The Impact of Village Cash Transfer on Rural Households' Economic Well-being

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Abstract

Indonesia applied adjustments and refocused the policy of using the Village Funds budget to minimize the impact of the Covid-19 pandemic in 2020, especially in the rural area. The Village Funds have been used as a social safety net as Village Cash Transfer. The researchers carried out this study to present an overview of the evaluation of the effects of Village Cash Transfer on the economic well-being of rural communities in every household quintile. 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 analysed using Smoothed Instrumental Variables Quantile Regression, which overcame endogeneity issues and produced robust estimates. The study results show that the Village Cash Transfer has a positive and significant impact on the economic well-being of rural households. Still, their impact is felt more by the upper middle quintile households, which benefit more from Village Cash Transfer households in the Java region. As a result, it is advisable for Governments to be more generous in providing benefits to families in the lowest quantile and to monitor the program by the requirements of beneficiaries closely.

Keywords: Village Cash Transfer; rural; economic well-being.

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1. Introduction

The weakening of the economy and reduced purchasing power due to the Covid-19 pandemic has disrupted the economic well-being of the people. The Covid-19 pandemic has caused an income shock for all levels of society, especially the poor and vulnerable to poverty. According to UNICEF, UNDP, Prospera, & SMERU (2021), households implement various strategies to meet their daily needs. Families sell or pawn assets, borrow money from relatives, and reduce food and non-food consumption to meet their needs. The number of poor people increased by 2.8 million, so 27.6 million people lived below the national poverty line, and the poverty rate jumped to 10.2% (BPS, 2021). According to Martin et al. (2020) research, the implementation of social safety measures such as unemployment insurance (UI) and the Coronavirus Aid, Relief, and Economic Security (CARES) can prevent a significant rise in poverty. The study suggests that poverty rates can be restricted to 19% from the earlier 17.1%, and the recovery time can be around 6.7 months. However, the level of impact is spatially heterogeneous. It is possible for a recovery time longer than one year for specific communities.

Indonesia applied adjustments and refocused the policy of using the Village Funds budget to minimize the impact of the Covid-19 pandemic in 2020, especially in rural areas. Village Funds applied as Community-Driven Development (CDD) in rural areas could be a solution to provide quality infrastructure and services to impact economic welfare (Arcand, 2008; Beath et al., 2015). 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. The Village Funds can also serve as a social safety net through Village Cash Transfer (Bantuan Langsung Tunai Desa-BLT Desa).

Village Cash Transfer is carried out to maintain the purchasing power of rural communities and meet their needs (Sofi, 2021). Villages that have allocated funds for Village Cash Transfer in 2020 have reached 74,249 Villages. The Village Funds for Village Cash Transfer 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 local Government.

Research studies have demonstrated that cash transfer programs can enhance economic well-being. For instance, Hadna and Askar (2022) discovered that the Family Hope Program (PKH) increased individual consumption, while The National Team for the Acceleration of Poverty Reduction in 2018 showed that the PKH program boosted per capita expenditures. Similarly, cash transfer programs such as the Pantawid Pamilyang Pilipino Program in the Philippines and Familias de Accion in Columbia have also demonstrated an increase in per capita expenditures.

Some studies found that Cash Transfer improves economic well-being. Hadna & Askar (2022) found that the Family Hope Program (Program Keluarga Harapan-PKH) improves individual consumption. In 2018, The National Team for the Acceleration of Poverty Reduction also showed PKH improves per capita expenditures.

A research gap exists in examining the impact of Village Cash Transfer on consumption expenditure distribution. The researchers had to conduct this study as Golan et al. (2017) observed that cash transfers alone do not reduce poverty. This study examines

how Village Cash Transfer affects the distribution of consumption expenditures in different quantile groups. This study assumes households in the lowest quantiles may face more significant challenges when obtaining consumption than those in the other quantiles. This occurred because the Cash Transfer program is not suitable for everyone, and the methods and resources used in the program must effectively tackle the problems the most underprivileged groups face. Using a Smoothed Instrumental Variable Quantile Regression approach (SIVQR), this paper provides contributions by analysing the impact of Village Cash Transfer on each quantile of recipients and offering a more suitable approach for comparing consumption expenditure impacts of Cash Transfer on various quantiles.

2. Literature Review

2.1. Village Cash Transfer

The target of the Village Cash Transfer is low-income families not part of 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. The determination of the number of Village Cash Transfer beneficiaries varies according to the provisions set by the Government. Villages receiving Village Funds of less than Rp 800 million can only allocate Village Cash Transfer of 25% of the total. In comparison, villages that welcome Village Funds between Rp 800 million to Rp 1.2 billion can allocate Village Cash Transfer of up to 30%. Towns that receive Village Funds of more than IDR 1.2 billion can allocate Village Cash Transfer up to 35% of their Village Funds and can even exceed 35%, specifically for villages with many low-income families.

2.2. Economic Well-being

Economic well-being is the satisfaction obtained from consuming the income received. The best way to assess well-being is by assessing the changes in well-being indicators (Schaffner, 2014). The consumption approach provides a more accurate description of household living standards than measuring short-term income (Schaffner, 2014). Per capita consumption can better reflect the level of well-being compared to total household consumption. Ravallion (2016) regards individuals as rational beings who seek to maximize their own benefits; thus, each person will only choose to fulfil needs that align with their budget and usage. This aligns with consumer theory, where everyone selects the best consumption preference (the most preferred bundle/feasible set) in accordance with their allocation (budget set).

3. Methodology

3.1. Data and Identification

The data analysed include rural households spread across 33 provinces and 428 districts/cities. The number of rural households analysed consisted of 35,759 households. The data used is sourced from the nationally representative Indonesian Socio-Economic Survey (Susenas) 2020 and consists of per capita consumption, internet access, access to credit, age of household head, gender of household head, education level of household head, disability of household head, working status of household head, number of household

members, Covid-19 Social Assistance (Cash Transfer and Village Cash Transfer), and non-Covid-19 Social Assistance (PKH, BPNT, and Regional Government assistance).

The study established a connection between the residential addresses of the households given Village Cash Transfer and the relevant data obtained from the Directorate General of Fiscal Balance, Ministry of Finance of the Republic of Indonesia. The period for data analysis is limited to 2020 as the start of the Covid-19 pandemic and the implementation of the Village Cash Transfer policy.

3.2. Estimation Strategy

To describe the impact of the Village Cash Transfer on the economic well-being of rural households, equation (1) is used.:

$$y = \beta_0(\tau) + \beta_1(\tau)x + v \qquad\qquad (1)$$

Where y is the natural logarithm of per capita household consumption in September 2020, x is the dummy variable for households' recipients of Village Cash Transfer, v is the control variable for families.

Since this research examines the policy impact at household quantile levels and the analysis regarding Cash Transfer will inevitably involve issues of endogeneity, selectivity, and optimization (Zuluaga et al., 2020), the SIVQR estimation method is employed. The SIVQR 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 independent variable is constant and solve the heteroscedasticity problem (Chernozhukov, Hansen & Wuthrich, 2020). SIVQR is like the IV Quantile Regression Model (IVQR) but involves smoothing in the computation of IVQR. With this smoothing, SIVQR produces faster computations compared to IVQR and yields statistically better estimation results. According to Kaplan (2022), the expected value of equation (1) in IV Quantile Regression Model (IVQR) can be expressed as equations (2) and (3). SIVQR is like IVQR by smoothing the IVQR computation. With this smoothing, SIVQR produces faster computations than IVQR and statistically better estimation results.

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

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

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 analysing 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.

To tackle endogeneity concerns while examining the influence of Village Cash Transfer on the economic well-being of rural households, the study employed the quantity of social support provided to the household by the Central Government as an instrument. Social assistance consists of PKH, BPNT, and BST. The greater the social assistance received; the less likely households will receive Village Cash Transfer. Households that do not receive social assistance can receive Village Cash Transfer. The more excellent the

opportunity for households to receive Village Cash Transfer, the greater the household consumption.

4. Results, Analysis, and Discussions

4.1. Impact Village Cash Transfer on Consumption

Many households receive social assistance more than once, as shown in Figure 1. The large number of households that receive more than one assistance indicates a problem of inaccurate targeting of social assistance. The inaccuracy of targeting Village Cash Transfer recipients in the form of inclusion errors occurred in at least 1,714 households, while exclusion errors occurred in at least 6,825 households. Many households that receive PKH, BPNT, and BST assistance receive the Village Cash Transfer, indicating the presence of inclusion errors. The number of households indicates the exclusion error in quantiles 1 to 3 that do not receive assistance, such as PKH, BPNT, and BST.
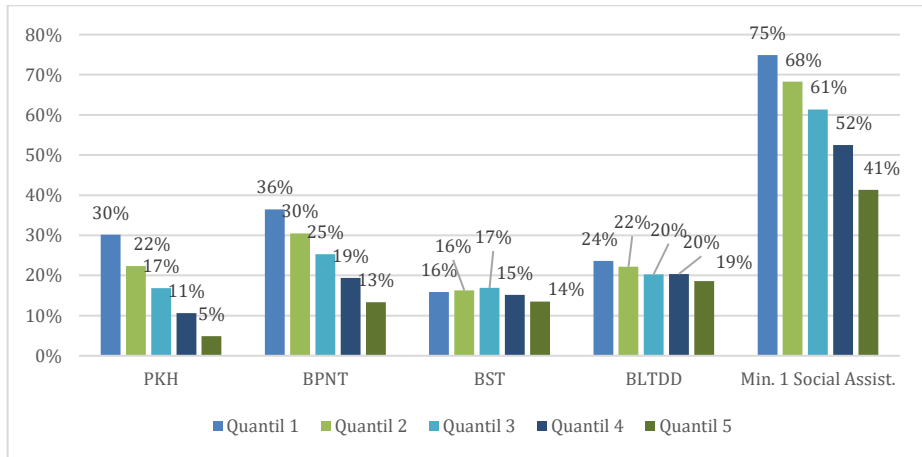
Figure 1. The proportion of Households Receiving Social Assistance in 2020
Source: Author's calculation Susenas 2020

Village Cash Transfer has a positive and significant impact on household consumption, as shown in Table 1. On average, the increase in consumption experienced by households receiving Village Cash Transfer was 75.7%. However, if analysed further, the increase in household consumption because of Village Cash Transfer was felt more by middle to upper-quantile households, with an impact size ranging from 97.6% to 158.7%. Households in the lowest quantile of the low-income bracket exhibit a slower response rate toward the changes. This implies that the program's effectiveness is relatively lower for people who are more disadvantaged and can cause inequality.

Household characteristics consist 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. Covid-19 Social Assistance consists of Cash Transfer and Village Cash Transfer, while non-Covid-19 Social Assistance consists of PKH, BPNT, and Regional Government assistance.

Table 1. Estimation Results of Village Cash Transfer on Consumption

Variables	IV ln per capita consumption	SIVQR ln per capita consumption		
		Q25	Q50	Q75
Village Cash Transfer	0.757***	0.493***	0.976***	1.587***
	(0.0350)	(0.0270)	(0.0857)	(0.3970)
HH Characteristics	Yes	Yes	Yes	Yes
Non-Covid-19 Soc. Assist	Yes	Yes	Yes	Yes
N	35759			
R^2	0.049			
adj. R^2	0.049			
F	947.6			

Standard errors in parentheses + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001

Source: Processed by Author, 2022

Social assistance assists the community in maintaining income stability and meeting their needs (Daidone et al., 2017), especially for vulnerable people and people with disabilities (Asuman et al., 2021). The assistance in cash transfers is more effective than non-cash transfers because cash transfers can provide more opportunities in their allocation, both for health and welfare (Hadna & Askar, 2022).

Although the results of estimating the impact of the Village Cash Transfer on household welfare are not by the general concept, Martin et al. (2020) explained that social assistance plays a vital role in maintaining household welfare or consumption levels and accelerating the recovery of economic conditions caused by income shocks.

4.2. Heterogeneity Effect

Even though the allocation of Village Cash Transfer in the Java region, as well as Kalimantan & eastern Indonesia, was almost the same, the differences in the economic characteristics of households in the two regions caused the impact of the Village Cash Transfer to be felt more by households in the Java region compared to Kalimantan & eastern Indonesia as shown in Table 2.

In addition to differences in the amount of Village Cash Transfer allocations, the problem of inaccuracy in targeting (inclusion and exclusion errors) can also cause Village Cash Transfer to have a more impact on the Java region than other regions. Targeting inaccuracy in the Java region is lower than in Sumatra, Kalimantan & eastern Indonesia.

There are also problems of inaccuracy in targeting in the Java region, both inclusion and exclusion errors; the impact of the Village Cash Transfer can be felt more by middle to upper-class households. As social assistance, Village Cash Transfer assists the community in maintaining income stability and meeting their needs (Daidone et al., 2017), especially for vulnerable people and people with disabilities (Asuman et al., 2021). This is also possible because there are problems with the inaccurate targeting of Village Cash Transfer recipients.

Table 2. Heterogeneity Effect Village Cash Transfer on Consumption

Variabel	Sumatera ln Konsumsi per kapita	Jawa ln Konsumsi per kapita	Kalimantan & Indonesia Timur ln Konsumsi per kapita
IV			
Village Cash Transfer	0.526***	1.033***	0.709***

	(0.0514)	(0.1001)	(0.0525)
SIVQR Q25			
Village Cash Transfer	0.351***	0.631***	0.428***
	(0.0370)	(0.0678)	(0.0334)
SIVQR Q50			
Village Cash Transfer	0.603***	1.371***	0.799***
	(0.0836)	(0.1976)	(0.0808)
SIVQR Q75			
Village Cash Transfer	1.033***	1.351***	1.008***
	(0.1912)	(0.1934)	(0.102)
HH Characteristics	Ya	Ya	Ya
Non-Covid-19 Soc. Assist	Ya	Ya	Ya
N	11723	8378	15658

Standard errors in parentheses $^+ p < 0.10$, $^* p < 0.05$, $^{**} p < 0.01$, $^{***} p < 0.001$

Source: processed using STATA MP17

5. Conclusion and Recommendation

The shift in the priority policy regarding utilizing Village Cash Transfer since 2020 was the driving force behind this research. The target of the Village Cash Transfer is non-PKH/non-BPNT low-income families with the criteria of losing their livelihood, not being recorded (exclusion error), and having family members prone to chronic/chronic illness. This study aims to analyse and provide empirical evidence on the impact of Village Cash Transfer on economic well-being at every quantile of Indonesian rural communities.

According to the study findings, Village Cash Transfer has a notable and favourable influence on the per capita consumption of rural households. However, the impact of Village Cash Transfer on consumption can be felt more by middle to upper-quantile households. Households receiving Village Cash Transfer in the lower quantile will continue to experience a decrease in consumption. In comparison, households receiving Village Cash Transfer in the higher quantile may experience increased consumption. Village Cash Transfer can significantly impact households in the Java region more than in other regions.

Village Cash Transfer as a priority activity for using Village Funds also still leaves problems with inaccurate distribution. These constraints and problems cause Village Funds and Village Cash Transfer to be more felt by middle to upper-quantile households than lower-quantile households.

The study's outcomes and conclusions have several policy implications. Firstly, policymakers must consider regional and community characteristics in formulating the Village Funds and allocating Village Cash Transfer. Secondly, given the importance of Village Cash Transfer in enhancing rural households' economic well-being, the policy approach to resolving this issue would be to distribute cash differently, with the poorest receiving more than the wealthiest. Village Cash Transfer should seek to increase the number of recipients rather than increase support to the most impoverished households. The Government must construct customized economic and social assistance programs for low-income households.

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