TRANSPUBLIKA
Precise. Resilience. Felicitous.

Journal of Management, Accounting, General Finance and International Economic Issues
https://ojs.transpublika.com/index.php/MARGINAL
Online ISSN 2809-8013 | Print ISSN 2809-9222

https://doi.org/10.55047/marginal.v4i1.1537

Original Article

The Impact of the Non-Cash Food Assistance (BPNT) Program on Household Welfare in Indonesia

Meriska Suwatri[1*], Hefrizal Handra[2], Efa Yonnedi[3]

[1]Program Study of Doctor Economics, Sumatera Barat, Indonesia
[2]Faculty of Economics and Business, Andalas University, Padang, Sumatera Barat, Indonesia
Email: [1)] ms.meriska06@gmail.com

Received : 16 November - 2024
Accepted : 23 December - 2024
Published online : 25 December - 2024

Abstract

One of the government's steps to address poverty through food security is the launch of the Non-Cash Food Assistance (BPNT) program. This study evaluates the impact of the Non-Cash Food Assistance (BPNT) program on household welfare in Indonesia. Utilizing logistic regression analysis and data from the 2017 National Socio-Economic Survey, the research reveals that participation in the BPNT program has a significant negative effect on household welfare. Recipients of BPNT are 8.366% less likely to achieve prosperity compared to non-recipients. This outcome underscores the need to address additional factors influencing welfare, such as education, employment opportunities, and access to social services. While the BPNT program effectively provides food assistance, its design and implementation require improvements to better support recipients in overcoming economic challenges. Enhancing the program's scope and efficiency is essential for achieving its objective of sustainable poverty alleviation and improving welfare outcomes for vulnerable households in Indonesia.

Keywords: Household Expenditures, Non-Cash Food Assistance (BPNT), Welfare.

1. Introduction

Poverty is a condition characterized by a lack of economic resources to meet basic needs. Poverty alleviation is a primary focus in efforts to achieve community welfare (Fetiningrum, 2017). This issue is often faced by developing countries, including Indonesia (Sumeitri & Destiningsih, 2022), where poverty remains a fundamental social problem that persists in society (Kuncoro, 2006).

According to the Central Bureau of Statistics (BPS), poverty is measured using the approach of the ability to meet basic needs. With this approach, poverty indicates the economic inability to fulfill basic needs such as food and non-food items, measured by expenditures (Dewi & Aslami, 2022). Therefore, individuals with monthly per capita expenditures below the poverty line can be categorized as poor residents (BPS, 2024).

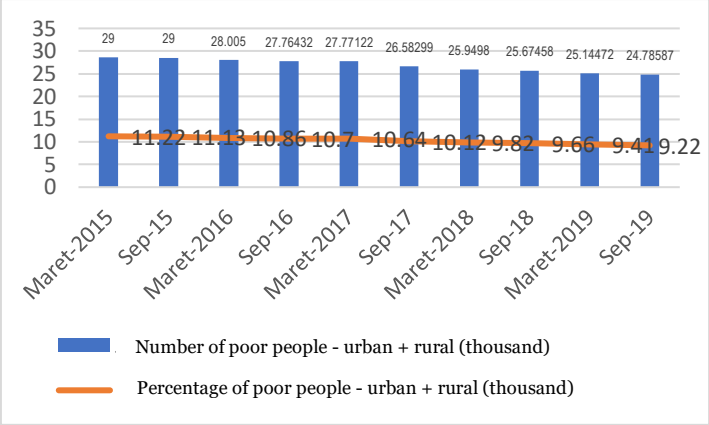

Figure 1. Number of Poor Population and Percentage of Poor Population in Indonesia

Source: Central Bureau of Statistics, processed data

Based on the data in Table 1, there is a trend of decreasing numbers of poor people; however, qualitatively, no significant change is observed. According to BPS statistics, in 2018, the number of poor people was 25.95 million, which decreased to 25.14 million in 2019, indicating a decline of 0.81 million from 2018 to 2019. While there has been a reduction in poverty in Indonesia, the number of poor people remains substantial. Despite this decrease, the change is not sufficient to significantly alter the overall poverty condition. Many individuals still live below the poverty line, indicating that efforts to address poverty need to be strengthened with more comprehensive and sustainable strategies.

Poverty is a primary cause of food insecurity, making sustainable poverty alleviation a key focus in improving access to food. One concrete implementation by the government to address poverty is through the provision of social protection programs.

Various program schemes have long been developed by the Indonesian government to enhance community welfare. One of the primary efforts is community empowerment to enable individuals to independently meet their daily needs. In 2017, the government implemented the Rice for the Poor Program (Rastra) to assist residents categorized as poor. However, at the end of 2018, this program was transformed into the Non-Cash Food Assistance (BPNT) program, which utilizes e-voucher technology, ensuring that aid distribution is more accessible and efficient. The BPNT program is a transformation of the Rastra program, aimed at improving the targeting, quantity, timing, pricing, quality, and administration of food assistance distribution. This program was first implemented in 2017 in 44 cities that had adequate infrastructure and facilities to support the non-cash mechanism (PMK, 2019).

According to basic price theory, social assistance programs from the government can increase income, which in turn affects how households decide and allocate their expenditures. With the implementation of BPNT, individuals can increase their consumption of food items because this transfer causes an upward shift in the budget constraint line.

BPNT is designed to improve the accuracy of food assistance distribution, ensuring that it is targeted, adequate in quantity, and timely. Additionally, BPNT strategically aims to reduce the expenditure burden on households, particularly since food spending for poor households accounts for nearly 30 percent of total monthly expenditures (Satriawan & Shrestha, 2018). Such food assistance is a government effort to ensure that all individuals facing hunger and malnutrition have access to nutritious food. The implication is that food assistance is expected to provide significant benefits for welfare and strengthen food security for poor households (Ningtiyas, 2018).

Observing the facts on the ground, one of the factors contributing to the high levels of poverty in Indonesia is the suboptimal targeting of government assistance programs. Many poor individuals who should receive aid do not get it due to inaccurate targeting. The existence of BPNT is one effort to reduce the expenditure burden on poor households, particularly those unable to meet all their needs, especially food requirements. Based on the description, it can be concluded that BPNT generally influences household expenditures. This study aims to investigate the effects of BPNT on welfare in Indonesia. It is expected that this research will enrich the theoretical discussion on the impact of BPNT on society and provide important insights for the government in designing BPNT policies.

2. Theoretical Review

2.1. Welfare

Consumption plays a crucial role in individual life. Every day, people must meet their needs through consumption activities. Consumption expenditures can be used as an indicator to assess the economic welfare level of individuals or households.

According to Albert & Hahnel (2017), the available consumption choices and the level of satisfaction derived from those choices influence a person's welfare. The higher an individual's income, the greater the level of utility that can be obtained, allowing for a wider variety of goods to be acquired to meet needs. This indicates that higher income correlates with greater levels of welfare.

The welfare approach can also be measured through household utility, which is often linked to consumption expenditures or household income. These two factors are considered input factors that generate utility for the household. With sufficient income, households are presumed to have better knowledge in allocating these resources, whether for purchasing food, clothing, housing, and other necessities. Total household expenditures, when divided by the number of household members, provide a measure of consumption expenditure or per capita income (Haughton & Khandker, 2009).

Consumption expenditures are often considered a more accurate proportion for measuring household welfare. Additionally, expenditures can more accurately reflect living standards compared to merely using income. Therefore, spending provides a better measure for assessing the recovery of welfare among poor households (Ayyash & Sek, 2020). Expenditures also become a primary focus in many studies because consumer spending serves as a key pillar for sustainable economic activity. Ernst Engel's economic theory, proposed in 1857, reveals that, with consistent preferences, the proportion of expenditures on food tends to decrease as income increases. Households that spend a larger share of their income on food are likely to be poorer (Fadhli & Fahimah, 2021).

2.2. Non-Cash Food Assistance (BPNT)

The Non-Cash Food Assistance (BPNT) program represents a significant transformation from the previous Rastra program, aiming to enhance accuracy in targeting, quantity, timing, pricing, quality, and administration. Launched in 2017 in 44 cities with adequate infrastructure, BPNT is social food assistance program where electronic funds are provided monthly to Beneficiary Families (KPM). These funds can only be used for purchasing food items at e-Warongs. In remote areas, the implementation of BPNT is adjusted according to government policies (PMK, 2019).

KPM, as the beneficiaries of BPNT, are families with the lowest socio-economic conditions in the areas of implementation. They are listed in the BPNT Beneficiary Recipient

List (DPM) managed by the Ministry of Social Affairs. The goals of BPNT include improving food security at the KPM level, serving as a social protection mechanism, and contributing to poverty alleviation efforts.

BPNT provides a monthly balance of Rp. 110,000 to Beneficiary Families (KPM), which is transferred to an ATM or the Family Welfare Card (KKS). On the 25th of each month (or on a date set by the designated e-Warong KUBE PKH or bank agents), this balance can be used by KPM to purchase rice and/or eggs at the designated e-Warong KUBE PKH or agents according to their place of residence (Hasimi, 2020).

3. Methods

This study is conducted quantitatively using secondary data from the National Socio-Economic Survey (*Susenas*) of 2019. Data processing is performed using STATA software. Each indicator used in the research model will refer to the National Socio-Economic Survey (SUSENAS) questionnaire. The definitions and operational concepts of all variables used in this research can be found in the following table:

Table 1. Operational Definitions of Variables

Variable	Operational Definition
Welfare (EXP_CAP)	Welfare in this study is assessed based on household expenditures. Individuals living above the poverty line are classified as prosperous, while those below the poverty line are considered unprosperous.
Non-Cash Food Assistance (BPNT)	A code of 1 indicates the status of Beneficiary Families (KPM), and 0 indicates non-KPM.
Demographic Characteristics of Households	The indicators for Demographic Characteristics (DC) are as follows: Gender of Household Head (jk): Code 1 = Male, 0 = Female. Age of Household Head (age: Numeric. Marital Status (married): Code 1 = Married, 0 = Other. Number of Household Members (jart): Numeric. Education Level of Household Head (education): Code 1 = Senior High School and above, 0 = Other. Residence Area (wilayah): Code 1 = Urban, 0 = Rural.
Socio-Economic Characteristics of Households	Employment Status of Household Head (employed): Code 1 = Employed, 0 = Other. Participation in the Family Welfare Card (KKS): Code 1 = Does not have KKS, Code 0 = Has KKS.

Source: National Socio-Economic Survey 2019, processed data.

This study employs logistic regression analysis, a statistical method used to explain the relationship between a response variable with two or more categories and one or more explanatory variables that can be categorical or interval (Hosmer Jr et al., 2013). Logistic regression transforms the response variable into a binary or dichotomous form, making it suitable for cases where the dependent variable has values of 0 and 1, as seen in research on the impact of the BPNT program on household welfare. This model interprets the effects of independent variables on the probability of the occurrence of the dependent variable through the logit transformation, which is the natural logarithm of the odds ratio.

4. Results and Discussion

The presentation of descriptive data aims to provide a comprehensive overview of the information contained in the collected data, particularly regarding the general characteristics of the sample and the beneficiaries. The government transitioned the social assistance mechanism from Rastra to BPNT starting in 2017. The number of BPNT beneficiaries in 2017 reached 1,286,194 KPM, while in 2018, this number increased to 10,093,866 KPM. In 2019, the government targeted to expand the number of beneficiaries to reach 15.6 million KPM.

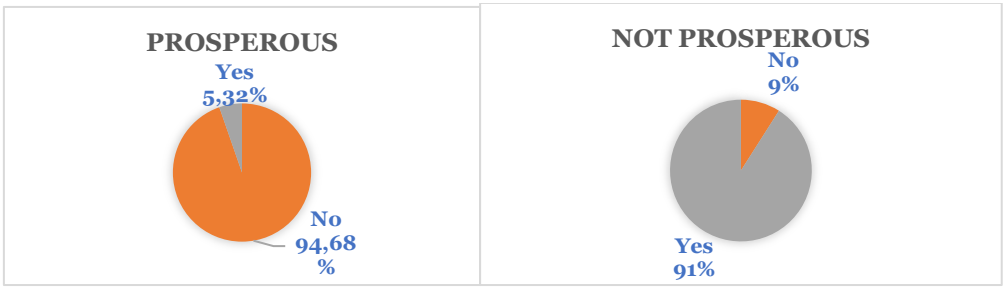

Figure 2. Distribution of BPNT Program Beneficiaries

Based on the Susenas data from 2019, the number of households receiving BPNT assistance reached 5,621 households, accounting for 5.9% of the total observations. Figure 1 shows that 5.32% of individuals classified as prosperous (living above the poverty line) received benefits from the BPNT program. In contrast, among individuals living below the poverty line, 9% received BPNT assistance, while the remaining 91% did not benefit from the program.

Next, the characteristics of BPNT beneficiaries can be seen in Table 2. Based on Table 2, it is shown that the majority of BPNT recipients are male, accounting for 89.49% of the total beneficiaries. Additionally, the average age of the household heads receiving the program is 54 years. The average household size for BPNT recipients is four members. The program is also predominantly represented by married household heads, making up 89.19%. Table 2 further illustrates the educational background of the household heads, indicating that 81.78% of BPNT recipients have completed high school or lower levels of education. Moreover, households living in rural areas receive BPNT assistance more frequently than those in urban areas, with 78.47% of recipients residing in rural regions. Regarding employment status, 58.46% of the household heads who do not have jobs are recipients of the BPNT program. Lastly, 40.92% of household heads holding a Social Welfare Card (KKS) also receive BPNT assistance.

Table 3. Characteristics of BPNT Beneficiaries

Individual Characteristics	BPNT	
	Yes	No
Gender		
Male	89,49%	89,40%
Female	10,51%	10,60%
Age		
Average	54	50
Household Size		
Average	4	4
Marital Status		
Married	86,19%	84,68%%
Not Married	13,81%	15,32%%
Education		

Individual Characteristics	BPNT	
	Yes	No
Senior High School and Above	18,22%	26,42%
Below Senior High School	81,78%	73,58%
Region		
Urban	21,53%	12,21%
Rural	78,47%	87,79%
Employment Status		
Employed	41,54%	46,69%
Unemployed	58,46%	53,31%
Ownership of Social Welfare Card		
Yes	40,92%	9,83%
No	59,08%	90,17%

Source: National Socio-Economic Survey 2019, processed data

Based on the estimation results of the logistic model shown in Table 3, this study demonstrates that household welfare is influenced by the BPNT program, the gender of the household head, the age of the household head, the marital status of the household head, the number of household members, the classification of the residence area, employment status, and ownership of the social welfare card.

Table 3. Results of Logistic Regression Analysis

Logistic regression			Number of obs = 95,320	
			LR chi2(9) = 7276.77	
			Prob > chi2 = 0.0000	
			Pseudo R2 = 0.0879	
Welfare	dy/dx	odds-ratio	Coef.	P>z
BPNT	-0.08366	0.549994	-0.59785	0,000
JK	0.00763	1.782186	0.577841	0,000
Age	0.00009	1.003977	0.00397	0,000
Married	-0.0048	0.835248	-0.18003	0,000
Jart	-0.00057	0.686273	-0.37648	0,000
Education	0.00251	1.016962	0.01682	0,440
Region	0.00285	1.588968	0.463085	0,000
Employed	0.00219	1.322995	0.279898	0,000
KKS	-0.00357	0.754306	-0.28196	0,000
_cons	-	14.23158	2.655463	0,000

Source: National Socio-Economic Survey 2019, processed data

Table 3 shows a significant negative impact of the BPNT program on welfare. This indicates that households receiving BPNT assistance experience a decrease in welfare. Regarding the gender of the household head, male heads are more likely to enhance household welfare. Similarly, as the age of the household head increases, household welfare also tends to improve. Conversely, marital status indicates that households headed by married individuals experience a decline in welfare. This trend is echoed by the number of household members; as the number of members increases, household welfare decreases. The residence area demonstrates that households living in urban areas positively influence welfare. Additionally, having a working household head contributes to improved welfare. Lastly, the ownership of a social welfare card shows a negative impact on household welfare.

Furthermore, to examine how independent variables influence the probability of the dependent variable, we can refer to the marginal effects values derived from the MFX analysis. The MFX table aids in interpreting the direct effects of independent variables on the

probabilities or log odds of the outcomes in the logistic regression model.This allows us to understand how changes in the independent variables affect the likelihood or log odds of specific outcomes. By analyzing these marginal effects, we can gain insights into the practical significance of each variable in relation to household welfare, providing a clearer picture of the dynamics at play in the BPNT program's impact.

The Non-Cash Food Assistance (BPNT) program has a negative impact on the probability of welfare. The dy/dx value of -0.08366 indicates that receiving BPNT reduces the probability of being considered prosperous by 8.366%. This means that individuals receiving BPNT are 8.366% less likely to achieve welfare compared to those who do not receive BPNT. This can be attributed to the fact that the BPNT program is typically aimed at economically disadvantaged groups, who are already in unfavorable economic conditions before receiving assistance. Additionally, BPNT recipients may face various other constraints, such as limited education, lack of access to decent jobs, or health issues that hinder their ability to significantly improve their welfare. While BPNT provides crucial support for meeting basic needs, this assistance may not be sufficient to elevate recipients to a higher level of welfare. This highlights the need for a more holistic and comprehensive policy approach to effectively address welfare issues. It also indicates that many BPNT recipients have yet to fully utilize the assistance to enhance their family welfare. Therefore, despite the theoretical expectation that BPNT could reduce poverty levels, the implementation of this program still faces numerous challenges that need to be addressed to achieve the desired outcomes.

Gender has a positive influence on the probability of welfare. The dy/dx value of 0.00763 indicates that changes in the gender variable increase the probability of welfare by 0.763%. This means that differences in gender affect an individual's chances of achieving welfare, with a probability increase of 0.763%. This finding is consistent with the results of studies (Han et al., 2019; Mutia, 2020; Nainggolan & Saragih, 2022; Sharma & Singh, 2015), which also highlight the significance of gender in influencing welfare outcomes.

Age has a positive influence on the probability of welfare. The dy/dx value of 0.00009 indicates that each additional year of age increases the probability of being considered prosperous by 0.009%. In other words, as individuals age, their chances of achieving welfare slightly improve. This finding may reflect the fact that as people get older, they tend to have more work experience, accumulated savings, or better financial stability, all of which contribute to enhanced welfare. These results align with the findings of Han et al. (2019); Nainggolan & Saragih (2022); Sharma & Singh (2015).

Marital status shows a negative influence on the probability of welfare. The dy/dx value of -0.0048 indicates that being married reduces the probability of being considered prosperous by 0.48%. This means that individuals who are married have a 0.48% lower likelihood of achieving welfare compared to those who are unmarried. This can be understood in light of various factors associated with marital status, such as increased family responsibilities, greater financial dependency, or differing time allocations in daily life, all of which can negatively affect welfare.

The number of household members has a negative influence on the probability of welfare. The dy/dx value of -0.00057 indicates that each additional unit in the number of household members decreases the probability of being considered prosperous by 0.057%. This means that the more members there are in a household, the lower the likelihood that the household will be deemed prosperous. This may be attributed to the increased allocation of resources needed to meet the basic needs of each additional member in the household, such as food, clothing, healthcare, and education. This study's findings align with previous research,

indicating that a larger number of household members reduces the chances for a household to escape poverty and achieve better welfare levels (Nasiraei et al., 2013).

The residence area shows a positive influence on the probability of welfare. The dy/dx value of 0.00285 indicates that living in a specific area increases the probability of being considered prosperous by 0.285%. This means that individuals living in the studied area have a higher likelihood of achieving welfare compared to those living in rural areas. Employment status also shows a positive influence on the probability of welfare. The dy/dx value of 0.00219 indicates that having employment increases the probability of being considered prosperous by 0.219%. This means that individuals who are employed have a higher chance of achieving welfare compared to those who are unemployed.

On the other hand, ownership of the social welfare card shows a different outcome. The dy/dx value of -0.00357 indicates that having a social welfare card reduces the probability of being considered prosperous by 0.357%. This means that individuals who possess the card are less likely to achieve welfare compared to those who do not have it. This may reflect the notion that ownership of the social welfare card could be an indicator that individuals are in a less prosperous economic category. Therefore, despite receiving assistance from the social welfare card, there are still other factors that limit their potential for welfare improvement.

5. Conclusion

The study findings lead to the conclusion that recipients of the Non-Cash Food Assistance (BPNT) program have a 8.366% lower likelihood of being prosperous compared to those who do not receive BPNT. This highlights that, although BPNT provides food assistance, further consideration is needed regarding other factors that can influence the welfare of recipients, such as access to education, employment, and social services. As a suggestion, expanding the scope and enhancing the effectiveness of the BPNT program could help increase its positive impact on the welfare of beneficiaries.

6. References

Albert, M., & Hahnel, R. (2017). *Quiet revolution in welfare economics* (Vol. 5028). Princeton University Press.

Ayyash, M., & Sek, S. K. (2020). Decomposing inequality in household consumption expenditure in Malaysia. *Economies*, *8*(4), 83.

Dewi, M. S., & Aslami, N. (2022). Analisis Strategi Marketing Terhadap Minat Konsumen Dalam Penggunaan Jasa Keuangan Pospay Pada Pt Pos Indonesia (Persero) Regional I Sumatera. *TRANSEKONOMIKA: AKUNTANSI, BISNIS DAN KEUANGAN*, *2*(4), 81–86. https://doi.org/10.55047/transekonomika.v2i6.307

Fadhli, K., & Fahimah, D. A. N. (2021). Pengaruh Pendapatan, Pendidikan, Dan Gaya Hidup Terhadap Kesejahteraan Keluarga Penerima Manfaat (Kpm) Bantuan Sosial Covid-19. *Jurnal Education and Development*, *9*(3), 118–124.

Fetiningrum, A. V. K. (2017). *Inovasi Program Bantuan Pangan Non Tunai (BPNT) Sebagai Upaya Pengentasan Kemiskinan (Studi pada Kelurahan Tunjungsekar Kecamatan Lowokwaru Kota Malang)*. Universitas Brawijaya.

Han, J., Wang, J., & Ma, X. (2019). Effects of farmers' participation in inclusive finance on their vulnerability to poverty: Evidence from Qinba poverty-stricken area in China. *Emerging Markets Finance and Trade*, *55*(5), 998–1013.

Hasimi, D. M. (2020). Analisis Program Bantuan Pangan Non Tunai (BPNT) guna meningkatkan kesejahteraan masyarakat dalam perspektif ekonomi Islam. *REVENUE: Jurnal Manajemen Bisnis Islam*, *1*(1), 81–94.

Haughton, J., & Khandker, S. R. (2009). *Handbook on poverty+ inequality*. World Bank Publications.

Hosmer Jr, D. W., Lemeshow, S., & Sturdivant, R. X. (2013). *Applied logistic regression*. John Wiley & Sons.

Kuncoro, M. (2006). *Ekonomi Pembangunan*. CSAE Working Paper WPS, 07.

Mutia, R. (2020). Analisis penyebab kemiskinan petani sektor perkebunan rakyat di provinsi aceh, berdasarkan faktor individu dan rumah tangga. *Kinerja: Jurnal Ekonomi Dan Manajemen*, *17*(1), 129–139.

Nainggolan, F., & Saragih, M. T. B. (2022). Kesejahteraan Rumah Tangga Pertanian Di Provinsi Sumatera Utara. *Journal of Analytical Research, Statistics and Computation*, *1*(1), 1–21.

Nasiraei, S. M., Hosseini, S. J. F., & Farhangfar, H. (2013). Factors affecting economic prosperity of rural families in the South Khorasan Province (Iran). *African Journal of Business Management*, *7*(17), 1675.

Ningtiyas, E. R. (2018). Counterproductive effects of rice for poor (raskin) program on labor supply. *Jurnal Perencanaan Pembangunan: The Indonesian Journal of Development Planning*, *2*(2), 188–202.

Satriawan, E., & Shrestha, R. (2018). Mistargeting and regressive take up of the Indonesian Rice Subsidy Program. *Asian Economic Journal*, *32*(4), 387–415.

Sharma, R., & Singh, G. (2015). Access to modern agricultural technologies and farmer household welfare: Evidence from India. *Millennial Asia*, *6*(1), 19–43.

Sumeitri, A., & Destiningsih, R. (2022). Analysis Of Factors Affecting Poverty in Central Java 2016-2019. *MARGINAL: Journal of Management, Accounting, General Finance and International Economic Issues*, *1*(4), 23–40. https://doi.org/https://doi.org/10.55047/marginal.v1i4.257