THE EFFECT OF AGRICULTURAL SECTOR CREDIT ON RURAL POOR POPULATIONS CHANGES IN JAVA ISLAND

Diah Nur Amany[1*], Abdul Aziz Ahmad[1], Bambang Bambang[1], Suparjito Suparjito[2]

[1] Jenderal Soedirman University, Indonesia
[2] Directorate General of Treasury, Ministry of Finance, Republic of Indonesia
*diahnuramany@gmail.com, Indonesia

ABSTRACT

The number of poor people on Java Island occupies the first position compared to other provinces in Indonesia. By region, the number of poor people in rural areas is always higher than in urban areas. The majority of the rural poor depend on their livelihoods in the agricultural sector. This study aims to analyze the effect of the variable agricultural sector investment credit, agricultural working capital credit, farmer exchange rates, and COVID-19 on changes in the number of poor people in rural areas on the island of Java. This research uses secondary data from five provinces in the period 2017–2022.The results of the study show that investment credit in the agricultural sector and working capital credit in the agricultural sector have no effect on changes in the number of poor people in rural areas. Meanwhile, the exchange rate of farmers has a significant negative effect on changes in the number of poor people in rural areas. And COVID-19 has had a significant positive effect on changes in the number of poor people in rural areas on Java Island in the 2017–2022 period. The implication that is recommended in this research is to evaluate and adjust policies related to the provision of investment credit and working capital credit in the agricultural sector. In addition, efforts are needed to maintain the stability of the Farmer's Exchange Rate (NTP) at a rational level. Coordination between the government, financial institutions, the private sector, and rural communities needs to be improved in formulating policies and programs that support FTT stability and poverty alleviation in rural areas. Interventions focused on rural communities, such as social assistance, skills training, and agricultural sector development, are also important to deal with the impact of COVID-19 and improve their livelihoods and incomes.

Keywords: Poverty, Credit, Agriculture, NTP, COVID-19

1. Introduction

The number of poor people fluctuates from year to year, with the number of poor people in rural areas always being higher than the number of poor people in urban areas (Central Bureau of Statistics, 2023a). Even though there was a decrease in the overall number of poor people in 2019, the number of poor people increased again in 2020 and 2021. One of the main factors contributing to this increase in the number of poor people is the COVID-19 pandemic, which has hit Indonesia since early 2020 (Setyadi & Indriyani, 2021). If you look at Table 1.1, the number of poor people is 13.94 million, concentrated in Java; this figure is more than half of the poor population in Indonesia.

Table 1.1 Number of Poor Population by Island, September 2022

Island	Percentage of Poor Population (%)			Number of Poor Population (Million People)		
	Urban	Rural	Total	Urban	Rural	Total
Sumatera	8.25	10.48	9.47	2.25	3.51	5.76
Java	7.65	11.94	9.03	8.03	5.91	13.94
Bali and Nusa Tenggara	8.71	17.80	13.46	0.65	1.45	2.10
Kalimantan	4.70	7.07	5.90	0.39	0.60	0.99
Sulawesi	5.88	13.08	10.06	0.50	1.53	2.03
Maluku dan Papua	6.00	27.62	20.10	0.16	1.38	1.54
Indonesia	7.53	12.36	9.57	11.98	14.38	26.36

Source: Central Bureau of Statistics, 2023

Indonesia, as an agricultural country, has a strategic role in the structure of national economic development while maintaining agriculture as a crucial sector (Afiati, 2018). The agricultural sector makes a significant contribution to the Gross Regional Domestic Product (GRDP) and acts as a provider of employment, making a major contribution to poverty alleviation and socio-economic stability. The poverty alleviation program for farming households is carried out using various instruments, one of which is the capital assistance instrument in the form of credit with the aim of increasing production (Novindra et al., 2019). The use of bank credit in order to increase production is divided into two categories: investment credit and working capital credit (Dwiastuti, 2020). The effect of this credit is to increase investment and working capital belonging to the community, resulting in an increase in national income that will achieve economic growth (Fahriyansah, 2018). If economic growth can be achieved, then the impact will be a reduction in the number of poor people.

This research has significant novelty in expanding our understanding of the influence of agricultural credit on poverty. Previous studies have evaluated the effectiveness of credit in reducing poverty, but this research makes a contribution by focusing on the amount of credit received by the agricultural sector as a factor affecting poverty, especially macro-level poverty in rural areas. A relevant previous study by Purnomo (2020) found that the provision of credit plays an important role in reducing poverty in the Province of DIY. However, this study is general in nature and does not specifically focus on agricultural credit and its impact on rural poverty. One of the studies on credit in the agricultural sector is by Abdallah et al. (2019), who stated that access to credit resulted in significant gains in agricultural income in Ghana. However, this research was conducted to evaluate the effectiveness of credit on income, so the credit variable used was a dummy variable. Then, research by Abdallah et al. (2018) evaluates the effectiveness of credit on farmer welfare, not poverty.

Many variables affect poverty in Indonesia, especially in rural areas. Agriculture is the main source of income in rural areas, so variables related to agriculture will have a greater impact on people's income levels (Rahmawati, 2020). Poverty has a close relationship with welfare, where groups of people who live in poverty are considered not prosperous. Measuring farmer welfare is often carried out through the Farmer Exchange Rate (NTP) indicator (Yacoub & Mutiaradina, 2020). Research conducted by Rahmawati (2020) shows that increasing the welfare of farmers has a significant impact on reducing poverty rates in rural areas. In addition, in the context of the

COVID-19 pandemic, poverty has also experienced a significant impact. Sani et al. (2022), in their research, found an increase in unemployment and poverty rates as a result of the COVID-19 pandemic. The government's appeal to implement health protocols, implement social distancing, limit travel between regions, and implement Large-Scale Social Restrictions policies in several areas aims to stop the spread of the COVID-19 virus and protect the public. However, these actions also had a negative impact on economic activity.

This study aims to analyze the effect of agricultural sector credit and farmer welfare on the number of poor people, especially in rural areas on Java Island, in the 2017–2022 period. This research is unique in its focus on the effect of the amount of credit in the agricultural sector on rural poverty in Java and will involve an analysis of the effect of farmer welfare on rural poverty. In addition, this research will also include the COVID-19 variable as a disturbing variable or an unexpected variable that affects poverty.

2. Literature Review

2.1 Rural Poverty

The Central Bureau of Statistics (BPS) applies the concept of ability to meet basic needs (basic needs approach) as a poverty measurement method. According to this concept, poverty is defined as the economic inability to meet one's basic food and non-food needs, as measured by expenditure. If the average expenditure per capita per month is below the poverty line, then a person will be categorized as poor (Central Bureau of Statistics, 2023a). Poverty that hits Indonesia and other countries is actually a phenomenon of rural and urban poverty (Saifuloh & Nursini, 2022). Referring to data published by the Central Bureau of Statistics (2023b) the number of poor people in rural areas is greater than the number of poor people in urban areas. A village is said to be poor if the village and its population are relatively underdeveloped compared to other regions (Kurniawan, 2015). Rural communities have problems with limited access to key goods and services such as health, education, water, other natural resources, markets, and employment opportunities. This makes it difficult for people to maintain and improve their standard of living. Most of the population living in rural poverty is made up of local residents who work as subsistence farmers with low wages and are directly involved in agricultural activities (Todaro & Smith, 2012). The majority of the poor in rural areas have no choice but to utilize the available resources to survive.

2.2 Causes and Strategies for Poverty Alleviation

Kuncoro (2006) stated that the cause of poverty boils down to the vicious circle of poverty theory developed by Nurkse in 1953. Nurkse said "A poor country is poor because it is poor". So this theory assumes that poverty has no end or beginning, which means that all the elements that cause poverty will be interconnected. Nurkse explained how poverty and underdevelopment can be trapped in a vicious circle where low investment in the productive sector results in low productivity, which in turn results in low people's income. The low income of the people then limits their ability to invest in productive sectors that can increase productivity, so that the vicious circle of poverty continues to spin.

Poverty is often associated with rural areas; this is due to the homogeneous livelihoods of rural residents, namely as farmers, and a lack of ability that makes it impossible to obtain alternative sources of income (Sri Rejeki, 2019). Farmers' dependence on seasons causes difficulties during famine or dry seasons. This is the cause of poverty in rural areas because income is only earned during certain seasons. The government's poverty alleviation strategy has two main

components: protection for families and community groups that experience temporary poverty, as well as assistance to people experiencing chronic poverty through empowerment and preventing the emergence of new poverty (Yulianto, 2023). Initiatives aimed at the poor include providing basic necessities, developing a social security system, and developing a business culture. In addition, the poor can also determine their own plans to overcome poverty, for example through institutional loans, increased working hours, the participation of other family members in work, migration, or savings. In an effort to reduce the poverty rate, simultaneous efforts are needed through strategies that involve various sectors, regions, and related parties (Sugiyarta, 2014).

2.3 Agriculture Credit

Credit is the provision of money or bills that can be equated with it, based on a loan agreement or agreement between the bank and another party that requires the borrower to pay off the debt after a certain period of time with interest (President of the Republic of Indonesia, 1998). According to Sari (2019), credit principles are based on trust and prudence. Moral, commercial, financial, and collateral trust are indicators of credit confidence. Credit-granting trust is distinguished by pure trust and reserve trust. If the creditor gives credit to the debtor solely on the basis of trust and without any other collateral, this is called pure trust. However, if the creditor is not sure, he will ask for material guarantees (such as house certificates, BPKB, and so on) before giving credit or providing loans to the debtor. Types of credit can be seen from various angles; when viewed in terms of the use of credit, it is divided into investment credit and working capital credit (Thamrin Abdullah, 2014).

One target recipient of government credit is the agricultural sector. The aim of offering loan programs through bank intermediaries is to increase farmer capital so that farmers can develop their businesses (Novindra et al., 2019). Agricultural loans can be used for various purposes, such as purchasing seeds, fertilizers, agricultural medicines, agricultural equipment, developing agricultural land, and other operational needs. In addition, agricultural credit is also intended to encourage farmers or business actors in the agricultural sector to be more productive and efficient in running their businesses, as well as to improve the quality of the agricultural products they produce. Thus, agricultural credit can be a way to increase economic growth in the agricultural sector and help reduce poverty in rural areas.

2.4 Farmers Exchange Value (Nilai Tukar Petani or NTP)

Farmers' Exchange Rate (NTP) is an indicator used to measure the ability of farmers to exchange their agricultural products for goods or services needed for farmer household consumption as well as needs in the production process of agricultural goods (Riyadh, 2015). The NTP is an indicator that functions to determine the level of welfare of farmers in an area (Permana, 2021). According to the Central Statistics Agency (2023c), NTP is the ratio between the price index received by farmers (It) and the price index paid by farmers (Ib). Price index received by farmers (It) and price index paid by farmers (Ib) Based on this ratio, it can be concluded that the higher the NTP, the better the profits obtained by farmers or the better their economic conditions.

2.5 COVID-19

COVID-19 is an infectious disease caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) virus (Ministry of Health of the Republic of Indonesia, 2022). On March 31 2020, COVID-19 was declared a pandemic in Indonesia (President of the Republic of Indonesia, 2020). In an effort to suppress the spread of COVID-19 the minister of health

established large-scale social restrictions (PSBB) (Regulation of the Minister of Health of the Republic of Indonesia, 2020). However, there are other impacts arising from the COVID-19 pandemic, and the implementation of the PSBB, namely an increase in the number of unemployed due to Termination of Employment (PHK), which has implications for disrupting people's incomes and difficulties in making ends meet, thereby increasing the poverty rate (Hastuti et al. al., 2020).

3. Research Methodology

This study uses quantitative research methods in the form of secondary data in the form of panel data. Panel data consists of cross-sectional data (5 provinces in Java) and time series data (2017 to 2022). This data was obtained from the websites of Bank Indonesia and the Central Bureau of Statistics. Panel data is a combination of cross-sectional data and time series data, so to test the hypotheses that have been formulated in this study, the model can be formulated as follows:

$$[Y_{it} - (Y_{it-1})] = \alpha_1 + \beta_1 lnKI_{it} + \beta_2 lnKM_{it} + \beta_3 NTP_{it} + \beta_4 COV_{it} + e$$

Where:
$Y_{it} - (Y_{it-1})$ = Changes in the Total Poor Population
α = Constanta
$\beta_{1,2,3,4}$ = Regression Coefficient
KI_{it} = Amount of Agricultural Sector Investment Credit in Province i in Year t
KM_{it} = Amount of Working Capital Credit in the Agricultural Sector in Province i in Year t
NTP_{it} = Farmers Exchange Rate in Province i In Year t
COV_{it} = Dummy Variable COVID-19 in Province i In Year t
i = *Cross section* 5 Provinces
t = *Time series* 2017-2022
e = *Standard Error*

There are several methods that can be used to estimate model parameters with panel data, namely the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). Of the three estimation methods using the panel data model, the best model will be selected to be used in this study using the Chow Test, Hausman Test, and Lagrange Multiplier Test. If the best regression estimation method has been found, then the data will be tested for the classical assumption test. According to Gujarati & Porter (2009), cited in Kosmaryati et al. (2019), the possibility of multicollinearity in panel data is very small. So in this study, it is enough to do the heteroscedasticity test and the autocorrelation test. After selecting the regression model method and obtaining the best regression estimation model to be used in this study, the hypothesis testing will then be analyzed in the form of an F test, a t test, and a coefficient of determination test.

4. Results

From the models produced, the best model will be used in this study, and to determine the appropriate model, the Chow Test, Hausman Test, and Lagrange Multiplier Test are required.

Table 4.1 Common Effect Model (CEM)

Variable	Coefficient	Std. error	t-statistic	P-*value*
C	1780.084	473.1126	3.762497	0.0009
LNKI	7.809004	46.96274	0.166281	0.8693
LNKM	-32.41940	37.26345	-0.870005	0.3926
NTP	-14.65427	4.848748	-3.022278	0.0057
COV	162.6830	30.61379	5.314045	0.0000

Table 4.2 Fixed Effects Model (FEM)

Variable	Coefficient	Std. Error	t-statistic	P-*value*
C	520.1326	1115.717	0.466187	0.6459
LNKI	13.51697	73.19743	0.184665	0.8553
LNKM	16.21261	77.83524	0.208294	0.8370
NTP	-10.33622	6.133390	-1.685238	0.1067
COV	157.8372	32.21359	4.899710	0.0001

Table 4.3 Random Effects Model (REM)

Variable	Coefficient	Std. Error	t-statistic	P-*value*
C	1780.084	494.1699	3.602171	0.0014
LNKI	7.809004	49.05296	0.159195	0.8748
LNKM	-32.41940	38.92198	-0.832933	0.4128
NTP	-14.65427	5.064557	-2.893494	0.0078
COV	162.6830	31.97635	5.087605	0.0000

Based on the results of the Chow test, the Chi-Square Cross-section probability value is 0.6237 > (α = 0.05), meaning that the right model to use is the Common Effect Model. Because CEM is accepted, it will proceed to the Lagrange Multiplier (LM) test.

Table 4.4 Chow Test

Effects Test	Statistic	d.f.	P-*value*
Cross-section F	0.478704	(4,21)	0.7510
Cross-section Chi-square	2.617835	4	0.6237

Based on the results of the LM test, the value of Both 0.0325 < (α = 0.05) means that the right model to use is the Random Effect Model. Based on the tests that have been carried out, it is concluded that the best estimation method in this study is the Random Effect Model.

Table 4.5 Lagrange Multiplier Test

	Cross-section	*Period*	*Both*
Breusch-Pagan	2.387529	2.183260	4.570789
	(0.1223)	(0.1395)	(0.0325)

From the Random Effect Model that has been done, the estimation results of the model are as follows:

$$\hat{}[Y_{it} - (Y_{it-1})] = 1780{,}084 + 7{,}809 \ln KI_{it} - 32{,}419 \ln KM_{it} - 14{,}654 NTP_{it} + 162{,}683 COV_{it}$$

4.1 Classical Asumption Test

4.1.1 Heteroscedasticity Test

The heteroscedasticity test can be done with the white test, by looking at the Chi-Square probability value.

Table 4.7 Heteroskedasticities Test

F-statistic	0.694461	Prob. F(13,16)	0.7435
Obs*R-squared	10.82148	Prob. Chi-Square(13)	0.6258
Scaled explained SS	11.81036	Prob. Chi-Square(13)	0.5433

Based on Table 4.11, the Chi Square Probability (Obs* R-squared) value is 0.36258 > (α = 0.05), so the heteroscedasticity effect in the model can be statistically tolerated.

4.1.2 Autocorrelation Test

To determine the presence of autocorrelation in this study, the Durbin-Watson (DW) test was used.

Table 4.8 Autocorrelation Test

DW	Durbin-Lower (DL)	Durbin-Upper (DU)
2,1514	1,1426	1,7326

Based on Table 4.12, using the equation DL < DU < DW < 4-DU < 4-DL or 1.1426<1.7386<2.1514<2.2614<2.8574, the autocorrelation effect in the model can be statistically tolerated.

4.2 Hypothetic Testing

4.2.1 F-Stat

The F-statistic test is carried out by comparing the calculated F test with the F table and by looking at the probability value of F, where the significance level used is α = 0.05 or 5%. Based on the results of the regression output, the F-stat value of 12.57269 is greater than the F table value with df (k-1) and (n-k), namely 2.76. The P-value F-stat 0.00001 is smaller than α = 0.05. Because F_test > F_table and the probability error of F_test < 0.05, this means that the variables agricultural sector investment credit, agricultural working capital credit, farmer exchange rates, and COVID-19 together have a significant effect on the change variable of the number of rural poor people in Java Island in the period 2017–2022.

4.2.2 t-Stat

To see the level of significance of the effect of investment credit in the agricultural sector, working capital credit in the agricultural sector, and farmer exchange rates on changes in the number of rural poor people in Java Island in the period 2017–2022, the t test was partially used. With a significance level of (α/2 = 0.05/2 = 0.025) and a degree of freedom (n-k), where n = 30 and k = 5, it is known that the t-table value is 2.485. The following are the results of a two-tailed t test on Random Effect Model (REM) estimation.

The lnKI variable has a t-stat > t-table value where 0.159 > -2.485 and a P-value (0.8748 > α = 0.025). Thus, it can be concluded that investment credit in the agricultural sector has no effect on changes in the number of rural poor people on Java Island in the period 2017–2022. The lnKM variable has a t-stat > t-table value where -0.832933 > -2.485 and a P-value of 0.4128 > (α = 0.025). Thus, it can be concluded that working capital credit in the agricultural sector has no

effect on changes in the number of rural poor people on Java Island in the period 2017–2022. In the NTP variable, it is known that t-stat < t-table where -2.893493 < -2.485 and P-value 0.0078 < (α = 0.025), so that it can be concluded that farmer exchange rates have a significant negative effect on changes in the number of rural poor people in provinces on Java Island in 2017–2022. The COVID-19 variable has a t-stat > t-table value where 5.087605 > 2.485 and a P-value of 0.0078 (α = 0.025). It can be concluded that COVID-19 has had a significant positive effect on changes in the number of rural poor people in provinces on Java Island in 2017–2022.

Table 4.9 t-Statistic Testing

Variable	t-Statistic
LNKI	0.159195
LNKM	-0.832933
NTP	-2.893494
COV	5.087605

4.2.3 Determination Coefficient (R^2)

To measure how much the model's ability to explain the influence of independent variables on the dependent variable can be indicated through the value of the coefficient of determination (R squared), It shows that the value of R-squared is 0.667954, or 66.8%. So it can be concluded that the independent variables of investment credit in the agricultural sector, working capital credit in the agricultural sector, farmer exchange rates, and COVID-19 are jointly able to explain the variation of the dependent variable in the change in the number of poor people by 66.8%. While the remaining 33.2% of the variation in the dependent variable is explained by other variables not included in the regression model.

5. Discussion

5.1 The Effect of Agricultural Sector Investment Credit on Changes in the Number of Poor People in Rural Areas

Investment credit for the agricultural sector has had no effect on the number of poor people on rural Java Island in the 2017–2022 period. This research is in line with research (Purnomo, 2020), which states that investment credit has no significant effect on the poverty level. Investment credit in the agricultural sector does not directly affect changes in the number of rural poor people. Implementation of investment credit takes time and a long process to reduce the number of rural poor people. Even though the agricultural sector investment credit aims to develop and modernize the agricultural sector with investment funds for the procurement of equipment, infrastructure, increased productivity, business diversification, and market development, the low level of agricultural mechanization in Indonesia has limited the use of efficient agricultural tools and machines. This results in a high dependence on human labor, which is unsustainable, with farm labor only needed at the tillage and harvest stages. This condition results in underemployment and low agricultural efficiency (Ministry of Agriculture, 2019).

Based on data in the Agricultural Involution of the Ministry of Agriculture (2019), the level of tractor use in Indonesia is very low compared to other countries. The use of tractors per hectare in Indonesia is only 0.005 Kw/ha, while countries such as the United States have a level of 1.7 Kw/ha, the Netherlands 3.6 Kw/ha, and Japan 5.6 Kw/ha. The low mechanization of agriculture in Indonesia is due to the slow development of mechanization. The impact of this low level of mechanization is that the time required to cultivate the land is relatively long and involves a lot of

human labor. Human labor in the agricultural sector does not get the appropriate wages, so agricultural productivity is low. High dependence on human labor, which is only used for a limited time, causes low agricultural efficiency. Based on these conditions, although the agricultural sector investment credit aims to encourage the development of the sector, the low level of mechanization and high dependence on human labor hinder the expected positive impact of increasing agricultural productivity and reducing poverty.

5.2 The Effect of Working Capital Credit in the Agricultural Sector on Changes in the Number of Poor People in Rural Areas

Working capital credit for the agricultural sector has had no effect on the number of poor people in rural Java Island in the 2017–2022 period. Working capital credit for the agricultural sector does not have a direct effect on poverty because the focus is on financing business capital. The influence of working capital credit in the agricultural sector on poverty is indirect because the success of businesses funded by credit is influenced by other factors such as harvest season, climatic conditions, weather, market competition, and other factors. Financial management and the use of working capital credit are also important in increasing farmer incomes and reducing rural poverty. Although working capital credit can support poverty reduction in the long run, its effect is indirect and depends on other factors that affect business success and income. This research is in line with the research of Nwibo et al. (2019), which stated that agricultural credit did not have a significant impact on the poverty rate of farming households in the study area. The main obstacle faced by farmers is the lack of credit availability, which causes uncertainty in agricultural inputs and outputs. In addition, there is a time lag between input and output, which also causes uncertainty in the farmer's income. As a result, farmers find it difficult to meet basic household needs, especially before the harvest season arrives.

5.3 The Effect of Farmer Exchange Rates on Changes in the Number of Poor People in Rural Areas

Farmer Terms of Trade (NTP) has a negative effect on changes in the number of rural poor people in provinces on Java Island in 2017–2022. NTP has a negative effect on changes in the number of rural poor people because of the link between agricultural commodity prices and farmer income. According to the Central Statistics Agency (2023c), NTP is the ratio between the price index received and the price index paid by farmers, which illustrates the relationship between farmer income and agricultural input costs. The higher the NTP, the higher the profit earned by farmers. NTP is used as an indicator of farmer welfare, which shows that an increase in NTP will increase farmers' income and welfare. With higher incomes, farmers can meet basic needs such as food, education, health, and infrastructure. Increasing farmer incomes also contributes to economic growth in rural areas and creates new job opportunities. Thus, an increase in NTP can reduce poverty in rural areas as a whole and improve the standard of living in rural communities significantly. This research is in line with Rahmawati's research (2020), which concluded that the welfare of farmers as measured by FTT has a significant effect on reducing the number of poor people in rural areas. This finding is also in line with the research by Maulidina et al. (2022), which shows that changes in NTP are associated with changes in the opposite direction of poverty levels. The research is based on general equilibrium theory, which explains that changes in FTT reflect changes in farmers' welfare, which ultimately contribute to poverty reduction.

5.4 The Effect of COVID-19 on Changes in the Number of Poor People in Rural Areas

The COVID-19 variable has a positive effect on changes in the number of rural poor people in provinces on Java Island in 2017–2022. This is because COVID-19 disrupts economic activity, thus affecting people's incomes and ultimately increasing the number of poor people. The results of the research are in line with research conducted by Setyadi and Indriyani (2021) which states that an increase in COVID-19 cases has a significant positive impact on the poverty rate. COVID-19 is having a significant economic impact, with business closings and reduced economic activity globally. Many workers have lost their jobs or experienced reduced income due to business closures, travel restrictions, and reduced consumer demand. Especially for workers in the informal sector, they do not have adequate job security or social security, so they are more severely affected. Sectors such as tourism, hotels, and restaurants have also seen a sharp decline in income, causing many workers in these sectors to lose their jobs or suffer wage cuts. All of these factors have contributed to an increase in the number of poor people. According to Sitorus (2022), rural poverty increased during the pandemic while the price of rice, the main contributor to the poverty line, decreased. The increase in poverty in rural areas during the pandemic was caused by decreased income, decreased prices and demand for agricultural products, limited access to markets, dependency on the affected sectors, and other factors.

6. Conclusion

The independent variables, namely, agricultural sector investment credit, agricultural working capital credit, farmer exchange rates, and COVID-19, jointly have a significant effect on the dependent variable of changes in the number of rural poor people in Java Island in the period 2017–2022. Investment credit variable and working capital credit in the agricultural sector, both of which have no effect on changes in the number of rural poor people in Java Island in the period 2017–2022, The Farmer Exchange Rate (NTP) variable has a negative effect on changes in the number of rural poor people in provinces on Java Island in 2017–2022. So, if the NTP increases, the change in the number of rural poor will decrease. That is, the number of poor people decreased from the previous year. The COVID-19 variable has a positive effect on changes in the number of rural poor people in provinces on the island of Java in 2017–2022. Thus, COVID-19 encourages additional changes in the number of poor people.

References

Abdallah, A. H., Ayamga, M., & Awuni, J. A. (2018). Impact of agricultural credit on farm income under the Savanna and Transitional zones of Ghana. *Agricultural Finance Review*, *79*(1), 60–84. https://doi.org/10.1108/AFR-02-2018-0009

Afiati, N. F. (2018). *Pengaruh Luas Lahan Sektor Pertanian, Jumlah Tenaga Kerja, Kredit Pertanian Dan Infrastruktur Irigasi Terhadap PDRB Sektor Pertanian Di Kabupaten Sumedang Periode 2005-2015 (Disertasi Doktoral)* [Universitas Pasundan. Bandung]. http://repository.unpas.ac.id/id/eprint/33113

Badan Pusat Statistik. (2023a). *Konsep Kemiskinan dan Ketimpangan*. Biro Pusat Satatistik. Jakarta. https://www.bps.go.id/subject/23/kemiskinan-dan-ketimpangan.html

Badan Pusat Statistik. (2023b). *Nilai Tukar Petani*. Badan Pusat Statistik. Jakarta. https://www.bps.go.id/subject/22/nilai-tukar-petani.html

Badan Pusat Statistik. (2023c). *Profil kemiskinan di indonesia september 2023*. Berita Resmi Statistik. Jakarta. https://www.bps.go.id/pressrelease/2023/01/16/2015/persentase-penduduk-miskin-september-2022-naik-menjadi-9-57-

Dwiastuti, N. (2020). Pengaruh Kredit Perbankan Terhadap Pertumbuhan Ekonomi dan Hubungannya Dengan Kesejahteraan Masyarakat Kabupaten/Kota di Provinsi Kalimantan Barat. In *Prosiding Seminar Akademik Tahunan Ilmu Ekonomi dan Studi Pembangunan* (pp. 73–91). Fakultas Ekonomi dan Bisnis Universitas Tanjung Pura.

Fahriyansah, M. (2018). Pengaruh Kredit Terhadap Pertumbuhan Ekonomi Di Indonesia (2010-2016). *Jurnal Ilmiah Mahasiswa FEB Universitas Brawijaya*, *3*(4).

Gujarati, D. N., & Porter, D. C. (2009). *Basic Econometrics* (5th ed.). McGraw-Hill.

Hastuti, P., Harefa, D. N., & Napitupulu, J. I. M. (2020). Tinjauan Kebijakan Pemberlakuan Lockdown, PHK, PSBB Sebagai Antisipasi Penyebaran Covid-19 Terhadap Stabilitas Sistem Moneter. *Prosiding WEBINAR Fakultas Ekonomi Universitas Negeri Medan*, *V o l . 1*, 57–70. http://digilib.unimed.ac.id

Kementerian Kesehatan Republik Indonesia. (2022). *Pertanyaan dan Jawaban Terkait Covid-19*. Nfeksiemerging.Kemkes.Go.Id. https://www.kemkes.go.id/folder/view/full-content/structure-faq.html

Kementerian Pertanian. (2019). *Pemecahan Masalah Efisiensi Kerja Petani*. Cyber Extension - Pusluhtan Kementan. http://cybex.pertanian.go.id/mobile/artikel/72583/Pemecahan-Masalah-Efisiensi-Kerja-Petani/

Kosmaryati, K., Handayani, C. A., Isfahani, R. N., & Widodo, E. (2019). Faktor-Faktor yang Mempengaruhi Kriminalitas di Indonesia Tahun 2011-2016 dengan Regresi Data Panel. *Indonesian Journal of Applied Statistics*, *2*(1), 10. https://doi.org/10.13057/ijas.v2i1.27932

Kuncoro, M. (2006). *Ekonomika Pembangunan, Teori, Masalah, dan Kebijakan*. UPP AMP YKPN.

Kurniawan, A. (2015). *Tipologi Modal Sosial dan Spasial Masyarakat dalam Program PNPM Mandiri Perdesaan di Kecamatan Pagak dan Kecamatan Donomulyo Kabupaten Malang* [Universitas Brawijaya]. http://repository.ub.ac.id/id/eprint/143622

Maulidina, S., Zahara, V. M., & Sutjipto, H. (2022). Analisis Faktor Yang Mempengaruhi Kemiskinan Pada Sektor Pertanian Di Indonesia Bagian Barat. *National Conference on Applied Business, Education, & Technology (NCABET)*, *2*(1). https://doi.org/10.46306/ncabet.v2i1.86

Novindra, N., M Sinaga, B., Hartoyo, S., B. deRosari, B., Hastuti, H., Adif I. Fallo, F., & Amanda, D. (2019). Dampak Bantuan Penanggulangan/Pengentasan Kemiskinan Terhadap Produksi, Pendapatan Dan Kesejahteraan Rumahtangga Petani. *Journal of Agriculture, Resource and Environmental Economics*, *2*(1), 88–99. https://doi.org/10.29244/jaree.v2i1.25977

Nwibo, S. U., Okonkwo, T. O., Eze, A. V., Mbam, B. N., & Odoh, N. E. (2019). Effect of Microcredit on Poverty Reduction among Rural Farm Households in Northeast, Nigeria. *Asian Journal of Agricultural Extension, Economics & Sociology*, *35*(2), 1–9. https://doi.org/10.9734/ajaees/2019/v35i230218

Peraturan Menteri Kesehatan Republik Indonesia. (2020). *Pedoman Pembatasan Sosial Berskala Besar dalam Rangka Percepatan Penanganan Corona Virus Disease 2019 (COVID-19) (Permenkes No. 9/2020)*. https://doi.org/10.4324/9781003060918-2

Permana, F. Y. (2021). *Analisis pengaruh dana desa, nilai tukar petani dan upah buruh tani terhadap kemiskinan pedesaan di kawasan timur indonesia tahun 2015-2019 (skripsi)*. UIN Syarif Hidayatullah Jakarta.

Presiden Republik Indonesia. (2020). *Keputusan Presiden (Keppres) Nomor 11 Tahun 2020 tentang Penetapan Kedaruratan Kesehatan Masyarakat Covid-19.* https://peraturan.bpk.go.id/Home/Details/135058/keppres-no-11-tahun-

2020#:~:text=KEPPRES No. 11 Tahun 2020,19) %5BJDIH BPK RI%5D

Presiden RI. (1998). *Undang-Undang Republik Indonesia Nomor 10 Tahun 1998 Tentang Perubahan Atas Undang-Undang Nomor 7 Tahun 1992 Tentang Perbankan*. https://peraturan.bpk.go.id/Home/Details/45486/uu-no-10-tahun-1998

Purnomo, S. D. (2020). *Pengaruh Kredit, Etnis, dan Infrastruktur terhadap Kemiskinan di Provinsi Daerah Istimewa Yogyakarta (Disertasi Doktoral)* [Universitas Jenderal Soedirman. Purwokerto]. http://repository.unsoed.ac.id/id/eprint/14298

Rahmawati, N. (2020). Pengaruh Kesejahteran Petani Terhadap Kemiskinan Di Perdesaan. *Jurnal Ilmu Ekonomi Dan Pembangunan*, *20*(1), 38–44. https://jurnal.uns.ac.id/jiep/article/view/35518/26925

Riyadh, M. I. (2015). Analysis of Farmers Term of Trade of Crops Commodities in North Sumatra. *Jurnal Ekonomi & Kebijakan Publik*, *6*(1), 17–32.

Saifuloh, N. I., & Nursini. (2022). Dilema Penanggulangan Kemiskinan Perdesaan Melalui Sektor Pertanian. *National Multidisciplinary Sciences*, *1*(2), 102–108. https://doi.org/10.32528/nms.v1i2.59

Sani, S. R., Fitri, C. D., Amri, K., Muliadi, M., & Ikhsan, I. (2022). Dampak Pandemi Covid-19 terhadap Pengangguran, Kemiskinan dan Ketimpangan Pendapatan: Bukti Data Panel di Indonesia. *Ekonomis: Journal of Economics and Business*, *6*(1), 107. https://doi.org/10.33087/ekonomis.v6i1.499

Sari, Y. P. (2019). *Pengaruh Dana Pihak Ketiga dan Tingkat Suku Bunga Kredit Terhadap PT. Bank Pmbangunan Daerah Jawa Timur Tbk. Cabang Kangean* [Universitas Muhammadiyah]. http://repository.um-surabaya.ac.id/id/eprint/3650

Setyadi, S., & Indriyani, L. (2021). Dampak Pandemi Covid-19 Terhadap Peningkatan Resiko Kemiskinan di Indonesia. *PARETO: Jurnal Ekonomi Dan Kebijakan Publik*, *4*(1), 1–11.

Sitorus, E. A. G. (2022). Pengaruh Covid-19 terhadap Harga Beras, Nilai Tukar Petani dan Kemiskinan di Wilayah Perdesaan. *Jurnal Ekonomi Pertanian Dan Agribisnis*, *6*(3). https://doi.org/10.21776/ub.jepa.2022.006.03.9

Sri Rejeki. (2019). Pilihan Rasional Petani Miskin pada Musim Paceklik. *Jurnal Analisa Sosiologi*, *8*(2), 185–212.

Sugiyarta. (2014). *Strategi Kemiskinan Terpadu di DIY*. BAPPEDA DIY. http://bappeda.jogjaprov.go.id/artikel/detail/58-strategi-penurunan-kemiskinan-terpadu-di-diy

Thamrin Abdullah. (2014). *Bank dan Lembaga Keuangan* (2nd ed.). Universitas Terbuka. https://pustaka.ut.ac.id/lib/pkop4318-bank-dan-lembaga-keuangan-edisi-2/

Todaro, M. P., & Smith, S. C. (2012). Economic Developement. In *Pearson* (11th ed.).

Yacoub, Y., & Mutiaradina, H. (2020). Analisis Kesejahteraan Petani dan Kemiskinan Perdesaan di Indonesia. *Prosiding Seminar Akademik Tahunan Ilmu Ekonomi Dan Studi Pembangunan*.

Yulianto, T. (2023). Memahami Kembali Strategi Pengentasan Kemiskinan di Indonesia sebagai Sumber Penerimaan Negara. *DPJb Kemenkeu*. https://djpb.kemenkeu.go.id/kanwil/sulteng/id/data-publikasi/berita-terbaru/2830-memahami-kembali-strategi-pengentasan-kemiskinan-di-indonesia-sebagai-sumber-penerimaan-negara.html