The Impact of Community-Driven Development Program on Rural Households Economic Well-being: Evidence from Village Funds

Dampak Program Community-Driven Development pada Kesejahteraan Ekonomi Rumah Tangga Perdesaan: Bukti Empiris dari Dana Desa

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Abstract

Indonesia has implemented the concept of community-driven development in rural areas through village funds since 2015. Village funds are one of the instruments to minimize the impact of Covid-19 in rural areas. This research was conducted to provide an overview of the impact evaluation of village funds on the economic well-being of rural communities in each household quantile. This study uses data on the characteristics of 35,759 households obtained from merging results of the March & September 2020 Susenas data with the village fund data in each district/city area. Data were analyzed using smoothed instrumental variables quantile regression, which overcame endogeneity issues and produced robust estimates. The study results show that the village fund has a positive and significant impact on the economic well-being of rural households. Still, their impact is felt more by the upper middle class and households in the Sumatra region.

Keywords: Community-driven Development, Economic Well-being, Village Funds.

Abstrak


Kata Kunci: Community-driven Development, Dana Desa, Sejahtera..
INTRODUCTION

Community-Driven Development (CDD) could be a solution to provide quality infrastructure and services so that it can have an impact on economic welfare (Arcand & Bassole, 2008; Beath et al., 2015). Therefore, many developing countries, including Indonesia, apply a similar development pattern. Indonesia applies the CDD development pattern in rural areas through the village funds. The development of rural areas is significant and requires enormous funds because 43.3 percent of Indonesia's population lives there, and 13.2 percent is poor (Badan Pusat Statistik, 2020). The Indonesian Government issued Law Number 6 of 2014 concerning villages so that villages are given sufficient authority and sources of funds to manage their potential to improve economic conditions and people's welfare. Based on the Village Law, the government annually allocates village funds, which began to be implemented in 2015. The village funds are intended to support increased community welfare and equitable development. Increasing village development can be done by meeting basic needs, fulfilling village facilities and infrastructure, developing local economic potential, and utilizing natural resources and the environment sustainably. The activities funded by the village funds in Indonesia can differ from those implemented in other countries. In Indonesia, infrastructure, finance, and human resource development are financed with the village funds.

To minimize the impact of the Covid-19 pandemic in 2020, especially in rural areas, the government is adjusting and refocusing the use of the village funds budget. The government determined the priority use of village funds through the Village Cash Workforce (Padat Karya Tunai Desa-PKTD) and strengthening public health through efforts to prevent and deal with Covid-19. With this policy, the village administration can change the APBDS by shifting spending on other sectors and sub-sectors to disaster management and emergencies and urging the village and the village development sector for PKTD. Therefore, the village funds can also be used as a social safety net as BLT Dana Desa. Village funds in the form of BLT Dana Desa are carried out to maintain the purchasing power of rural communities and meet their needs (Sofi, 2021).

Several research results on village funds show that funds have various influences on the economic well-being of rural households. Economic well-being needs attention because they are directly affected by the Covid-19 pandemic. Village funds in Thailand have been unable to reduce poverty (Chandoeuwit & Ashakul, 2008). However, Boonperm et al. (2013) further prove that Village funds in Thailand have been pro-poor since their implementation and have had a significant effect on increasing consumption by an average of 3.5 percent and increasing income by an average of 1.4 percent. Parajuli et al. (2012) showed that the form of CDD in Nepal was able to increase the level of public consumption by 7.1 percent, while CDD in Senegal had no impact on increasing public consumption and only had an effect on increasing access to clean water and health services (Arcand & Bassole, 2008). Joetarto et al. (2020) and Hartoko et al. (2022) have shown that village funds have varied effects on improving welfare and the economy in rural areas. The Covid-19 pandemic has caused people's economic welfare to decline. Therefore, according to UNICEF, UNDP, Prospera, & SMERU (2021), households implement various strategies to meet their daily needs. To meet their needs, households sell or pawn assets, borrow money from relatives, and reduce food and non-food consumption. The literature study results strengthen the author's suspicions about the impact of the village funds. The research hypothesis is that village funds significantly affect the welfare of rural communities in Indonesia.

This research analyzes the impact of village funds on economic well-being at each household quantile in rural areas. This study also uses data on the socio-economic characteristics of rural
communities by comparing the March and September 2020 Susenas data with the village funds data from the Directorate General of Fiscal Balance (DJPK), Ministry of Finance of the Republic of Indonesia. By juxtaposing these two data sources, only those households that live in rural areas are analyzed and are given village funds. The estimation method uses the smoothed instrumental variables quantile regression (SIVQR), first introduced by Kaplan (2022). SIVQR method could overcome endogeneity problems in quantile regression and produce more robust causal estimates. In addition, the smoothing process in SIVQR carried out will also produce statistically better estimation results. The definition of rural areas used is the definition of rural areas, according to BPS (2021). Based on BPS Head Regulation Number 37 of 2010 concerning Urban and Rural Classification in Indonesia, a rural is an administrative area at the village/kelurahan level that does not yet meet the criteria for urban area classification. Therefore, the data analyzed includes data on rural households spread across 33 provinces and 428 districts/cities.

LITERATURE REVIEW

Community-Driven Development

Community-driven development (CDD) is a development approach that emphasizes the authority of the community in decision-making and resource utilization (Zou et al., 2012; Casey, 2018). CDD views the community as an asset and partner in the development process, making it a bottom-up approach that emphasizes the role of beneficiaries and community participation. CDD can be more effective in providing infrastructure and social services, organizing economic activities and resource management, empowering poor communities, and improving governance (Labonne & Chase, 2011; Abbas et al., 2020). In its implementation, CDD should be supported by accountable financing and inclusive communities, facilitating access to information and technology, and applying policies that enable a conducive functional relationship between the community and relevant institutions.

The success of CDD depends on its objectives, context, and nature of participation. CDD can generally be effective in providing infrastructure and even improving service quality and performance (Farida et al., 2022; Bhattarai, 2022). Community participation can play a vital role in effective joint resource management. However, there is no evidence that CDD can have a short-term impact on social capital. For CDD to have a more effective result, it needs to be implemented in the long term (10-15 years), and bottom-up participation needs to be supported by both the government and the community (Bebbington et al., 2004; Noori, 2022). There is no consistent evidence regarding the impact of CDD on poverty alleviation, but programs that have been proven to be better in poverty alleviation are direct transfers.

Village Funds

Before 2018, Village Funds allocations were calculated based on Basic Allocations (Alokasi Dasar-AD) and Formula Allocations (Alokasi Formula-AF), while in 2018 and 2019, Village Funds allocations were not only based on AD and AF but also on Affirmation Allocations (Alokasi Afirmasi-AA). In 2020, the percentage of Village Funds will no longer be based on AD, AF, and AA. However, it will also pay attention to the Performance Allocation (Alokasi Kinerja-AK) or rewards for villages that are performing well and supporting poverty alleviation efforts. AD is the portion of the Village Funds, which is distributed equally to each Village based on population clusters. At the same time, AF is the portion of the Village Funds based on a formula consisting of the number of
Village residents, the number of poor Village residents, the area of the Village, and the village construction cost index or Geographic Difficulty Index (Indeks Kesulitan Geografis-IKG). AA is the portion of the Village Funds based on the status and number of poor people in the Village, while AK is the portion of the Village Funds that is provided based on the primary performance assessment and performance criteria: Village financial management, Village Funds management, Village Funds output achievements, and Village development outcomes.

The Government determined the priority use of Village Funds through the Village Cash Workforce (Padat Karya Tunai Desa-PKTD) and strengthening public health through efforts to prevent and deal with Covid-19 (Permatasari et al., 2021; Pamungkas et al., 2020; Maun, 2020). Village Funds can also be used as a social safety net as BLT Dana Desa. The target of the BLT Dana Desa is low-income families who are not part of the Family Hope Program (PKH) and non-Cash Food Assistance (BPNT) with the criteria of losing their livelihood, not being recorded (exclusion error), and having family members who are prone to chronic/chronic illness (Sutanto & Hardiningisih, 2021; Paat et al., 2021; Mubarok & Slamet, 2022). The determination of the number of BLT Dana Desa beneficiaries varies according to the provisions set by the Government. Villages receiving Village Funds of less than Rp 800 million can only allocate BLT Village Funds of 25% of the total. In comparison, villages that receive Village Funds between Rp 800 million to Rp 1.2 billion can allocate BLT Village Funds of up to 30%. Villages that receive Village Funds of more than IDR 1.2 billion can allocate BLT Dana Desa up to 35% of their Village Funds and can even exceed 35%, specifically for villages with many low-income families.

Villages that have allocated funds for BLT Dana Desa in 2020 have reached 74,249 villages. The Village Funds for BLT Dana Desa is substantial because it can be allocated up to 35% of the Village Funds budget, and the proportion can be more significant than 35% after obtaining approval from the Regional Government, considering the number of low-income families in the area of the local Government (Triani & Handayani, 2018; Sofianto, 2017; Arham & Hatu, 2020).

Economic Well-being

Economic well-being can be defined as the level of satisfaction obtained from the income received and can be assessed by examining changes in well-being indicators (Schaffner, 2014). According to Meyer & Sullivan (2003), income and consumption are the most closely related economic well-being or welfare indicators. Policymakers can use the income to assess program feasibility, while consumption can be used to evaluate policy impact. The level of consumption is a more accurate indicator for determining the welfare level of the lowest quantile (Meyer & Sullivan, 2003). Researchers have long used consumption-based welfare indicators, especially in developing countries (Ravallion, 1992; Sen, 1981). Per capita consumption is a better reflection of welfare level than household consumption, as individuals who are not prosperous can still be part of a prosperous household (Falkingham & Namazie, 2002). Additionally, Duflo (2003) notes that each household member may have different circumstances.

METHOD

The study examined data from 35,759 rural households in 33 provinces and 428 districts/cities. The data used in the analysis were obtained from the 2020 Indonesian Socio-Economic Survey (Susenas), a representative survey. The variables included in the analysis were per capita consumption, internet access, access to credit, age, gender, and education level of the household.
head, disability status of the household head, working status of the household head, number of household members, and various types of social assistance, including Covid-19 and non-Covid-19 related programs (PKH, BPNT, and Regional Government assistance). The Village Funds and BLT Dana Desa data used in this study came from the Directorate General of Fiscal Balance, Ministry of Finance of the Republic of Indonesia. The analysis was limited to the year 2020, which marks the onset of the Covid-19 pandemic and the implementation of the BLT Dana Desa policy.

To describe the impact of village funds on the economic well-being of rural households, equation (1) is used:

$$y = \beta_0(\tau) + \beta_1(\tau)x + \nu \ldots (1)$$

Where $y$ is the natural logarithm of per capita household consumption in September 2020, $x$ is the natural logarithm of per capita village fund variable generated from village funds obtained by districts/cities compared to the number of rural residents, $\nu$ is the control variable for families.

According to Chernozhukov & Hansen (2005), quantile regression can capture the characteristics of the heterogeneity of the impact resulting from the influence of the variation in the observed data so that it can still provide better results even though the variation of the independent variable is constant. Chernozhukov, Hansen & Wuthrich (2020) also reiterated that quantile regression could solve the heteroscedasticity problem.

According to Kaplan (2022), the expected value of equation (1) in IVQR can be expressed as equations (2) and (3). SIVQR is like the IV quantile regression model (IVQR) by smoothing the IVQR computation. With this smoothing, SIVQR produces faster calculations than IVQR and statistically better estimation results.

$$0 = E[1\{y - \beta_0(\tau) - \beta_1(\tau)x \leq 0\} - \tau] \ldots (2)$$

$$0 = E[z \{1\{y - \beta_0(\tau) - \beta_1(\tau)x \leq 0\} - \tau\}] \ldots (3)$$

Kaplan (2022) emphasized that the results of the SIVQR estimation are relatively the same as the IVQR, and although they are different, they will be qualitatively the same. Previously, Furno (2020) and Hadna & Askar (2022) used the IVQR in analyzing welfare at each household quantile level. Hansen & Chernozhukov (2008) stated that the IVQR method could overcome endogeneity problems in quantile regression and produce more robust causal estimates. SIVQR is the solution for computing IVQR because IVQR differs from ordinary IV. With the smoothing performed on the computational process, the SIVQR computational process will be faster than IVQR. In addition, the smoothing process carried out will also produce statistically better estimation results.

The instrument used to address endogeneity issues in analyzing the impact of village funds on the economic welfare of rural households is the number of rural residents in each district/city. The village fund will be transferred proportionately to the number of rural people in the district or municipality. The greater the village fund that will be transferred, the more excellent village fund per capita is perceived by households. The greater the village fund per capita perceived by the household, the greater the household consumption.

Regional characteristics have also been considered in the village funds formulation since 2018. Previously, Joetarto et al. (2020) proved that until 2018, the impact of village funds on the welfare of rural communities throughout Indonesia varied. Hartojo et al. (2022) also confirm that the influence of village funds on the economy is felt more by Eastern Indonesia than by Western and Central Indonesia. Therefore, Indonesia's territorial aspects will be considered to analyze the heterogeneity
effect. The regional elements will be interpreted according to the classification described by Joetarto et al. (2020). Indonesia's territory is divided into three regions, i.e.: Sumatra, Java, Kalimantan, and Eastern Indonesia.

RESULTS

An analysis of the impact of village funds and BLT Dana Desa on the welfare of rural communities uses household data for 2020 of 35,759 spread across 33 provinces and 428 districts/cities. The households with the most samples came from East Java Province, with 3,014 households, and the smallest sample came from the Riau Archipelago Province, with 178 households.

Table 1. Estimation Results of Village Funds on Consumption (in per capita consumption)

<table>
<thead>
<tr>
<th>Variables</th>
<th>IV</th>
<th>SIVQR Q25</th>
<th>SIVQR Q50</th>
<th>SIVQR Q75</th>
</tr>
</thead>
<tbody>
<tr>
<td>ln Village Funds per capita</td>
<td>0.211***</td>
<td>0.218***</td>
<td>0.227***</td>
<td>0.219***</td>
</tr>
<tr>
<td></td>
<td>(0.0081)</td>
<td>(0.0097)</td>
<td>(0.0087)</td>
<td>(0.0111)</td>
</tr>
<tr>
<td>HH Characteristics</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Covid-19 Soc. Assist</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Non-Covid-19 Soc. Assist</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>(N)</td>
<td>35759</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(R^2)</td>
<td>0.296</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>adj. (R^2)</td>
<td>0.296</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(F)</td>
<td>1070.8</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Standard errors in parentheses + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001.
Source: Secondary data (processed using STATA MP17), 2022.

Table 2. Heterogeneity Effect of Village Funds on Consumption per Region (in per capita consumption)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sumatera</th>
<th>Jawa</th>
<th>Kalimantan &amp; Eastern Indonesia</th>
</tr>
</thead>
<tbody>
<tr>
<td>ln Village Funds per capita</td>
<td>0.239***</td>
<td>0.001</td>
<td>0.159***</td>
</tr>
<tr>
<td></td>
<td>(0.0163)</td>
<td>(0.0244)</td>
<td>(0.0136)</td>
</tr>
<tr>
<td>SIVQR Q25</td>
<td>0.218***</td>
<td>0.038</td>
<td>0.134***</td>
</tr>
<tr>
<td>ln Village Funds per capita</td>
<td>(0.0156)</td>
<td>(0.0334)</td>
<td>(0.0212)</td>
</tr>
<tr>
<td>SIVQR Q50</td>
<td>0.227***</td>
<td>0.019</td>
<td>0.155***</td>
</tr>
<tr>
<td>ln Village Funds per capita</td>
<td>(0.0162)</td>
<td>(0.0278)</td>
<td>(0.0150)</td>
</tr>
<tr>
<td>SIVQR Q75</td>
<td>0.242***</td>
<td>-0.007</td>
<td>0.189***</td>
</tr>
<tr>
<td>ln Village Funds per capita</td>
<td>(0.0247)</td>
<td>(0.0251)</td>
<td>(0.0196)</td>
</tr>
<tr>
<td>HH Characteristics</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Covid-19 Soc. Assist</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Non-Covid-19 Soc. Assist</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>(N)</td>
<td>11723</td>
<td>8378</td>
<td>15658</td>
</tr>
</tbody>
</table>

Note: Standard errors in parentheses + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001.
Source: Secondary data (processed using STATA MP17), 2022.
The central government has distributed more social assistance during the Covid-19 pandemic since 2020. This assistance consists of PKH and BPNT, distributed before the Covid-19 pandemic, and BLT Dana Desa and BST, which have been explicitly distributed since the beginning of the Covid-19 pandemic in 2020. BLT Dana Desa is different from other social assistance because the beneficiaries are determined by each village and approved by the regional government leaders and are aimed only at non-PKH/non-BPNT low-income families with the criteria of loss of livelihood, exclusion error, and have family members who are prone to chronic/chronic illness.

Based on the results in Table 1, village funds have a positive and significant impact on the welfare of Indonesian rural households. This research result is consistent with the findings of previous studies as Boonperm et al. (2013) in Thailand, Parajuli et al. (2012), Joetarto et al. (2020), and Hartojo et al. (2022) in Indonesia. Village funds have varied effects on improving welfare and the economy in rural areas. On average, with a coefficient of 0.2, village funds’ impact on rural communities’ welfare is relatively the same between quantiles. This means that every change in the funds per capita of 1 percent will affect per capita rural household consumption by 0.2 percent.

The benefits of village funds are felt more by rural communities in the Sumatra region compared to Java and Kalimantan & Eastern Indonesia. The magnitude of the impact is relatively the same across all household quintiles, which is 0.2 percent, as shown in Table 2. This means that per capita household consumption can increase by 0.2 percent if per capita Village Funds increase by 1 percent. The variables of internet access, access to credit, age of the head of household, gender of the head of household, level of education of the head of household, disability, and working status determine household characteristics. Covid-19 social assistance is expressly provided during the Covid-19 pandemic, such as BST and BLT Dana Desa, while non-Covid-19 social assistance consists of PKH, BPNT, and Regional Government assistance.

Discussion

According to the World Bank, the effects of CDD on the populace's well-being might be observed in 10 to 15 years. The implementation of village funds in Indonesia began in 2015. Hence it is probable that the influence on people’s welfare has not been significant. However, the long-term implementation of village funds does not guarantee that funds will significantly impact people’s welfare. In contrast, the positive and significant impact of village funds on the welfare of village communities is found in the research results of Boonperm et al. (2013), Joetarto et al. (2020), and Chandoevwit & Ashakul (2008). However, the results of Chandoevwit & Ashakul (2008) also show that the impact of village funds on consumption level is very small because the use of village funds in the form of a credit to the community has not been able to create a source of income and is only sufficient to pay for other credits other than those originating from the village funds.

The limited impact of village funds on household consumption in Indonesia may also be attributable to the low quality of village expenditures and the prevalence of numerous frauds. This resulted from the poor quality of the village government machinery and the lack of community empowerment. According to Wahyudi et al. (2022), the high level of fraud against the village funds can be attributed to several issues, including internal control, compensation, and fraud expertise. The low quality of village spending can be reflected in one way or another through the still high proportion of infrastructure spending. The ratio of infrastructure development until 2018 was the highest at 81 percent (Direktorat Jenderal Perimbangan Keuangan, 2019). In addition, according to Permatasari et al. (2021), the proportion of village funds used to achieve the 9th SDG, namely...
industry, innovation, and infrastructure, from 2018 to 2020 is the highest at 54 percent. Ambia & Sujarwoto (2018) stated that developing education and health infrastructure might influence community welfare. Still, infrastructure development in the form of roads does not significantly impact community welfare. In addition, the distribution of cash transfers sourced from village funds (BLT Dana Desa) cannot automatically reduce poverty (Golan et al., 2017).

Idealistically, the village funds would have a more significant impact on households in the bottom quantile. The village funds formulation incorporates the Affirmation Allocation (AA), designed for individuals in the lowest quantile. In addition, the target category for PKTD activities is the lowest quantile of the population, which includes poor households, the unemployed, the underemployed, and homes with stunted members. Participation from PKTD target community groups is compensated according to the village meeting/community gathering (Musyawarah Desa-Musdes) but still needs to replace their previous employment. Participation from community members outside of the PKTD target group or the upper middle quantile constitutes self-help and mutual participation. However, the more significant impact of the village funds on households from the middle and upper classes suggests that participation is broader than self-help and cooperation.

The Java region receives the largest village funds after the Kalimantan and Eastern Indonesia regions. Still, with a vast population, the per capita village funds in the Java region are almost half the per capita village funds in the Kalimantan and Eastern Indonesia regions. By comparing village funds data from the Directorate General of Fiscal Balance (DJPK, Ministry of Finance) and the estimated rural population from the Central Statistics Agency (BPS), it was obtained that the village funds per capita in 2020 for Java region is IDR 475,656.00 and Sumatera region is IDR 718,922.00. In contrast, the village funds per capita for Kalimantan & Eastern Indonesia region in 2020 is IDR 950,995.00. Although the village funds per capita in Kalimantan and Eastern Indonesia is the highest because its use is dominated by infrastructure development and the quality of village administration apparatus and community empowerment is low, the impact on welfare is relatively tiny. In addition, because the center of economic activity for the Indonesian people is dominant in the Java region and the large-scale social restrictions (PSBB) policy has been implemented, the impact of the Covid-19 pandemic on reducing consumption is felt more by households in areas implementing PSBB such as Java than other regions (Samuda, 2022). This condition allows people in the Sumatra region to benefit more from the village funds than those in Java and Kalimantan & Eastern Indonesia.

CONCLUSION

This research was motivated by a change in priority policy on the use of village funds since 2020, which made village funds usable as a social safety net in the form of BLT Dana Desa. This study aims to analyze and provide empirical evidence on the impact of the village funds policy during the Covid-19 pandemic and the BLT Dana Desa on economic welfare at every level/quantile of Indonesian rural communities. The study results show that the village funds have a positive and significant impact on the per capita consumption of rural households. However, the impact of village funds on consumption can be felt more by middle to upper-quantile households and more experienced by rural households in the Sumatra region than in other areas.

The low impact of the village funds is due to its implementation in the short term, the quality of village funds spending is still low, and there is much fraud. In addition, there are indications that community participation in implementing PKTD activities is more than just self-help and cooperation. BLT Dana Desa as a priority activity for using village funds also still leaves problems
with inaccurate distribution. These constraints and issues cause the impact of village funds and BLT Dana Desa to be more felt by middle to upper-quantile households than lower-quantile households. Based on the results and conclusions of the research results, this research produces several policy implications. Firstly, regional and community characteristics must be considered in formulating the village funds and allocating BLT Dana Desa. Differences in regional and household characteristics in Sumatra, Java, and Kalimantan & Eastern Indonesia can influence the impact of implementing the village funds and BLT Dana Desa policies.

Due to the limited available data, this research was only conducted in 2020. An analysis can be done for the following more comprehensive study until 2022, considering that the village funds and BLT Dana Desa distributed to the rural community are more significant than in 2020.

REFERENCES


