The Impact of Local Governments' Social Transfers on Poverty Reduction In Indonesia

Bayu Kharisma[1], Sutyastie S. Remi[2] , Muhammad Syaiful[3] ,Ricky Abdillah[4]
[1,2] Departemen Ilmu Ekonomi, Universitas Padjadjaran, bayu.kharisma@unpad.ac.id, tatiremi@gmail.com
[3,4]Badan Pusat Statistik, email: m.syaiful@bps.go.id, didiel@bps.go.id

ABSTRAK

Penelitian ini bertujuan untuk menguji dampak intervensi terhadap pengurangan kemiskinan, yang dimanifestasikan melalui transfer sosial dari anggaran pemerintah daerah (APBD). Kami menggunakan data panel provinsi untuk memeriksa sejauh mana dampak dari transfer tersebut ke kinerja pengentasan kemiskinan. Dengan menggunakan penaksir OLS-PCSE Beck dan Katz, kami mengkonfirmasi bahwa jumlah transfer sosial yang lebih tinggi memang bermanfaat untuk pengurangan lebih lanjut dalam insiden kemiskinan. Variabel penjelas lainnya, yaitu PDB per kapita dan modal manusia, juga menunjukkan dampak yang signifikan dalam mengurangi jumlah orang miskin, sementara pengangguran yang lebih tinggi dapat menyebabkan penambahan jumlah orang yang hidup di bawah garis kemiskinan. Temuan-temuan ini menunjukkan bahwa tren penurunan transfer sosial yang disalurkan oleh pemerintah daerah mungkin mendasari stagnasi pengurangan kemiskinan dalam beberapa dekade terakhir. Oleh karena itu kami menyarankan bahwa memastikan keberlanjutan transfer kepada orang miskin dari dana pemerintah daerah sangat penting untuk mempercepat kembali pengentasan kemiskinan.

Kata kunci: Transfer sosial, pemerintah local, pengurangan kemiskinan, Penaksir OLS-PCSE

ABSTRACT

This research aims to examine the impact of intervention to poverty reduction, manifested through social transfers from local governments' budget (APBD). We use provincial panel data to examine the extent of impact from such transfer to poverty alleviation performance. Using Beck and Katz's OLS-PCSE estimator, we confirmed that higher amount of social transfer is indeed beneficial for further reduction in poverty incidence. Other explanatory variables, namely GDP per capita and human capital, also demonstrate significant effects in decreasing the number of poor people, while higher unemployment can lead to addition of the number of people living below the poverty line. These findings suggest that the declining trend in social transfers channelled by local governments might underlie the stagnation of poverty reduction in the last decades. We therefore suggest that ensuring the sustainability of transfers to the poor from local governments' funds is very important to re-accelerate poverty reduction.

INTRODUCTION

Albeit managed to substantially reduce poverty incidence in the past, Indonesia has seen a slowdown in the rate of poverty reduction over the last decade. The poverty rate had plunged by 8.8 percentage points within a decade of revival after the 1998 Asian Financial Crisis. This reduction is equivalent to 14.54 million people lifted from poverty. The most recent achievement (2018) even showed that the poverty headcount has reached a level lower than 10 percent— the lowest in history. However, a closer examination on the trend of poverty reduction reveals that the reduction speed has suffered from deceleration.
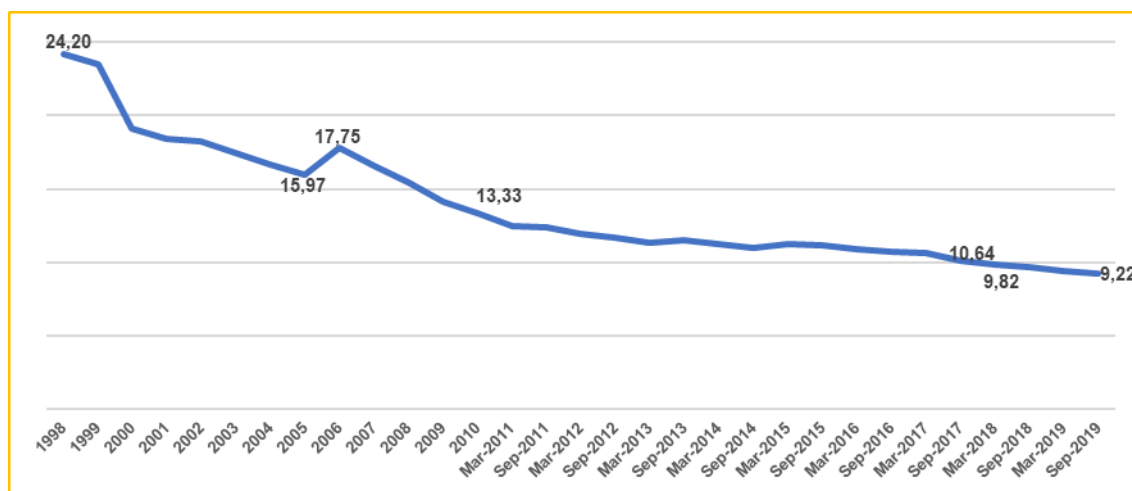

Source: Statistics Indonesia (BPS)

Figure 1. *Trends of Poverty Rate in Indonesia, 1998 - 2019*

In line with this phenomenon, inequality indicator (measured by *gini coefficient*) also shows no discernible improvement. Although there has been a minor improvement in *gini coefficient*, the recent data (0.382 in 2019) is no better than that of ten years ago (0.372 in 2009).

To date, several measures have been taken to address the problem of stagnation in poverty reduction. On the institutional aspect, the establishment of the National Team for the Acceleration of Poverty Reduction (TNP2K) marked the central government's concern over this issue. Through TNP2K, it is aspired that a more coordinated implementation of poverty reduction programmes across ministries can be achieved, hence improving living standards of the poor and vulnerable. To improve the programmes' performance, TNP2K is mandated to establish a national targeting system that contains a list of the names and addresses of social assistance beneficiaries (referred to as the Unified Database). Availability of such system is

deemed important to improve efficiency and effectiveness of various poverty alleviation programmes.
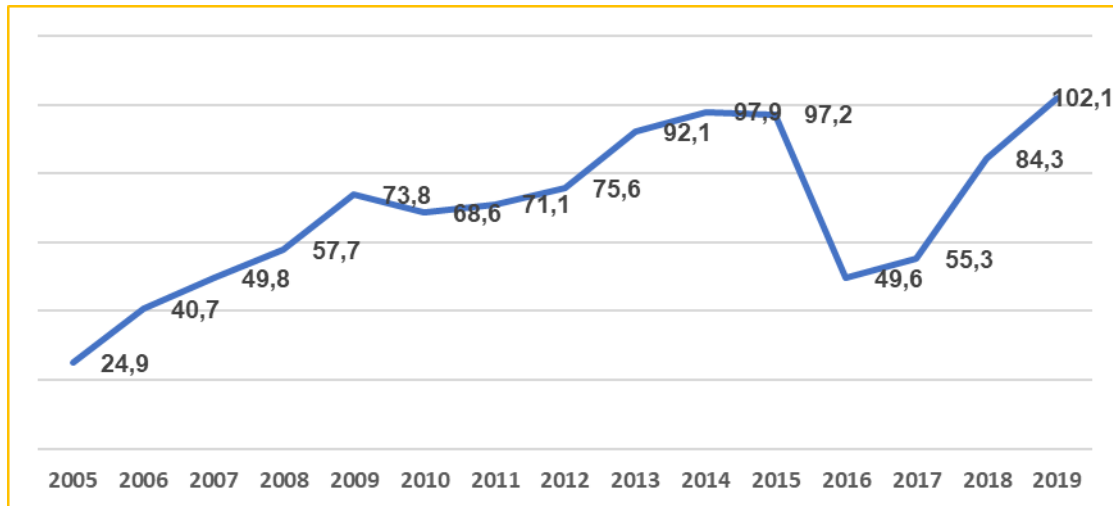

Source: Indonesia Ministry of Finance

Figure 2. *Allocation of Social Transfers in Central Government's Budget (Trillion Rp.), 2005 - 2019*

On the funding aspect, the central government has continually improved the budget allocated for social transfer purposes. This allocation is used to fund various poverty alleviation programmes, covering National Health Insurance (JKN), Program Indonesia Pintar (PIP), Non-cash Food Assistance (BPNT), Social Insurance for Employment (BPJS Ketenagakerjaan), and other social protection programs. In 2019, the central government allocated 102.1 trillion rupiahs to cover the expenditures of these programs. Other transfers that are channelled to local governments, such as village fund, are also hoped to indirectly improve the livelihood of rural population which comprise the majority of poor population in Indonesia.
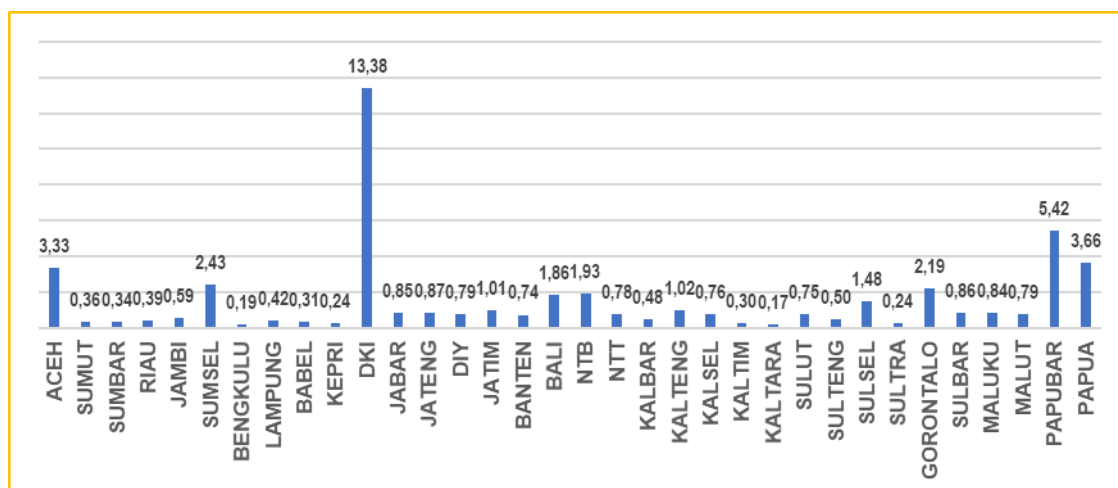
Source: Ministry of Finance

Figure 3. *Allocation of Social Transfers in Local Governments' Budget, 2018*
(% to Indirect Expenditures)

Aside from those executed by the central governments, local governments also contribute to additional transfers to the poor through their own budget. However, the extent of such transfers is limited and varies based on each local government's ability to generate its own local revenue. Most of local governments in Indonesia still heavily rely on grants or transfers from the central government. The local governments are also heavily criticised due to unbalanced spending proportion. In several cases (Sumatra Barat, Kepulauan Riau, and DKI Jakarta), the portion of budget that went to personnel expenditures exceeded 70 percent. This pattern is true for most local governments. The magnitude varies by provinces, but the effect still holds in which it minimizes the resources that can be allocated to other spending.

Assuming that the social transfers channelled to beneficiaries in provinces are proportional to the proportion of vulnerable individuals in those provinces, one then might argue that regional differences in poverty reduction are due to the local-specific intervention by local governments. Based on this rationale, this paper will attempt to examine the impact of such intervention to poverty reduction, manifested through social transfers from local governments' budget (APBD).

LITERATURE REVIEW

Many studies have highlighted the importance of government expenditure in reducing the poverty incidence. Obi (2007) examined the role of fiscal policy in alleviating poverty in Nigeria. He used the general equilibrium model for the study and concluded that the government revenue also positively redistributes income but government expenditures are the most important and effective tool of income redistribute and reduction in poverty. He further concluded that the

fiscal policy should be formulated in such a way that it redistributes the income from the rich people of the society to poor ones.

Study by Mehmood and Sadiq (2010) revealed that the matter to be concerned of is the composition of government expenditure. The increase in government expenditure usually comes with fiscal imbalance which subsequently distorts the economy. In this case, realigning the expenditure structure in favour of subsidies and social expenditures is necessary to counter the negative effect of expenditure increase. Fan, Hazeli, & Thorat (1994) used simultaneous equation to model panel data to estimate the effect of government expenditure on rural poverty and productivity growth in India. They found that highest priority should be given to investments in rural roads, agricultural research and education because these are the type of expenditures that generated higher impact on poverty reduction. Those findings suggest that a balance (pro-poor) expenditure is more important than the magnitude of the expenditure itself.

Regarding the effect of increase in per capita GDP to poverty incidence, Kanbur (2005) argues that in the notion of *ceteris paribus*, growth is good for poverty reduction. However, this notion is practically unusable in reality as complexity arises through the trade-off between poverty, inequality, and growth. He added that: '…if growth is accompanied by increased inequality, then the net effect on poverty is no longer clear…' (*ibid*., p. 224). Kakwani (2000)

also holds similar view, particularly in the case where inequality also persists in the lower-income group. In this setting, where the depth of poverty is high, growth will have a lesser impact in lowering poverty incidence.

Aside from government expenditure, the increase in human capital (proxied by education) is necessary to alleviate poverty. Additional stock of knowledge and skills gained through schooling and training are amongst investments in human capital activities that can raise earnings over a lifetime (Becker, 1995; Tilak, 2002) which consequently lowers poverty in the long-run. Human capital is in fact also the main asset of most poor people. Becker (*op cit.*) argued that pro-poor growth will rely on how much human capital the poor have. With regard to the problem of unemployment, Osinubi (2005) presents strong evidence from a macro perspective that high unemployment comes in line with widespread poverty. Highlighting the reduction of poverty following the decline of unemployment in Nigeria between 1987 and 1991, and the same pattern for Indonesia and Malaysia in early 1990s, he supported the claim of positive causality between unemployment and poverty.

DATA AND METHODOLOGY

This paper employs provincial panel data from Statistics Indonesia (BPS) and Ministry of Finance ranging from 2010 to 2018. Panel data regression is then used to examine whether there is any

significant effect from social transfers to poverty reduction performance of each province. The model in this study is developed from the basic model by Caminada, et. al., (2012). Their model was used to examine the impact of social expenditure on poverty in OECD countries between 1985 to 2005. In doing so, we realize the differences in context of unit being studied, thus we employ some modification based on determinants of poverty for the case of Indonesia as suggested by Miranti (2007). Our model is then specified as follows:

$$lpov_{it} = \beta_0 + \beta_1 lstravg_{it} + \beta_2 lgdpcap_{it} + \beta_3 MYS_{it} + \beta_4 unemp_{it} + \varepsilon_{it} \quad (1)$$

where:

$lpov$	:	Natural logarithm of the number of people living below the poverty line.
$lstravg$	:	Natural logarithm of average social transfers received by each poor individual. It is obtained by dividing province's social transfer with its respective poor population.
$lgdpcap$	:	Natural logarithm of GDRP per capita (constant 2010 Rp.)
MYS	:	Mean year of schooling (year)
$unemp$	:	Unemployment rate (%)
ε	:	Error term
i	:	Index provinces (i = 1, 2, …, 34)
t	:	Index for year (t = 2010, 2011, …, 2018)

Bearing in mind that provinces in our study are not selected through a random sampling, Fixed-Effect Model (FEM) is deemed as more appropriate (Gujarati & Porter, 2009). We check for correctness of model-specification in (1) using several diagnostic tests as follows: (1) Following Drukker's (2003) recommendation, we use Wooldridge's test to check for the presence of serial correlation. This test is suggested due to its practicality.; (2) Pesaran's test is employed to check for cross-sectional dependence. We employ this test due to potential spatial relationship that might emerge from neighbouring provinces. This test is more appropriate in the case where the number of cross-sectional observations exceeds the time-series range (De Hoyos & Sarafidis, 2006); (3) Wald's test for heteroscedasticity. The presence of relatively rich provinces alongside the poor ones might invoke large differences in variance among groups in our data, thus it is assumed that the data suffers from heteroskedasticity.

Considering the potential structural errors within the data, we choose to employ Beck and Katz's (1995) OLS with Panel-corrected Standard Errors (PCSE). This method was developed to address the issue of inaccurate standard errors estimated through Feasible Generalized Least Squares (FGLS) on the presence of autocorrelation, cross-sectional dependence and heteroskedasticity within the data. It has the advantage of

producing accurate estimation in the presence of panel error structures.

RESULTS AND DISCUSSION

On a broader aggregation level, we observe a declining tendency in the portion of local governments' fund allocated to social transfers. The pattern applies to all regions. In brief, we can see that the portion of local governments' funds that went to social transfers in 2010 is on average higher compared to 2018. Significant reduction is observable between 2010 and 2012, after which the proportion of social transfers remains relatively stagnant (except for Java which exhibits an upward trend).
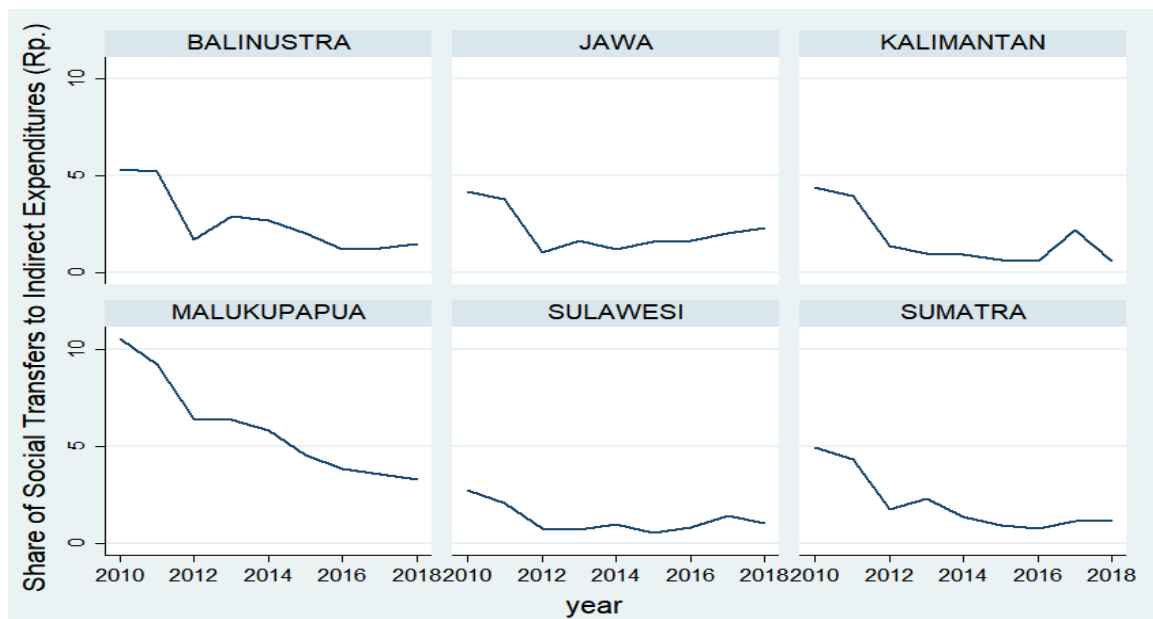
Source: Authors' calculation

Figure 4. *Trends in Portion of Social Transfers in Local Governments' Budget by Regions (%), 2010 – 2018*
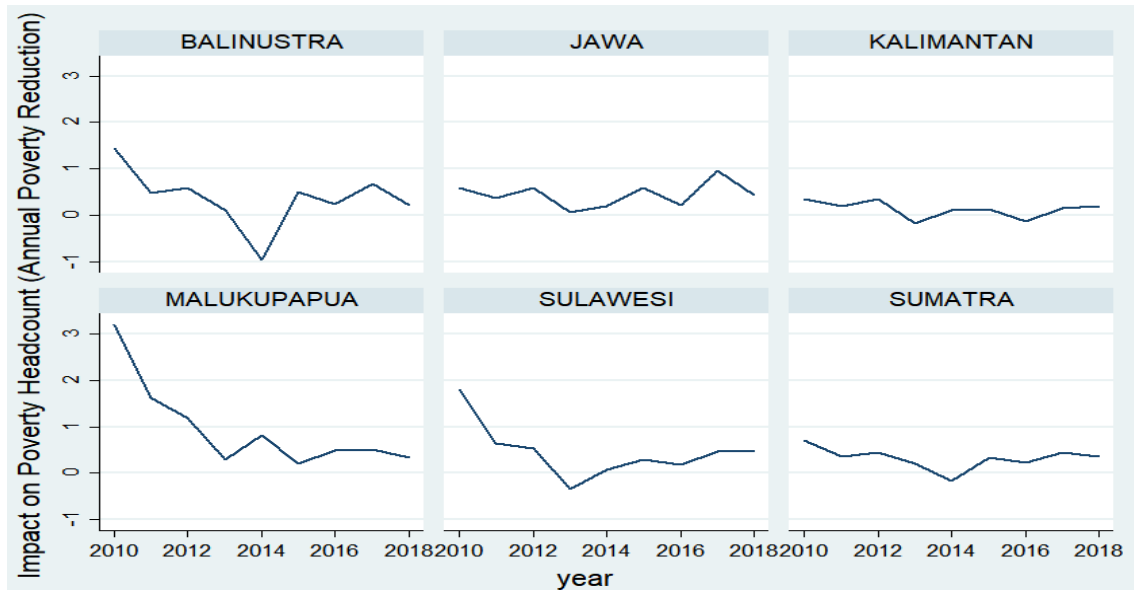
Source: Authors' calculation

Figure 5. *Trends in Annual Poverty Reduction by Regions, 2010 – 2018*

Incidentally, the same declining pattern can be observed in the case of annual poverty reduction ($H_t - H_{t+1}$). At least four regions (Bali-Nusa Tenggara, Maluku-Papua, Sulawesi, and Sumatera) exhibit the same pattern with those found in Figure 4. Their speed of poverty reduction declined greatly between 2010 and 2012, and had levelled off since then. This gives the early indication of the nexus between these two variables.

The diagnostic tests show that our panel data suffers from serial correlation, groupwise-heteroskedasticity and cross-sectional dependence at the same time. Based on these results, we then perform the estimation process using OLS-PCSE as follows:

Table 1. *Estimation Results Based on OLS-PCSE*

Variables	Dependent variable: *lpov*	
	(1)	**(2)**
lstravg		-0.0285**
		(0.0132)
lgdpcap	-0.2252***	-0.2096***
	(0.0819)	(0.0797)
MYS	-0.1848***	-0.1913***
	(0.0341)	(0.0373)
Unemp	0.0196**	0.0209**
	(0.0092)	(0.0095)
Constant	18.2165***	18.3522***
	(1.2727)	(1.2151)
N (obs)	301	301
N (groups)	34	34

| Wald-statistic | 89.43 | 70.10 |
| R-squared | 0.9806 | 0.9811 |

Significance: *=0.10, **=0.05, ***=0.01
Standard error in parentheses
Source: Own   calculation

We present our estimation results in two models, with (column 2) and without (column 1) the inclusion of social transfers in the model. As the poverty incidence, social transfers, and GDP per capita are expressed in log-transformation, their relationship can be interpreted as elasticity. The negative coefficient for social transfers in the second model confirms that additional transfers by the local government can further reduce poverty. The coefficient shows that each 10 percent increase in average social transfers received by the poor can lower the number of poor people by approximately 0.28 percent. One might argue that this effect is quite small, but considering the fact that several provinces have an average poverty reduction below 0.28 percent during 2011 to 2018 (see appendix) gives hint the increase in social spending with such magnitude can result in a higher poverty reduction. This result is in line with findings by Caminada et al., (*op. cit.*) who found a strong negative relationship between the level of social expenditures and poverty in 22 OECD countries. Thus, our result restates the importance of social transfers as an effective policy in combating poverty.

The effect brought by economic growth also significantly lowers the poverty rate. Each percent of increase in GDP per capita is associated with a lower poverty incidence by approximately 0.21 percent. As suggested by Kakwani (2000), countries with low initial inequality will have a greater poverty reduction payoff from growth, whereas countries with high initial inequality will have a greater poverty reduction payoff from pro-poor policies. Furthermore, Booth, et. al. (2019) showed that indeed there is a slight drop in inequality between 2015 and 2018 owing to the social protection policies executed by the government. Bearing in mind the conditional causality proposed by Osinubi (*op. cit.*), then this might be the reason behind the strong lowering effect to poverty from increase in GDP per capita observed in Indonesia.

Educational attainment is found to significantly affect both poverty headcount and poverty gap. Education affects poverty reduction through the increase in worker's income (Gundlach, 1997). Each additional year in mean year of schooling in a certain region will contribute to lower poverty incidence by 0.19 percent. Although the effect seems quite big, one must bear in mind that an extra year in MYS is not an instant achievement. It takes years just to achieve an additional year of MYS. The effect of unemployment on poverty level is also found to be statistically significant. This result is in line with findings by Xue & Zhong (2006) who observed a strong correlation.

CONCLUSION

This paper has briefly demonstrated that poverty reduction in Indonesia suffers from deceleration. Although through various social assistance programs the central government still managed to reduce the poverty rate, the reduction level is diminished. In this regard, complementary transfers from local governments might serve as an additional driver to the expected reduction in poverty rate.

By descriptive analysis, we have shown that there is a considerable decline in shares of social transfers allocated in local governments' budget. The fact that this trend stands alongside the declining trend in the speed of poverty reduction might be the reason behind stagnation of poverty in recent years. The implication of this finding is that local governments need to foster more revenue-generating scheme in order to extend the amount of social transfers to the poor. Sustainable channelling of this additional transfer is hoped to revive the speed of poverty reduction which has been greatly reduced in the last decade.

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