

Labor Conditions, Wages and Non-Cash Transfers in Poverty in Eastern Indonesia

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ABSTRACT

Poverty is a complex and prolonged problem because it touches all aspects of both social, economic and Environmental Society at large. The Eastern region of Indonesia still has a high percentage of poverty, there are 5 provinces with a predominance of poverty percentage identified as being at a high percentage of poor population, including Papua 27.33%, West Papua 22.67%, East Nusa Tenggara 21.10%, Maluku 17.74% and Gorontalo 16.17%. This study identifies the factors of productivity components of the poor with the variable influence of non-cash direct assistance, minimum wage and informal sector workers on poverty cases in 5 regions of eastern Indonesia. This study uses Panel Data with the ordinary Least Squares method, this researcher in the period 2016-2022 by using regional observation or (cross section) 5 provinces in eastern Indonesia including Maluku, Gorontalo, East Nusa Tenggara, Papua and West Papua. Informal sector workers (PSI) have a positive and significant effect, the Minimum wage (UM) has a negative and significant effect and non-cash food assistance (BPNT) has no effect on poverty in 5 provinces in eastern Indonesia in 2016-2022.

Keywords: Poverty, Minimum Wage, Informal Workers

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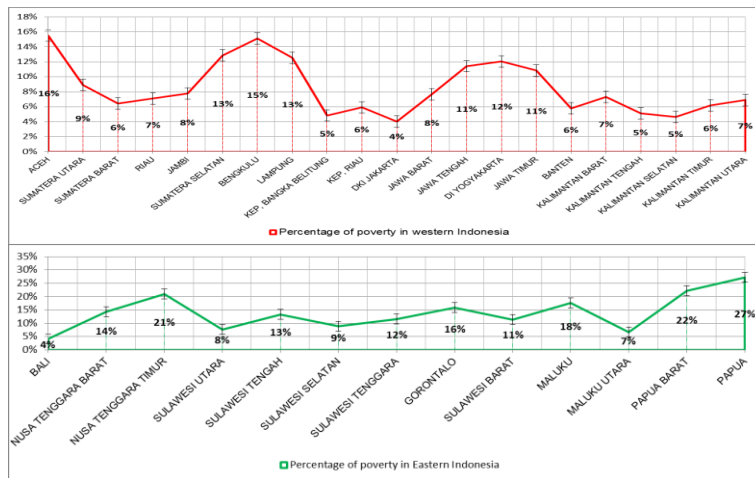
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INTRODUCTION

The poverty paradigm that occurs with various spatial studies in the literature, (Sen, 1976) The concept of poverty is not only a matter of income but also consists of various dimensions that together form the concept of poverty, in other words, a person is not poor just because he does not have enough income to meet his needs, he is poor because his opportunities to get out of poverty are reduced due to lack of education, health, and quality of life. Indonesia is included in developing countries with poverty levels that still tend to be high and continue to be structural. (Purwono et al., 2021) the state of poverty in Indonesia shows that the mantra approach tends to underestimate chronic poverty (households remained poor in two consecutive observation periods). An estimated 6.7,7% of total households are in chronic poverty. using the poverty gap ($\textcircled{3}=1$) and the severity of poverty ($\textcircled{3}=2$), The Chronic component reached 63.16% and 54.15% of total poverty,

respectively. The EDE poverty gap approach also shows that poverty in Indonesia is mostly chronic, amounting to 92% of the total poverty component. The high percentage of chronic poverty is due to the large impact of the gap. (Yuliansyah, 2022), In addressing poverty, the priority in Indonesia is to improve the quality of poverty data . The number of poor people in Indonesia is absolute poverty because it is determined based on income below it. Every year there is an increase because the minimum cost of food and non-food is increasing. By raising the poverty line, the amount of poverty can be known.

Presidential decree of the Republic of Indonesia No. 44 of 2002 on the Development Council of the Eastern Region of Indonesia (KTI) Article 3 states that the Eastern Region of Indonesia includes 14 provinces, among others; West Kalimantan, Central Kalimantan, South Kalimantan, East Kalimantan, West Nusa Tenggara, East Nusa Tenggara, North Sulawesi, Central Sulawesi, South Sulawesi, Southeast Sulawesi, Gorontalo, Maluku, North Maluku, and Papua. Based on Presidential Regulation No. 2 of 2015 on the National Medium-Term Development Plan (RPJMN) 2015-2019, the areas included in the Eastern Region of Indonesia (KTI) are all regions in Indonesia other than the island of Sumatra, Java, and Bali. Thus, KTI includes the islands of Kalimantan, Sulawesi, Maluku, Nusa Tenggara, and Papua. This shows that economic development in eastern Indonesia tends to be slower than in western Indonesia, especially in the field of poverty alleviation. In other words, there is a regional gap where KBI is seen to enjoy more results. The phenomenon of poverty can be seen in the following data:



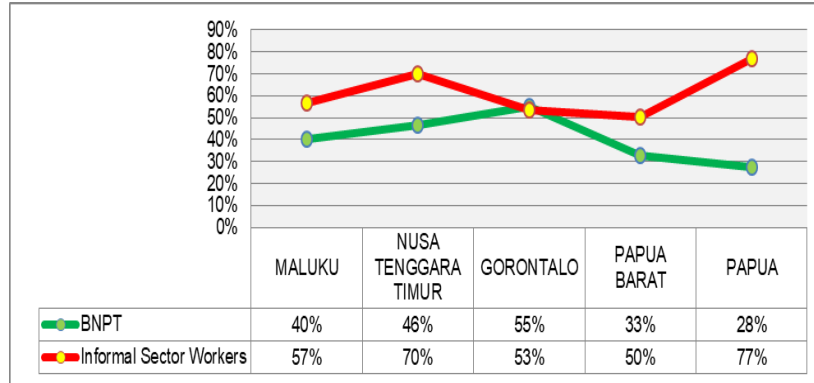
Source: Indonesian Central Bureau of Statistics, data processed in 2023
Figure 1: The average percentage of poverty in western Indonesia and eastern Indonesia for the period 2016-2022.

From the data on the percentage of poor people between the wilaya of the Western Region of Indonesia (KBI) and the Eastern Region of Indonesia (KTI), it can be explained that the range of the percentage of poverty in the Western Region of Indonesia (KBI) is 4% to 15%, while in the Eastern Region of Indonesia (KTI) is 4% to 27%. So if averaged between regions, the Western Region of Indonesia (KBI) is only 9.13% while the Eastern

Region of Indonesia (KTI) is 12.33%. So it can be concluded that the tendency of the poor population is in the Eastern Region of Indonesia (KTI). Comparison of poor people between KBI and KTI areas is a consideration in determining the observation area. Poverty shown in Figure 1 explains that the poverty rate is relatively high with a percentage above 15% located in the provinces, namely; Papua 27.33%, West Papua 22.67%, East Nusa Tenggara 21.10%, Maluku 17.74% and Gorontalo 16.17%. The number of poor people in these 5 provinces is the highest percentage of poverty in the KTI region, not only in the KTI region but from all provinces in Indonesia. According (Ferezegia, 2018), The poverty severity index in Indonesia explains that the poverty severity index in the provinces of West Papua (3.12), Papua (1.93), East Nusa Tenggara (1.17), Maluku (0.89), and Gorontalo (0.850), respectively. This region is included in the Cluster 1 province which explains that P2, P1 and P0 have high numbers both in terms of severity, percentage of poverty and depth of poverty.

Studies have been conducted to see how the condition of the factors that trigger poverty in eastern Indonesia, (Anita et al., 2023) several important components in the eastern and western regions of Indonesia show that variable life expectancy, average length of schooling, domestic investment, foreign direct investment, and health sector spending have a significant negative effect on poverty. In comparison, Gross regional Domestic Product, social protection spending, and education spending have a significant positive effect on poverty. Furthermore, from the results of dummy variables, there is a significant negative difference between poverty in western Indonesia and eastern Indonesia in 2010-2021. (Febriandika et al., 2022), government spending on health and the regional minimum wage negatively affect the number of poor people in eastern Indonesia. East Nusa Tenggara province has a high poverty rate, and North Maluku province tends to have a low number of poor people. (Soleman & Soleman, 2022), Islamic Banking Financing, TPAK, RLS, UHH, and Inflation have no influence. variable GRDP variables simultaneously affect the level of poverty. In contrast, UHH has a significant effect in a negative direction. This means that if there are independent variables at once, then the level of poverty in eastern Indonesia is increasingly leading to change. Thus, the government can make policies to increase usialife expectancy, so that people have high productivity and can ultimately reduce poverty levels.

This study focuses on the Eastern Region of Indonesia using variable minimum wage direct cash assistance and informal sector workers. Important assumptions identified where the eastern region of Indonesia has a tendency to low wage levels Menimbulkan low productivity. Meanwhile, the people of the eastern region still work on average in the informal sector, which means that their income tends to be erratic and does not follow basic government standards. In this effort, the government has carried out various important policy packages to help reduce and reduce poverty through direct cash and non-cash assistance policies to communities in eastern Indonesia.



Source: Indonesian Central Bureau of Statistics, data processed in 2023

Figure 2: The average percentage of non-cash direct assistance and informal sector workers for the period 2016-2022.

The percentage of informal workers in 5 Eastern Provinces is very high, the three largest provinces are Papua province at 77.18%, East Nusa Tenggara at 70.16% and Maluku 56.89%, these three provinces in the eastern region have a very high average range. In a slightly lower area, it covers 2 provinces, namely Gorontalo 53.34,34% and West Papua 50.09%. (Muara Setyanti, 2020) The higher the education of workers, the less likely they are to work in the informal sector. The informal sector needs special attention from policy makers. so it can improve working conditions to create better jobs that offer greater economic inclusion, generate higher incomes, and create a way out of poverty.

The percentage of poor people receiving non-cash food assistance in the 5 provinces of the eastern region on average ranges from 30-50% smaller than aid recipients in western Indonesia, the highest percentage of poor people receiving non-cash food assistance is in the Gorontalo region at 55.07% and the lowest in the Papua region at 27.6%. The Data above reflects that more than half of the poor in eastern Indonesia still do not receive non-cash food assistance from the government. (Ma'ruf, 2022) , the implementation of the policy to accelerate poverty alleviation in the education sector has a positive impact on the rate of change and acceptance of the poor. model optimal policy implementation models to accelerate poverty alleviation in the education sector can be built by looking at the configuration and collaboration between regulatory actors, implementers, and beneficiaries. The distribution of non-cash direct assistance is also not significant.

The regional minimum wage in 5 provinces of eastern Indonesia when viewed from the nominal average is quite large, the highest is in Papua province of 3,133,554 rupiah, West Papua province of 2,818,457 rupiah and Gorontalo of 2,410,580 while the lowest regional minimum wage is in Maluku province of 2,307,445 rupiah and East Nusa Tenggara of 1,754,285 rupiah. (Faharuddin & Endrawati, 2022), Some practical implications for reducing the incidence of the working poor are increasing workers' income through productivity growth and improving workers' skills, encouraging the participation of workers from poorer groups and reducing precarious employment. The study also suggests the need to continue to help the working poor, especially by increasing access to financial credit. (S.

G. Dewi, 2018), using balanced panel data from the Indonesian Family Life Survey (IFLS) found that the minimum wage reduced the wage gap in 2007 and 2014. The minimum wage policy in 2014 led to an increase in the wage disparity between 2007 and 2014, with the largest wage disparity in the middle of the distribution of middle-income earners in Indonesia.

This study focuses on 5 regions of eastern Indonesia with a high percentage of poverty has a poverty range of, Papua 27.33%, West Papua 22.67%, East Nusa Tenggara 21.10%, Maluku 17.74% and Gorontalo 16.17%. Poverty levels in eastern Indonesia this study identifies how the influence of non-cash direct assistance, minimum wage and informal sector workers on poverty cases in 5 regions of eastern Indonesia.

LITERATURE REVIEW

The World Bank sets the international poverty line at \$2 US dollars per capita per day. That is, the population that is considered poor in all countries in the world is a population that has less than \$2 per day. The determination of the poverty line of US\$2 per capita per day is based on the poverty lines of 75 countries (lessdeveloped countries and developing countries) collected by the World Bank during 1990-2005. Most of the poverty line is determined using the same calculation method, namely the cost method of meeting basic needs (*basic need approach*). To calculate the international poverty line, the World Bank converts the poverty line of 75 countries expressed in the currency of each country to the US dollar (BPS, 2009)

In Indonesia, other important factors that cause chronic poverty are large household size, lack of access to services (finance, electricity, information, and mobility), and having limited or no assetssama. Freelance work in the informal sector of Agriculture and living in rural areas increase the likelihood of poverty, although it is not always chronic. Poverty therefore, poverty alleviation programs need to target the right causes because exposure to poverty varies from household to household. (Sugiharti et al., 2022), the agricultural employment sector in Indonesia has a positive and significant relationship, so that someone who works in the agricultural sector has a greater pr obabilityto be classified as a poor worker. This is because workers who work in the agricultural sector have uncertain wages because the agricultural sector is seasonal, besides that there are still many workers who manage agricultural land in a traditional way so that the wages that workers can receiveare low (Febriana, 2010).

Lost income is obvious, but it is still far from market wages. For the same budget, unproductive wages have less impact on poverty than basic income schemes or assistance associated with government ration card assignments. Therefore, labor productivity is very important as a poverty alleviation policy. (Murgai et al., 2016), the minimum wage has a negative and significant influence on poverty. It is explained that the existence of the minimum wage stipulationthis amount must be above the needs of a decent living community, which means that an increase in wages will not mean if the number of decent living needs still ranges above the minimum wage,(Sari, 2021).

Budget allocations for social protection programs have a negative and significant impact on poverty levels in Indonesia. Increasing the determinants of poverty in the government budget for subsidies and improving the quality of life of people can reduce poverty in Indonesia. The unemployment rate is positively correlated with poverty but not significantly. This is because people need time to get a suitable job. However, in the long run, unemployment will have a positive impact on poverty in Indonesia through income effects, (Wiranatakusuma & Primambudi, 2021). The Indonesian government should continue to monitor the ongoing program, so that the existing poverty alleviation program can run well and on target. The government also needs to evaluate poverty alleviation programs, lest the budget that is sought to be absorbed by the poor, but does not touch poverty alleviation itself. (Ramdani, 2017).

Provincial governments in Indonesia give emphasis to hacking in accordance with the characteristics of the poor in their districts. In poverty alleviation, an area that has different population characteristics and indicators that cause a high percentage of poor people. Policies concerning human resources are still very relevant and affect the welfare of many people, errors in decisions will have a wide impact on poverty between regions (Pratama et al., 2022). Cash assistance programs directly impact poverty in Indonesia, but the program's policies have drawn protests because the distribution and disbursement are considered confusing. On the other hand, this program is considered more effective and efficient to provide to the community than social assistance in the form of basic foodstuffs, because the community can spend funds on other needs besides food needs. (R. Dewi & Andrianus, 2021)

METHOD

Types of Data sources and research objects

This research is in the form of descriptive quantitative problem solving based on data by presenting, analyzing and interpreting it. The Data used is secondary data, this data is obtained indirectly from various publications, official platforms and various data collection books. Secondary Data obtained from the Central Bureau of Statistics (BPS) Indonesia and the publication of each province. This study uses combined Panel Data from a data between time series and regional observation, where the time series used in this research in the period 2016-2022, using regional observation or (cross section) 5 provinces in eastern Indonesia include Maluku, Gorontalo, East Nusa Tenggara, Papua and West Papua. In this study the bound variable used is the percentage of poor people and the free variable used is the minimum wage, non-cash direct assistance and informal sector workers. Here is the definition of variable operational:

Table 1: Operational Definition Of Variables

No	variable	symbol	unit	definition
1	percentage of poor population	Y	percent	percentage of poor population is the percentage of population that is below the poverty line (GK). Percentage of poor population the figure indicated by the HCI-PO indicates the proportion of poor people in a region. A high percentage of the poor population indicates that the poverty rate in a region is also high. Source: https://sirusa.bps.go.id/sirusa/index.php/indikator/2
2	number of Informal sector workers	Psi	percent	of informal workers are residents who work with the status of self-employed, assisted by non-permanent workers / unpaid workers, free workers, and family workers/unpaid. Source: https://bps.go.id/
3	Minimum Wage	UM	Rupiah	minimum wage is the lowest wage (including regular allowances but excluding overtime pay) paid to employees (per type of position/job) applicable to all districts/cities in a province.. Source: https://bps.go.id/4
4	non-cash food aid		percent age	the percentage of poor people who receive food social assistance in the form of non-cash from the government provided to the KPM every month through an electronic account mechanism that is used only to buy food at food vendors/e-warong in cooperation with banks. Sumber: https://pusdatin.kemensos.go.id/bantuan-pangan-non-tunai-

Ordinary Least Square regression panel data

This study uses multiple linear regression analysis (Ordinary Least Square) using panel data. Statistical analysis of data using data processing applications Eviews. Panel Data used with time series from 2016-2021 and *Cross-section data* consisting of 5 provinces in eastern Indonesia. Econometric mathematical modeling is formed to determine the effect of the dependent variable on the independent variable, then the panel data regression model is used with the following equation :

- $$PPM_{it} = \beta_0 + \beta_1PSI_{it} + \beta_2UM_{it} + \beta_3BPNT_{it} + e_{it}$$
- PPM = Percentage of Poor Population
 - PSI = Percentage of Informal Sector Workers
 - UM = Minimum Wage
 - BPNT = non-cash food aid
 - = Percentage of Poor People Receiving Non-Cash Food Assistance
 - I = Observation of 5 provinces (cross section)
 - T = Research period 2016-2022 (time series)
 - β_0 = Coefficient Constant intercept which is a scalar
 - $\beta_1, \beta_2, \beta_3$ = regression coefficient or slop slope of each variable
 - et* = standard error in the mathematical model, (Error Term)

Data Panel analysis methods

Selection of the best data panel model

There are basically four models used in panel data analysis, namely pooled least square, pooling independent cross section over time, least square dummy variable (fixed effects), and random effects. The three models can be described in the following figure:

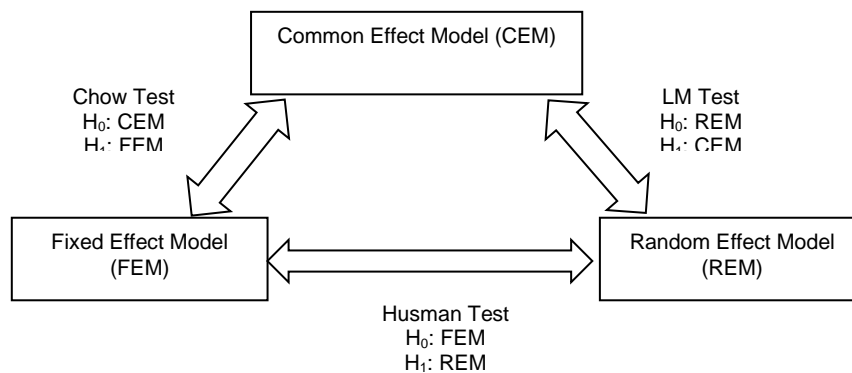


Figure 3: Panel Data Model Selection

Pooled Least Square (PLS)

In this model it is assumed that all coefficients are constant for all cross points of place and time. The general model form is as follows :

$$y_{it} = a + X_{it}\beta + U_{it} \quad i=1,\dots,N \quad t=1,\dots, T,$$

$$y_{it} = a + X_{it}\beta + D_{time}U_{it} \quad i=1,\dots,N \quad t=1,\dots, T,$$

where i is the state and etc. and t is the time. The assumption from the above model is that The Intercept is all the same and the slope coefficient of the variable X is identical for all places. The second model is the *Pooled least square* by adding variabel dummy. D time shows dummy time variables that usually start from the second order of time, for example, the second year and the first year as the basis (3).

Chow test /Fixed Effect

Chow test is used to determine whether the panel data regression technique with *fixed effect* (FE) is better. Pendekatan *This Fixed effect approach* allows for different intercepts between individuals but individual intercepts do not vary over time. This approach is written with the following equation:

$$Y_{it} = \beta_{0i} + \beta_1 X_{1it} + \beta_2 X_{2it} + \dots + \beta_n X_{nit} + \mu_{it}$$

Where β_{0i} is *intersep* dan β_1, β_2 is the slope. The existence of intercept differences in each cross section unit is done by adding *subscript i*. Although the intercepts differ between countries, the intercepts of each country do not differ between times, which is called *time invariant*. Chow Test with the following hypothesis:

$$F_{hitung} = \frac{\frac{SSE_1 - SSE_2}{(n-1)}}{\frac{SSE_2}{(nt-n-k)}} \sim F_{\alpha (N-1, NT-N-K)}$$

- 1) H_0 : *Pooled Least Square* (PLS)
- 2) H_1 : *Fixed Effect Model* (FEM)

Comparison is used if the result of F count is greater ($>$) than F table then H_0 is rejected which means the most appropriate model used is *the Fixed Effect Model*. Vice versa, if F count is smaller ($<$) than F table then H_0 is accepted with the model used is *Pooled Least Square*.

Hausman test / Random Effect

This Hausman test is based on the use of *dummy variables* in the method, Hausman follows *the chi-square statistical distribution* with df of k where k is the number of independent variables. If the value of Hausman statistic is greater than the critical value then the right model is *the fixed effect* model and vice versa. Mathematically, this test can be written as follows:

$$W = (\beta_{fe} - \beta_{re})^1 [V(\beta_{fe}) - V(\beta_{re})]^{-1} (\beta_{fe} - \beta_{re}) \sim \chi^2(k)W$$

Estimation of the true covariance matrix β_{fe} = estimator of FEM β_{re} = estimator of REM. Independent comparisons are carried out in terms of the following hypotheses: H_0 : $E(\tau_{xit}) = 0$; then Random Effect Model (REM) is the appropriate model, H_1 : $E(\tau_{xit}) \neq 0$; then Fixed Effect Model (FEM) is the appropriate model The Hausman specification approach follows the Chi-Squared distribution.

Classical Assumption Testing

Multicollinearity Detection

Detection of multicollinearity can be done by looking at the value of *Variance-Inflating Factor* (VIF) from the results of regression analysis. If the value of $VIF > 10$ then there

are symptoms of high multicollinearity (Widarjono, 2013). The velocity of increasing variance or covariance can be seen by the *Variance Inflation Factor* (VIF), which is defined as :

$$VIF = \frac{1}{(1 - R^2)}$$

As R^2 approaches 1, VIF approaches infinity. This shows that as the range of collinearity increases, the variance of an estimator also increases and at a limit value can become infinite (Gujarati, 2010).

- 1) H_0 : VIF > 10, there is multicollinearity between independent variables
- 2) H_a : VIF < 10, no multicollinearity between independent variables

Heteroscedasticity Test

Widarjono (2013) a model that is free from heteroscedasticity means that the variance of the error is constant (fixed) or can be said to be homoscedastic. The way to detect heteroscedasticity is the *White test*. A Model is said to contain heteroscedasticity if the *White statistic* ($n \times R^2$) is greater than the F table. Another way is to use the GLS Weight Cross-section method available in the estimation output of the EViews program. The Sum Square Resid (SSR) Weighted value is compared with the Sum Square Resid (SSR) Unweighted. If SSR Weighted < SSR Unweighted then it can be said that the model is free from heteroscedasticity problems.

Autocorrelation Test

Widarjono (2013), one of the important assumptions in the OLS method related to the disturbance variable is the absence of a relationship between the disturbance variable with another disturbance variable. While autocorrelation is a correlation between members of one observation with another observation at different times. In relation to the OLS method, autocorrelation is a correlation between one disturbance variable and another disturbance variable. So in the presence of autocorrelation, the OLS estimator does not produce an estimator that is Best Linear Unbiased Estimator (BLUE) only Linear Unbiased Estimator (LUE). There are several methods used to detect autocorrelation problems through Durbin-Watson method, Breusch-Godfrey method, and Breusch-Godfrey method.

T-test

Statistical t-test is used to determine whether the partially independent variables this test is used to see the significance of the influence of the independent variable on the dependent variable individually. Used 1-Way Test with a confidence level of 95% with the hypothesis of a significant effect on the dependent variable at the level = 0.05. Hypothesis testing as follows:

- 1) If the value of t-count > t-Table value then H_0 is rejected or accepts H_a , meaning that the independent variable has a positive effect on the dependent variable.
- 2) If the value of t-count < value of T-table then H_0 is accepted or rejected H_a , it means

that the independent variable has no effect on the dependent variable.

F-Test Statistics

F-statistical test is used to prove whether the independent variables used in the study together significantly affect the dependent variable. A large F-statistic is better than a small F-statistic. *The Probability value* (F-statistic) represents the marginal significance level of the F-statistic, with the hypothesis testing as follows:

The test criteria are as follows:

1. If $F_{\text{Count}} > F_{\text{table}}$, then H_0 is rejected, and H_a is accepted
2. If $F_{\text{Count}} \leq F_{\text{table}}$, then H_0 is accepted, and H_a is rejected.

At the level of $\alpha = 0.05$ if H_0 is rejected, it means that the independent variable tested has a significant effect on the dependent variable. If H_0 is accepted, it means that the independent variable tested has no significant effect on the dependent variable at $\alpha = 0.05$.

FINDING AND DISCUSSION

Selection of the best Model on the Data Panel

Panel data procedures are carried out to determine the best model to be used in analyzing whether with the Pooled Least Square (PLS) model, fixed effect, or Random Effect Model (REM), testing is carried out using the Chow Test and Hausman Test. The following is briefly the best model in panel regression data in 5 provinces of eastern Indonesia in 2016-2022:

Table 2: Panel Data Model Estimation Testing

No	Test Summary	Chi-Sq. Statistic	Chi-Sq. df	Prob.	Conclusion
1	Fix Effect Model	143.5783	4	0.0000	H_0 rejected
2	Random Effect Model	21.2930	3	0.0001	H_0 rejected
3	LM Test	27.350 (0.0000)	2.5600 (0.1096)	29.910 (0.0000)	H_0 rejected

Source: Eviews, processed Data 2023

Description: Critical Value at 0.05 significance.

Based on the results of the Fix Effect / Cow Test in 5 provinces in eastern Indonesia, a statistical chi-square value (143.5783) > Chi-square table (9.488) at $df = 4$ with a probability level of $0.0000 < 0.05$, causing H_0 rejected. The Random Effect / Husman Test results obtained a statistical Chi-square value (21.2930) > Chi-square table (7.815) at $df = 3$ with a probability level of $0.0000 > 0.05$, causing H_0 rejected. In the final conclusion of the model, see the LM Test that Breusch-Pagan is not significant in the random effect, so the right model is the Fix Effect Model. The results of the LM test with Breusch-Pagan p-value of 0.0000 (at Cross-section) are smaller than the real tarad value < 0.05 , so H_0 is rejected so it can be concluded that from the analysis of the two models the Fixed Effects model is more appropriate than the Common Effect Model and Random Effect Model.

Multicollinearity Test

The test was carried out by the Variance Inflation Factor (VIF) method, if the VIF value is less than 10, multicollinearity does not occur, the following is briefly the best model in panel data regression in 5 provinces of eastern Indonesia in 2016-2022:

Table 3: Multicollinearity Test Results

No	variable	VIF	Information
1	Informal sector workers (PSI)	1.2941	in tolerance level
2	Minimum Wage (UM)	1.2093	in tolerance level
3	non-cash food assistance (BPNT)	1.1033	in tolerance level

Source: Eviews, processed Data 2023

Description: Critical Value at 0.05 significance.

The results of multicollinearity level testing showed that the value of Variance Inflation Factor (VIF) all independent variables have a value of < 10 , this explains that all variables have a value in the tolerance level.

Heteroscedasticity Test

White method heteroscedasticity *whitetest*, which is calculated manually by regressing the squared residuals, aims to test whether the regression model variance inequality occurs from the residuals of one observation to another. Here is the calculation of heteroscedasticity:

Table 4: Heteroscedasticity Test Results

Independent Variable	Chi-Square Count	Chi-Square Table	Result	Conclusion
3	3,892	7,815	Ho rejected	Heteroscedasticity Free

Source: Eviews, processed Data 2023

Description: Critical Value at 0.05 significance.

Detection of heteroscedasticity is done and there are problems, but on the results of multiple linear regression panel data model final calculation has been freed from the problem of heteroscedasticity. Panel data Model with Chisquare count = Total N * R square ($335 * 0.1112, 1112 = 3.892$), on *Chi-Square table* count ($3.892 < Chi Square table (7.81)$) on DF of the independent variable = 3 with a significance level of 5 percent, thus accepting H_A which means there is a problem of heteroscedasticity in equation.

Autocorrelation Test

Autocorrelation *test of Breusch-Godfrey method* which is calculated manually by regressing the residuals obtained from the research equation to the independent variable

and the lag of the research residuals to obtain the value of R^2 which is then multiplied by the number of observations. Here are the results of autocorrelation calculations:

Table 5: Autocorrelation Test Results

Variabel Bebas	Chi-Square Count	Chi-Square Table	Result	Conclusion
1	7,401	3,84	Accept Ha	Autocorrelation-free with Linear estimation after one-step weighting matrix

Source: Eviews, processed Data 2023

Description: Critical Value at 0.05 significance.

Panel data Model with Chisquare count = Total n * Rsquare ($30 \times 0.24672467 = 7.401$), on *Chi-Square* count table ($7.401 > Chi\ Square\ table\ (3.84)$) on DF autocorrelation humidity 1 with significance level 5 percent, so reject H_A accepted there is autocorrelation problem in the equation. Steps in overcoming autocorrelation in the final model performed white method to eliminate the problem of autocorrelation by changing the Coef Covariance method into a White-Cross section in the option panel so as to change the regression equation to be free from autocorrelation problems (Widarjono, 2013). The conclusion of the final regression model is already free from the problem of heterokedasticity and hypothesis has been rejected H_o .

Panel Data Regression Estimation Results with Fixed Effect Model

Table 6: Ordinary Least Square (OLS) Calculation Results on Fixed Effect Model

Variabel	Coefficient	Std. Error	t-Statistic	Prob.
PSI	2.3766	1.0970	2.1663	0.0393*
UM	-12.544	1.1237	-11.163	0.0000*
BPNT	-0.1319	0.1354	-0.9742	0.3386
C	97.042	6.9295	14.004	0.0000
R-squared	0.9938			
F-statistic	618.76			

Source: Eviews, processed Data 2023

Description: Critical Value at 0.05* significance.

1. Mathematical Model of OLS equation:

$$PPM_{it} = \beta_0 + \beta_1 PSI_{it} + \beta_2 UM_{it} + \beta_3 BPNT_{it} + e_{it}$$

$$PPM_{it} = 97.042 + 2.3766PSI_{it} - 12.544UM_{it} - 0.1319BPNT_{it} + e_{it}$$

$$(14.004) (2.1663) (-11.163) (-0.9742)$$

In the mathematical model has an *R-square* value of 0.9938, 99% of the variation in the rise and fall of the percentage of poverty in eastern Indonesia in 5 provinces, namely East Nusa Tenggara, Maluku, Gorontalo, Papua and West Papua in 2016-2022, influenced

by the variables informal sector workers, minimum wage, non-cash food aid the remaining 1% is influenced other variables that are not included in the research model.

Hypothesis testing results of statistical t and F tests

Statistical t-test Results

Statistical t-test on fix effect model to determine the presence or absence of influence between each variable. By finding the value of the degree of freedom, with a significance level of α : 0.05% using the formula : number of observations (n) = 35, independent variable (k) = 3, so $df\ n-k-1= 35-3-1= 31$. Then the value of T-table found is 1.69552, then the test results tstatistics as follows:

Table 7: T-test results statistics

Variable	t-calculate	t-table	Prob.	Conclusion
PSI	2.1663	1.69552	0.0393*	H ₀ rejected
UM	11.163	1.69552	0.0000*	H ₀ rejected
BPNT	0.9742	1.69552	0.3386	Accept Ha

Source: Eviews, processed Data 2023

Description: Critical Value at 0.05 significance.

In the partial t results show that the variables PSI and UM reject H₀ because the Number t count > t table then it can be concluded that each of these variables has a statistical influence t . BPNT variables BPNTreceive Ha because the Number t count < t table then it can be concluded that each of these variables has no effect on the statistical t, at the level of confidence α : 0.05 %.

F-Statistic Test Results

This test is conducted to determine whether the independent variables together have a significant or insignificant effect on the dependent variable.this study was conducted at a confidence level of 95% ($\alpha=0.05$). Pada model panel dengan numerator degree of freedom ($df1$) = k – 1 atau ($df1$) = 3 – 1 = 2 dan enumerator degree of freedom ($df2$) = n – k atau ($df2$) = 35 – 3 = 32 . Then the value of F table is 4.01,01. The F test statistic is as follows:

Table 8: Statistical F test results

Dependent variable	f calculate	F Table	conclusion
1	618.76	3.295	H ₀ rejected

Source: Eviews, processed Data 2023

Description: Critical Value at 0.05 significance.

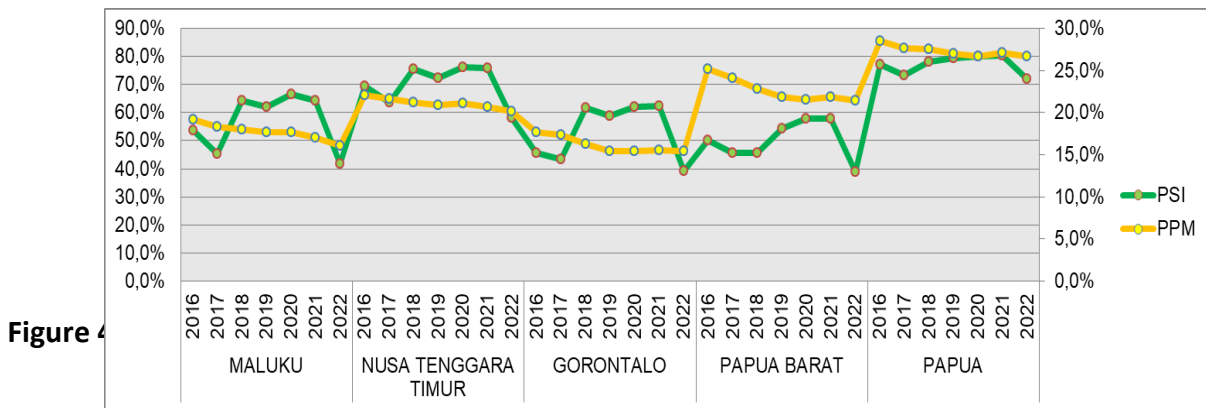
In F-table is used based on the reference distribution table F. The F-table regression Model obtained is 3.295 with α =5 percent. Because F-statistik > F-table = 618.76 > 3.295 then H₀ is rejected, so it can be concluded that the independent variables namely PSI, UM and BPNT together affect the percentage of poverty.

DISCUSSION

In Indonesia, which is a developing country is still dominated by people who work in the informal sector. In the labor market proposed by the Central Statistics Agency (BPS), labor is divided into 2 types of Labor, namely formal and informal. The formal sector has only 3 types of employment status, namely government workers/employees, private workers/employees and self-employed with permanent employees. informal sector has 5 employment statuses, namely, self-employed with the help of non-permanent employees, free workers in non-agricultural, unpaid family workers working alone and free workers in agriculture.

Eastern Indonesia with 5 provinces high percentage of poverty can be said to be people working in the informal sector consisting of non-permanent employees, free workers in non-agricultural, unpaid family workers working alone and free workers in agriculture. The results of statistically Informal sector workers (PSI) have a positive and significant effect on $\textcircled{3}$: 0.05% with a coefficient value of 2.3766, if informal sector workers increase by 1%, the percentage of poor people will increase by 2.3% in 5 provinces in eastern Indonesia, assuming other variables are constant.

The Eastern region of Indonesia has the potential resources and a variety of large companies as jobs. Judging from the average employment conditions of people working in the informal sector, the average community in eastern Indonesia is engaged in various micro-fields such as free workers in non-agricultural, unpaid family workers doing their own business and free workers in agriculture. The high percentage of informal workers is indicated by the linkage of poverty in 5 provinces in eastern Indonesia, in general, the following is a comparison between the high number of informal sector workers and poverty:



In the figure above, in general, you can see how the data on the percentage movement of informal sector workers in 5 provinces, the percentage figure shows that informal sector workers are in the range of 45% -70% of the average community working in the informal sector. This figure also indicates that the dominance of informal sector workers in eastern Indonesia is very high and can follow the high percentage of poverty. In the comparison of data seen in the Papua region 70% -80% of people work in the informal sector and followed by a high percentage of poverty of 20% -25%, in the second highest poverty

area of West Papua informal sector workers are at 40% -60% and followed by high poverty of 15% -20%. This phenomenon is also followed by 3 other eastern regions of Indonesia, namely East Nusa Tenggara, Maluku and Gorontalo where the high level of informal sector workers is at 40%-70% and poverty is 15% -20%, in general this indicates a correlation seen at the level of data where high informal sector workers cause a high percentage of poverty there are 5 provinces in eastern Indonesia.

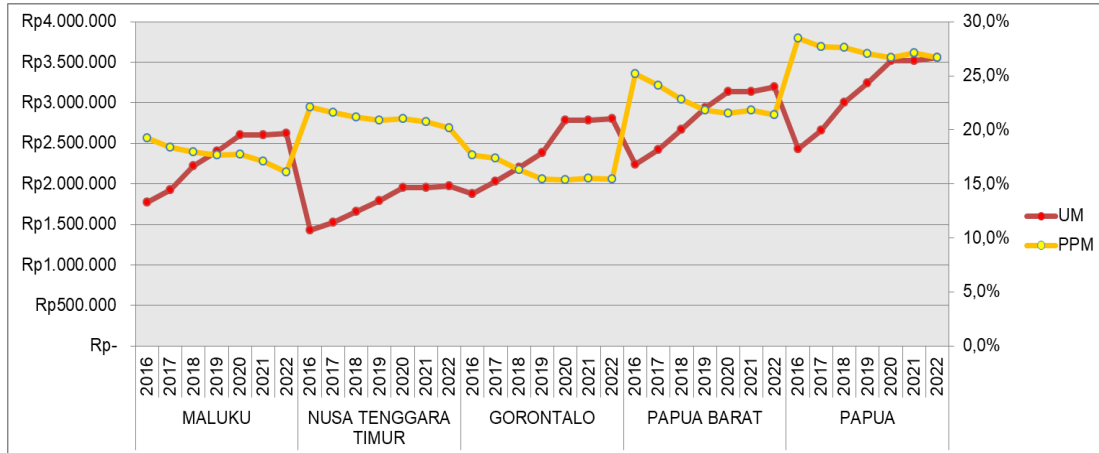
Workers in the informal sector who have uncertain incomes are also one of the causes of poverty according to the OECD *Development Center Studies* (2019) entitled "*Tackling Vulnerability in the Informal Economy*" explaining that the increase in informality in households is directly proportional to the high level of poverty and low income. Based on the data of the main indicator of informality based on individuals and households which shows a positive relationship between the level of household informality with poverty. (Alter Chen et al, 2002), explained that the economy in the informal sector has contributed to poverty. The average earnings of workers in the informal sector of the economy indicate low wages. The Data indicate that workers in the formal sector are relatively further out of poverty than workers in the informal sector. The transfer of workers between these sectors cannot directly reduce poverty levels but can be a stimulus.

This result is in line with research , (Sylvia Agatha Gultom, Agung Priyo Utomo, 2020), the poverty rate of Regions on the island of Java there are as many as 104 districts / cities spread across all provinces or about almost 90 percent of regions on the island of Java have a variable percentage of informal workers as a factor that affects the poverty rate in their. the percentage of informal workers has a positive and significant effect on poverty. (Paramita, 2012) which states that the informal sector partially affects poverty. Workers in the informal sector with lower wages and usually do not reach the minimum wage will make the population in the informal sector unable to meet their needs, irregular working hours will also make it difficult for workers in the informal sector.

The government as a public servant has the basis for upaj in regulation of the Minister of Labor Number: Per-01/Men/1999 and Labor Law No. 13 of 2003, which is to improve the welfare of workers, so as to be free from poverty. With the minimum wage standards set by the government, it is expected to provide a decent income for workers/employees, so as to improve the welfare of workers and worker productivity can increase. It is also a protection for workers from being trapped in poverty.

The results of statistical calculations in eastern Indonesia, the Minimum wage (UM) has a negative and significant effect on the β_3 : 0.05 % with a coefficient value of -12,544, if the minimum wage increased by 1 Rupiah, the percentage of poor people will decrease by 12.5% in 5 provinces in eastern Indonesia, assuming other variables in constant state. In the phenomenon of the state of the poor one cause of poverty is due to lack of income (*lack of income*) and assets (*assets*) in meeting basic needs such as food, clothing, housing, health and education levels are acceptable. Poverty is also related to limited employment and usually those who are categorized as poor (*the poor*) do not have jobs (unemployment), and the level of education and health are generally inadequate. In simple terms, poverty is understood as a state of lack of money and goods to ensure survival. (Anggadini, 2015)

In 5 provinces of eastern Indonesia from the 2016-2022 Research year showed an increase in the minimum wage level which every year an average increase of Rp 150,000-Rp 250,000. The determination of the recommended increase in the minimum wage in each region varies depending on the decisions of regional agencies related to the increase in wages. The following are the conditions of minimum wage development and the percentage level of poverty in 5 provinces of eastern Indonesia:



Source: BPS, processed Data, 2023

Figure 5: Development of Minimum Wage and poverty percentage in 5 provinces of eastern Indonesia in 206-2022

The development of the minimum wage in 5 provinces in eastern Indonesia is an important part in how it affects poverty. On average, the overall 5 provinces minimum wage is at Rp 2,505,743. General conditions between regions there are regions that are seen in the data showing that increasing the minimum wage helps reduce the poverty level in Maluku in 2019 UM of Rp 1,775,000 continues to increase until 2022 of Rp 2,619,312, this is also accompanied by a decreasing percentage of poverty throughout 2019-2022. In West Papua in 2019 UM of Rp 2,934,500 continues to increase until 2022 of Rp 3,200,000, this is also followed by a decreasing percentage of poverty throughout 2019-2022. In Papua there was a significant increase in wages from 2016 UM of Rp 2,435,000 and in 2022 UM of Rp 3,561,932 but the decline in poverty decreased slowly, this also happened in East Nusa Tenggara and Gorontalo the development of the percentage of poverty decreased slowly when the minimum wage increased.

Broadly speaking, the minimum wage greatly affects the reduction of poverty where an increase in wages will help improve the welfare of many people in the 5 provinces of the Eastern Region, so that it will automatically help reduce the level of poverty, setting a minimum wage that is close to KHM (Minimum living needs) and above the poverty line must be appropriate because it can reduce the level of poverty. In eastern Indonesia, the establishment of the minimum wage is not only applied to formal employment but also informal able to improve the welfare of workers and if accompanied by a continuous increase in the minimum wage will be able to reduce the number of poor people

significantly. From these results, it can be assumed that if drinking wages are increased, it can reduce the number of poor people. In other words, people's income increases, people's purchasing power also increases, and vice versa, if people's income is low, it will affect the lower purchasing power.

According to the efficiency-wage theory in the (Hanifah & Hanifa, 2021), shows that more wages make activists more profitable. The efficiency wage theory, which is often used in poor countries, argues that wages have an effect on nutrition. Activists who give with adequate wages akanwill get more nutrition, and workers who get healthier will get more profit. Wage efficiency theory suggests that workers ' productivity is getting higher simultaneously using the wage rate. The minimum wage must meet minimum living standards such as for the health, efficiency, and well-being of workers. The minimum wage is an effort to raise the level of the low-income population, especially the working poor.

The increase in the minimum wage level will increase people's income so that welfare also increases and thus free from poverty, (Ery Niswan, Ricola Dewi Rawa, 2014), The role of workers/laborers, employers and the government is needed in addressing the impact of setting minimum wages. It can't be just employers who have to bear the impact of setting this minimum wage. With the understanding and understanding and cooperation of all parties related to industrial relations, the Common Goal can be achieved, namely workers/prosperous workers, developing and sustainable companies and the government can maintain the development and improvement of the economy well.

The results of this study are in accordance with research (Rosalia Lukita Sari, 2019), From the estimation results and statistical testing, it is found that the district minimum wage has a negative and significant influence on poverty in Madura Island. The minimum wage is an effort to raise the level of low-income people and has the goal of achieving a minimum standard of living and is an indicator that affects the income in the community to be high or low. (Hapsari Wiji Utami, 2018) This study examined the effect of economic growth, minimum wage, open unemployment rate and education (average length of school) on the number of poor residents of districts/cities in East Java province. The Minimum wage has a negative and significant influence on the number of poor people. Significant effect shows that the minimum wage is able to respond to a decrease in the number of poor people. The cause of the minimum wage is able to reduce the number of poor people because it increases the income of the poor.

The role of the government is very necessary, considering the policies and regulations that are made into a reference in pushing towards development. Programs on Poverty Alleviation, initiated by the government by issuing Presidential Regulation of the Republic of Indonesia number 15 of 2016, on the acceleration of Poverty Alleviation, namely that in an effort to accelerate poverty alleviation, it is necessary to take integrated coordination steps across actors in the preparation of the formulation and implementation of the poverty alleviation policy, then the creation of an Non-Cash Food.

In the results of this study get the results statistically about the state of non-cash food aid (BPNT) has a negative influence and not significant on the α : 0.05% with a coefficient value of -0.1319, BPNT variable does not affect the bound variable is the

percentage of poor people in 5 provinces in eastern Indonesia. This result is in accordance with the hypothesis in the study that suspected the negative influence of non-cash food aid (BPNT) on the percentage of poverty but the results were not significant in affecting the percentage of poverty in wialayh-Eastern Region of Indonesia. According (Gultom et al., 2020),the BPNT Program is expected to provide tangible benefits in changing household spending patterns, namely by increasing household food and non-food consumption. However, if seen from observations in the field many of the people who receive government assistance in the form of BPNT have not been able to take advantage of any assistance provided to improve the welfare of their families. BPNT Program is assumed to be able to affect household spending patterns. The distribution of subsidized rice to low-income groups aims to reduce the expenditure burden of households receiving food assistance in meeting food needs. In addition, it is also to improve the access of low-income communities in meeting basic food needs, as one of their basic rights.

CONCLUSIONS AND SUGGESTIONS

Informal sector workers (PSI) have a positive and significant effect, the Minimum wage (UM) has a negative and significant effect and non-cash food assistance (BPNT) has no effect on poverty in 5 provinces in eastern Indonesia in 2016-2022. The government must cooperate and encourage the community to integrate with third parties such as banks/cooperatives/financial institutions in addition to informal sector business capital in order to increase income and business productivity of the community. The government can also conduct guidance and training with integration cooperation with academics/professionals for skills training to encourage more softskill workers to create more income. Both programs are aimed at reducing poverty through improving the quality of human resources and capital.

The increase in wages with the development of specific skill levels according to the characteristics of the ability and desire of the community, so that the role of the government is needed to organize training for workers, for example through the Department of labor in each region, where the training time is adjusted so that it can be reached by workers, as well as materials tailored to market demand. This skill improvement Program can also be included in local government programs/city districts in 5 provinces in eastern Indonesia, namely Papua, West Papua, Maluku, Gorontalo and East Nusa Tenggara.

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