth is quite effective in suppressing the disparity rate. The development of village infrastructure, such as irrigation channels, is also crucial to better the productivity of agricultural sectors, resulting in equal income distribution.

Table 3. Fixed Effect Model Results

Independent Variable	Inequality		Poverty	
	Model 1	Model 2	Model 1	Model 2
C	0.155 (0.915)	0.147 (0.790)	166.2861 (5.058)	158.7018 (4.777)
Growth	-0.001* (-2.001)	-0.001** (-2.848)	-0.064** (-2.625)	-0.077* (-1.897)
Log (Pop)	-0.001 (-0.626)	-0.001 (-0.751)	0.047 (0.305)	-0.00 (-0.019)
ALS	-0.001** (-2.708)	-0.002** (-2.842)	2.815* (1.895)	2.934* (2.001)
Ineq	-	-	4.967 (1.018)	1.342 (0.282)
Unemp	-0.004** (-2.776)	-0.004** (-2.703)	-0.581*** (-3.898)	-0.515*** (-3.418)
HDI	0.001 0.490	0.001 0.416	-2.243*** -7.517	-2.369*** -8.115
LPA	-0.001** (2.379)	-0.001** (2.622)	-0.002* (-1.819)	-0.002* (-2.250)
ShareAgri	0.002* (2.130)	0.002* (2.237)	-0.443*** (-3.861)	-0.448*** (-3.991)
ShareInd	0.001 (0.083)	0.001 (0.193)	-	-
AHS	-	-	-2.954 (-0.447)	-0.027 (-0.004)
Infra	-0.001* (-2.069)	-0.001* (-2.105)	0.001* (2.546)	0.001* (2.607)
Inflation			-0.03 (-0.581)	-0.044 (-0.832)
Log (TBG)		0.002 (0.911)		-0.075 (-0.885)
Log (TSG)		0.001 (0.207)		0.449** (2.771)
Log (TFV)	-0.001 (-0.018)	-0.001 (0.027)	-0.001* (-1.928)	-0.001** (-3.214)
Adjusted R-Squared	*0.906*	*0.904*	*0.975*	*0.976*
F-Statistic	*37.424*	*34.682*	*141.113*	*142.443*
Observations	*154*	*154*	*154*	*154*

The village fund transfer is expected to contribute to poverty alleviation since the development of rural areas is left behind. Moreover, the limited economic activities of rural communities cause a high rate of poverty. Rao, Bird, and Litvack (2002) argue that the general fund and specific fund transfer to the region are necessary to ensure the effectiveness of public services, thus alleviating poverty. According to the regression result, the first and the second model is consistent, indicating that a rise in the village fund for every province is effective to revamp impoverishment in the rural areas. This result differs from the one seen in a study by Suharyadi & Izzati (2018b), as they imply that poverty alleviation strategies through the expansion of social assistance and village fund transfer are insufficient to help impoverished communities.

Another type of transfer contributing to poverty alleviation is the specific allocation fund, which is specifically aimed at providing a fund to national priority programs that are managed under the local autonomy. Since 2015, the characteristic of this type of transfer, previously noted for its limited nature, which includes physical and non-physical funds. The non-physical fund includes School Operational Assistance, Implementation Operational Assistance for Early Childhood Education, Allowances for Regional Civil Servant Teachers, Additional Fund for Allowances for Regional Civil Servant Teachers, Special Allowance for Allowances for Regional Civil Servant Teachers, Health Allowance, Family Planning Operational Allowance, Allowance for Capacity Building for Cooperatives and SMEs (PK2UKM), and Allowance of Citizenship Administrative Services. Additionally, special allocation grant will be established in 2019, which includes the grants such as Implementation Operational Assistance for Equivalency Education Program, Implementation Operational Assistance for Museum and Cultural Development Center (or known as Taman Budaya), Allowance for Tourism Services, and Allowance for Waste Management Services. Overall, the non-physical grant is similar to the social assistance in strengthening the education and health sector, with equal distribution. Wu and Ramesh (2014b) argue that this type of fund is effective in combating poverty, as it has a more specific focus.

Macroeconomics serves as the control variable for the first and second equation model of the poverty variable. It is shown that two variables, i.e., human resources quality and contribution of the agricultural sector in shaping the local economy, have a significant determinant (with the level of significance of 1%) in reducing the rural poverty rate. The better the quality of rural human resources is, the sooner the implementation of rural poverty alleviation starts. In this context, it is a good idea to enhance the allocation of village funds and other fund assistance by the government for developing human resource quality, given that 83.9% of the village fund is allocated for the development of physical infrastructure. It is proven that the physical infrastructure variable has contributed to an increase in the rural poverty rate; such a situation is caused by the fact that the development of infrastructure is a project-based system. Also, the circulation of the village fund is not distributed to the lower class. One should take into account the issue of economic empowerment in the future use of village fund; this is to continuously stimulate the contribution of the agricultural sector as the main activity in the rural area. This principle is underpinned by the significance of the sector in shaping the economy and reducing the number of poor populations in the rural area; the idea is supported by the study by Suharyadi, Suryadarma and Sumarto (2009), Abro, Alemu and Hanjra (2014).

Likewise, the economic growth, the average years of schooling, and labor productivity rate in the agricultural sector have a negative impact on poverty alleviation. This finding is consistent with the phenomenon in Indonesia from 2015 to 2019. At the time, there was a steady decline in the poverty rate from 14.09% to 12.60% alongside economic growth despite the economic growth contraction since 2015 (it was due to the fall in the price of the commodity in the international market). The average years of schooling and productivity of agricultural sector labor have a strong relationship with the education sector, all of which have a negative impact on poverty. Long years of schooling leads to improvement of labor productivity, allowing the process to decline the rate of rural poverty. In fact, the education level of the working class in Indonesia was 40.50% dominated by elementary graduates in 2019. On that ground, the situation becomes a challenge for the government to continuously spend their efforts in increasing the average years of schooling. For five years (from 2015 to 2019), there was no significant rise in the average years of schooling (the average year was 8.32, and it increased to 8.75). The average year is equal to the average years of schooling of an individual until the second grade of secondary schools. Village funds, thereby, can be of use to increase the average years of schooling for rural communities, including the development of informal education to better the quality of the human resource.

5. Conclusion and Recommendations

The village fund transfer is presumed to be a stimulant in increasing the development level of rural areas, thus contributing to the decrease in inequality and rural poverty rate. Some critical conclusions have been drawn in this study. First, fluctuation occurs throughout the implementation of village fund transfer by which the elasticity of the changes in the rural income distribution are relatively small, despite of the decline of income before the establishment of village fund policy. Second, there is a steady decline on rural poverty rate. This trend, interestingly, has been slow after the village fund transfer. This situation is due to the fact that 83.9% of the village funds are allocated to the development of physical infrastructure despite that the contribution of this type of infrastructure to the public welfare is, by nature, long-term. Third, the village fund transfer has been cited by many in several literature and studies as an effective measure to improve income distribution. This study, however, provided opposite findings regarding village fund transfer. For five years, the implementation of village fund transfer is insignificant to help combat inequality, considering that the utilization of the fund tends to favor the rural apparatus or their relatives in person. Moreover, the budget allocation for the empowerment and social programs were considered low. Fourth, the village fund transfer, alongside with the special grant fund, is significant in suppressing the poverty rate. A rise in the budget allocation of the village fund from the State Budget and Local Government Budget is impactful for the rural communities. Still, one should not rely solely on budget assistance; the budget should be accompanied by improving the quality of the human resource, the productivity of agricultural workers, and innovation in the agricultural sector.

From the above conclusions, this study formulates several recommendations. Firstly, government needs to enhance the quality village apparatuses through workshops, education for the village chief, and training to address the issue of good governance and financial governance in the rural areas. Secondly, central government needs to provide budget planning assistance for the development programs in the rural areas and provide the involvement of universities as an institutional body in maximizing the village fund, which would further result in decreasing inequality and rural poverty rate. Thirdly, the village fund needs to be allocated for education and health sectors, which are deemed effective in reducing poverty rate. Fourthly, the management of village funds for the development of infrastructure should be prioritized for providing irrigation channels for better agricultural productivity. It is worth noting that one should not assign the project to the third parties. Community empowerment rather fits the project, allowing all people in the village to get the benefit of the provision of the infrastructure.

References

Abro, Z. A., Alemu, B. A., & Hanjra, M. A. (2014). Policies for Agricultural Productivity Growth and Poverty Reduction in Rural Ethiopia. *World Development, 59,* 461-474. https://doi.org/10.1016/j.worlddev.2014.01.033.

Agostini, C. A., & Brown, P. H. (2010). Cash Transfers and Poverty Reduction in Chile. *Journal of Regional Science, 51*(3), 604-625. https://doi.org/10.1111/j.1467-9787.2010.00707.

Agostini, C. A., Brown, P. H., & Góngora. D. P. (2010). Public Finance, Governance, and Cash Transfers in Alleviating Poverty and Inequality in Chile. *Public Budgeting and Finance, 30*(2), 1-23. https://doi.org/10.1111/j.1540-5850.2010.00954.x

Anderson, E., D'Orey, M. A. J., Duvendack, M., & Esposito, L. (2017). Does Government Spending Affect Income Inequality? A Meta-Regression Analysis. *Journal Economic Surveys, 3*(4), 961-987. https://doi.org/10.1111/joes.12173.

Arham, M. A. (2014). Fiscal Decentralization Policies, Sectoral Shifts and Inequalities Amongst Regencies/Municipalities in Central Sulawesi. *Indonesian Journal of Economics and Development, 14*(2), 145-167. https://doi.org/10.21002/jepi.v14i2.437

Aritenang, A., & Sonn, J. W. (2018). The Effect of Decentralization and Free Trade Agreements on Regional Disparity in A Developing Economy: The Case of Indonesia, 1993-2005. *International Journal of Urban Sciences, 22*(4), 546-564. https://doi.org/10.1080/12265934.2018.1425155.

Bourguignon, F. (2004). The Poverty-Growth-Inequality Triangle. *Working Paper No. 15*. Washington, DC: The World Bank.

Caminada, K., Goudswaard, K., Wang, C., & Wang, J. (2019). Income Inequality and Fiscal Redistribution in 31 Countries After the Crisis. *Comparative Economic Studies, 61*(1), 119-148. https://doi.org/10.1057/s41294-018-0079-z.

Central Bureau of Statistics. (2016). *Statistics News Summary*. Jakarta, Indonesia.

Charlery, L. C., Qaim, M., & Smith-Hall, C. (2016). Impact of Infrastructure on Rural Household Income and Inequality in Nepal. *Journal of Development Effectiveness, 8*(2), 266-286. https://doi.org/10.1080/19439342.2015.1079794.

Chatterjee, S., & Turnovsky, S. J. (2012). Infrastructure and Inequality. *European Economic Review, 56*(8), 1730-174. https://doi.org/ 10.1016/j.euroecorev.2012.08.003.

Checherita, C., Nickel, C., & Rother, R. (2009). The Role of Fiscal Transfers for Regional Economic Convergence in Europe. *Working Paper Series, No 1029*. Frankfurt, Germany: European Central Bank.

Crudu, R. (2015). The Influence of Fiscal Policy on Income Inequality in European Union's Member States. *Economics Business Systems and Economics, 5*(1), 46-60. https://doi.org/10.13165/VSE-15-5-1-05.

Enami, A., Lustig, N., & Taqdiri, A. (2019). Fiscal Policy, Inequality and Poverty in Iran: Assessing the Impact and Effectiveness of Taxes and Transfers. *Journal Middle East Development Journal. 11*(1), 49-74. https://doi.org/10.1080/17938120.2019.1583510

Fan, S., Yu, B., & Jitsuchon, S. (2008). Does Allocation of Public Spending Matter in Poverty Reduction? Evidence from Thailand. *Asian Economic Journal, 22*(4), 411-430. https://doi.org/10.1111/j.1467-8381.2008.00284.x.

Fan, S., Hazell, S., & Thorat, S. (2010). Government Spending, Growth and Poverty in Rural India. *American Journal Agricultural Economics, 82*(4), 1038-1051.

Fum, R. M., & Hodler, R. (2010). Natural Resources and Income Inequality: The Role of Ethnic Divisions. *Economics Letters, 107*(3), 360-363. https://doi.org/10.1016/j.econlet.2010.03.008

Hammond, G. W., & Tosun, M. S. (2011). The Impact of Local Decentralization on Economic Growth: Evidence from U.S. Counties. *Journal of Regional Science, 51*(1), 47-64. https://doi.org/10.1111/j.1467-9787.2010.00683.x

Huang, B., & Chen, K. (2012). Are Intergovernmental Transfers in China Equalizing? *China Economic Review, 23*(3), 534-551. https://doi.org/10.1016/j.chieco.2012.01.001.

Kim, E., & Samudro, Y. N. (2017). The Impact of Intergovernmental Transfer Funds on Interregional Income Disparity in Indonesia. *International Journal of Urban Sciences, 21*(1), 22-40. https://doi.org/10.1080/12265934.2016.1240626.

Kousar, R., Rais, S. I., Mansoor, A., Zaman, K., Shah, S. T. H., & Ejaz, S. (2019). The Impact of Foreign Remittances and Financial Development on Poverty and Income Inequality in Pakistan: Evidence from ARDL - Bounds Testing Approach. *Journal of Asian Finance, Economics and Business, 6*(1), 71-81. https://doi:10.13106/jafeb.2019.vol6.no1.71.

Kyriacou, A. P., Muinelo-Gallo, L., & Roca-Sagalés, O. (2017). Regional Inequalities, Fiscal Decentralization and Government Quality. *Journal Regional Studies, 51*(6), 945-957. https://doi.org/10.1080/00343404.2016.1150992.

Lessmann, C., & Steinkraus, A. (2017). The Geography of Natural Resources, Ethnic Inequality and Development. *CESifo Working Paper Series No. 6299*. https://www.cesifo.org/DocDL/cesifo1_wp6299.pdf

Lessmann, C. (2012). Regional Inequality and Decentralization: An Empirical Analysis. *Environment and Planning A: Economy and Space, 44*(6), 1363-1388. https://doi.org/10.1068/a44267.

Lewis, B. B. (2015). Decentralising to Villages in Indonesia: Money (and Other) Mistakes. *Public Administration and Development, 35*(5), 347-359. https://doi.org/10.1002/pad.1741.

Litschig, S., & Morrison, K. M. (2013). The Impact of Intergovernmental Transfers on Education Outcomes and Poverty Reduction. *American Economic Journal: Applied Economics, 5*(4), 206-240. https://doi.org.10.1257/app.5.4.206.

Liu, Y., Martinez-Vazquez, J., & Wu, A. J. (2017). Fiscal Decentralization, Equalization, and Intra-Provincial Inequality in China. *International Tax and Public Finance, 24*(2), 248-281. https://doi.org/10.1007/s10797-016-9416-1

Lustig, N., Pessino, C., & Scott, J. (2014). The Impact of Taxes and Social Spending on Inequality and Poverty in Argentina, Bolivia, Brazil, Mexico, Peru, and Uruguay: Introduction to the Special Issue. *Public Finance Review, 42*(3), 287-303. https://doi.org/10.1177/1091142113506931.

Nguyen, H. H., & Nguyen, N. V. (2019). Factor Affecting Poverty and Policy Implication of Poverty Reduction: A Case Study for the Khmer Ethnic People in Tra Vinh Province, Viet Nam. *Journal of Asian Finance, Economics and Business, 6*(1), 315-319. https://doi:10.13106/jafeb.2019.vol6.no1.315

Park, A., & Wang, S. (2010). Community-Based Development and Poverty Alleviation: An Evaluation of China's Poor Village Investment Program. *Journal of Public Economics, 94*(9), 790-799. https://doi.org/10.1016/j.jpubeco.2010.06.005.

Prawoto, N., & Cahyani, R. D. (2020). Analysis of Unequal Distribution of Population Income in Indonesia. *Journal of Asian Finance, Economics and Business, 7*(7), 489-495. https://doi:10.13106/jafeb.2020.vol7.no7.489

Rao, M. G., Bird, R. M., & Litvack, J. I. (2002). Fiscal Decentralization and Poverty Alleviation in a Transitional Economy: The Case of Vietnam. *Asian Economic Journal, 12*(4), 353-378. https://doi.org/10.1111/1467-8381.00068.

Rao, M. G., & Das-Gupta, A. (1995). Intergovernmental Transfers and Poverty Alleviation. *Environment and Planning: Politics and Space, 13*(1), 1-23. https://doi.org/10.1068/c130001.

Rodríguez-Pose, A., & Ezcurra, R. (2010). Does Decentralization Matter for Regional Disparities? A Cross-Country Analysis. *Journal of Economic Geography, 10*(5), 619-644. https://doi.org/10.1093/jeg/lbp049.

Rosen, H. (2008). *Public Finance* (5th Ed.). Homewood, IL: Richard D. Irvin, Inc.

Sacchi, A., & Salotti, S. (2014). The Effects of Fiscal Decentralization on Household Income Inequality: Some Empirical Evidence. *Journal Spatial Economic Analysis, 9*(2), 202-222. https://doi.org/10.1080/17421772.2013.833343.

Sepulveda, C. F., & Martinez-Vazquez, J. (2011). The Consequences of Fiscal Decentralization on Poverty and Income Equality. *Environment and Planning: Politics and Space, 29*(2), 321-343. https://doi.org/10.1068/c1033r.

Shah, A. (2006). A Practitioner's Guide to Intergovernmental Fiscal Transfers. *Policy Research Working Paper No. 4039*. Washington, DC: The World Bank. https://openknowledge.worldbank.org/handle/10986/9013

Slater, R. (2011). Cash Transfers, Social Protection and Poverty Reduction. *International Journal Social Welfare, 20*(3). 250-259. https://doi.org/10.1111/j.1468-2397.2011.00801.

Su, F., Li, M., & Tao, R. (2019). Transfer-Based Decentralization and Poverty Alleviation: Evidence from a Quasi-Experiment in China. *The Journal of Federalism. 49*(4), 694-718. https://doi.org/10.1093/publius/pjy044.

Suharyadi, A., & Al Izzati, R. (2018). Cards for the Poor and Funds for Villages: Jokowi's Initiatives to Reduce Poverty and Inequality. *Journal of Southeast Asian Economies, 35*(2), 200-222.

Suharyadi, A., Suryadarma, D., & Sumarto, S. (2009). The Effects of Location and Sectoral Components of Economic Growth on Poverty: Evidence from Indonesia. *Journal of Development Economics*, *89*(1), 109-117. https://doi.org/10.1016/j.jdeveco.2008.08.003

Suwanan, A. F., & Sulistiani, E. H. (2009). Fiscal Decentralization and Regional Disparities in Indonesia; A Dynamic Panel Data Evidence. *Journal of Indonesian Economy and Business, 24*(3), 328-336. http://www.doi.org/1022146/jieb.6310.

von Braun, J., & Grote, U. (2000). Does Decentralization Serve the Poor? In: *IMF-Conference on Fiscal Decentralization* (pp. 1-32). Center for Development Research, Washington D.C., 20-21 November 2000.

Wu, A. W., & Ramesh, M. (2014). Poverty Reduction in Urban China: The Impact of Cash Transfers. *Social Policy and Society, 13*(2), 285-299. https://doi.org/10.1017/S1474746413000626.

Yeeles, A. (2015). Intergovernmental Fiscal Transfers and Geographical Disparities in Local Government Income in the Philippines. *Journal of Southeast Asian Economic, 32*(3), 390-401. http://doi.org/10.1355/ae32-3f.