



Determinants of Poverty in Western Indonesia and Eastern Indonesia

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Article Information Abstract

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The diversion of regional characteristics in Indonesia costs the country countless economic issues, primarily poverty. This study aims to analyze the influence of gross regional domestic product, life expectancy, the average length of schooling, domestic investment, foreign direct investment, social protection spending, education sector spending, and health sector spending on poverty in Western Indonesia and Eastern Indonesia 2010-2021. Panel data regression was used in this study to examine data consisting of 34 provinces in Indonesia to annual data for each variable during the 2010-2021 period obtained from the Central Bureau of Statistics and affiliated institutions. The results of this study indicate that the best model is the Fixed effect, following the Chow and Hausman test. The results showed that the variables life expectancy, average length of schooling, domestic investment, foreign direct investment, and health sector spending had a significant negative effect on poverty. In comparison, gross regional domestic product, social protection spending, and education sector spending have a significant positive effect on poverty. Furthermore, from the results of the dummy variable, there is a significant negative difference between poverty in Western Indonesia and Eastern Indonesia in 2010-2021.

INTRODUCTION

Poverty is a development problem faced by every developing and developed country. It can be seen in Sustainable Development Goals (SDGs) as the fundamental objective is to end all forms of poverty everywhere (Irhamyah, 2019). As a developing country, Indonesia continuously struggles to eliminate poverty across its regions. The Central Statistics Agency (BPS) stated that the number of poor people in March 2021 was 27.54 million in September 2021 to 26.50 million (BPS, 2021). According to Nurkse (1957), the vicious cycle of poverty is due to low savings, low investment, lack of capital, low productivity, and low income which again leads to low savings and so forth (Prasetyoningrum & Sukmawati, 2018).

Regarding the development of Indonesia's territory, the country recognizes the

categorization of two areas: the Eastern Region of Indonesia and the Western Region of Indonesia. The division of this area is based on the Regulation of the Minister of Home Affairs Number 18 of 2005, namely: (i) The western region of Indonesia consists of Java, Sumatra, and Bali; (ii) The eastern region of Indonesia consists of Sulawesi, Kalimantan, Maluku, Papua, West Nusa Tenggara and East Nusa Tenggara. The division of the area is a fundamental strategic issue for the region because of the existing inequality between the two regions as indicated by 1) the high poverty rate in Eastern Indonesia; 2) Economic activities centered in Western Indonesia, especially Java Island; and 3) Limited infrastructure and accessibility in underdeveloped areas and Eastern Indonesia borders (Bappenas, 2020).

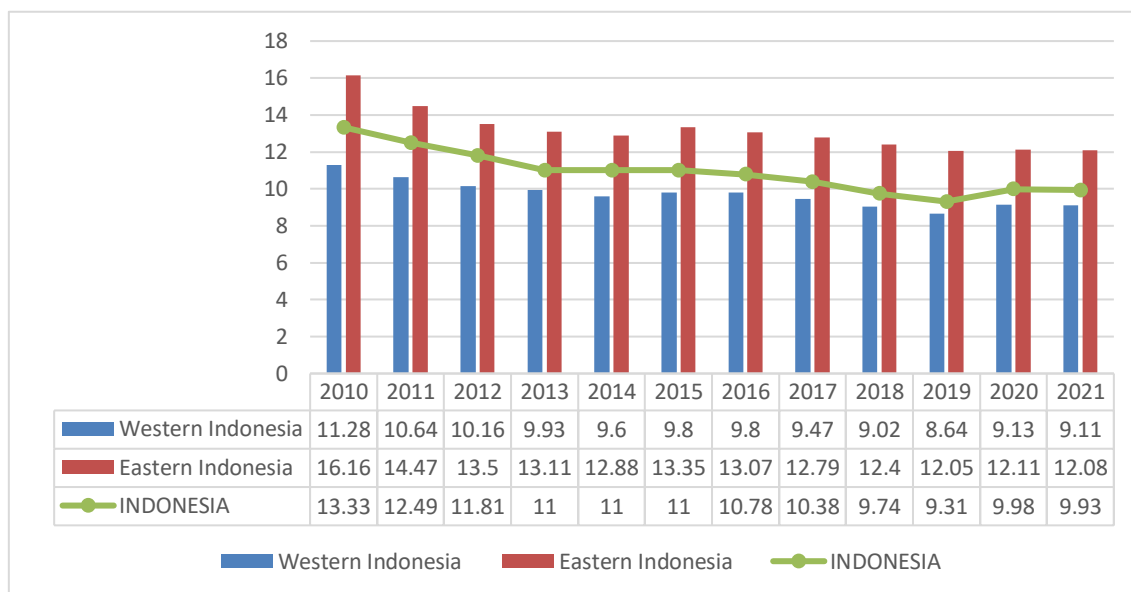


Figure 1. Percentage of poor people in Western Indonesia and Eastern Indonesia (percent).

Source: Data Processed, 2022

Figure 1 shows the percentage of poor people below the Poverty Line. Poverty in Indonesia has shown a downward trend in the last 12 years (2010-2021), reaching 9.93% in 2021. From a regional perspective, the percentage of poor people in Western Indonesia and Eastern Indonesia has also tended to decrease in the last 12 years. However, the percentage of poor people in Eastern Indonesia is

constantly higher than in Western Indonesia every year. Each province has different capacities and capabilities in efforts to combat poverty. The decline in the poverty rate in Western Indonesia from 2010 to 2021 was 2.17% in Eastern Indonesia it decreased by 4.08%. Even so, the poverty rate in Eastern Indonesia is still relatively high compared to Western Indonesia (Lailiyah et al., 2022).

According to Farid (2019), economic development through decentralization, in which each region provided the authority to administer and manage its area, does not spare regions in Eastern Indonesia from the problem of poverty. What happened was that most provinces in eastern Indonesia still had high poverty rates. Indonesia's socioeconomic development was

concentrated in Western Indonesia. Eastern Indonesia has a wealth of natural resources which need to be utilized properly for common prosperity. Currently, natural resource wealth has only been utilized for the benefit of Western Indonesia, and the state/central government allocated many resource concessions for the interest.

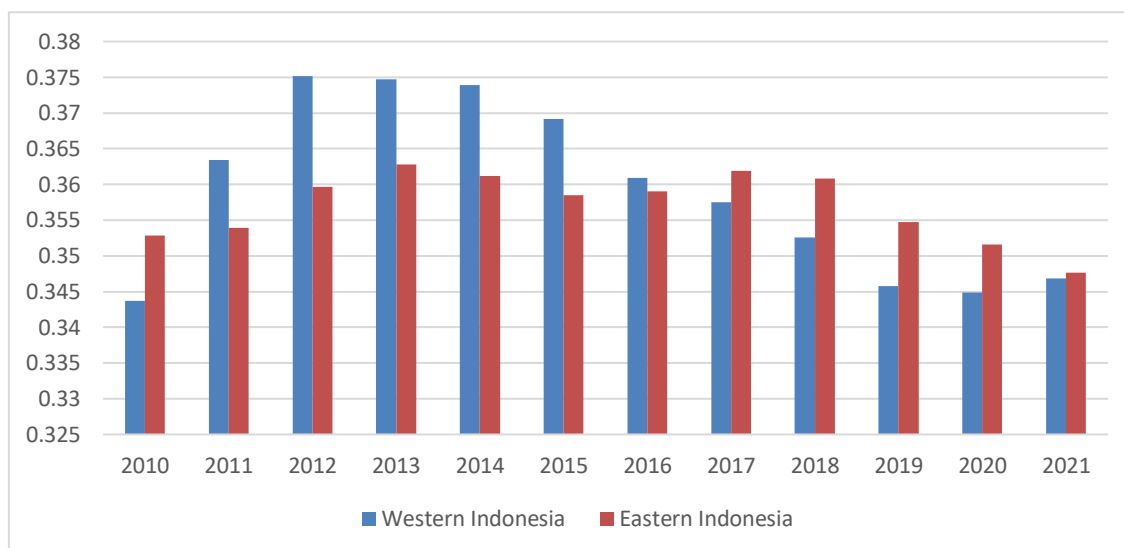


Figure 2. Development of the Gini Index for Western Indonesia and Eastern Indonesia Regions in 2010-2021 (ratio).

Source: Data Processed, 2022

Based on Figure 2, high inequality is dominated by the Eastern Indonesia region compared to Western Indonesia every year, except for 2011-2016. Stagnation for several years and relatively high levels of income inequality indicate that all groups cannot experience economic growth. The upper or middle class is growing faster than the lower class. High inequality will increase the risk of slowing economic growth which will weaken regions' ability to reduce poverty (Nizar, 2015). This study's results align with the research of Tubaka (2019) and Desmawan et al. (2021) state that income inequality is related to poverty reduction.

The poverty depth index in Western Indonesia and Eastern Indonesia during 2010-2021 shows the average gap size of the spending of each poor population against the poverty line. The higher the poverty depth index, the more significant the spending gap of each poor person

from the poverty line or, in other words, the farther they are from being able to afford it. The Eastern Indonesia poverty depth index has always been higher than Western Indonesia every year during 2010-2021. So it is known that the spending of each poor people in Eastern Indonesia is still much lower than that of each poor people in Western Indonesia.

The contribution GRDP by the island in 2021 was majorly composed of Java Island which accounted for a share of 57.92%, the second is Sumatra Island with 21.73%, third and fourth by Kalimantan Island and Sulawesi Island with 8.21% and 6.88%, and the smallest contribution is in Bali Island and Nusa Tenggara 2.85%, then Maluku Island and Papua 2%. The contribution of GRDP is exceptionally disproportionate to the islands of Java-Bali-Sumatra and other islands. The gross domestic regional product (GRDP) represents the regional economy. The GRDP value shows the way the performance of a region

is in managing and utilizing all the potential and advantages of the region (Hanafi, 2020). Rahman & Chamelia (2015) state that GRDP is a vital indicator useful for determining the state of the economy in a region in a certain period. The main requirement for overcoming the problem of poverty is economic growth (Wulandari et al., 2022). Michálek & Výboštok (2019) state that economic growth is related to poverty reduction.

According to Lewis (1954), the economic growth rate will follow an inevitable vertical flow from the rich to the poor. The prosperous will initially feel the benefits of economic growth, and

then in the following stage, the poor will start to profit after the prosperous start spending the benefits of the economic growth they have received. Therefore, economic expansion, if it is pro-poor, can have a beneficial effect on poverty reduction. Economic development and the rise of inequality in several countries concerns about increased poverty (Michálek & Výboštok, 2019). Previous research has found that increasing GRDP can reduce poverty (Agustini & Kurniasih, 2017; Alhudori, 2017; Giovanni, 2018; Puspita, 2015; Safuridar & Damayanti, 2018; Tahir et al., 2014).

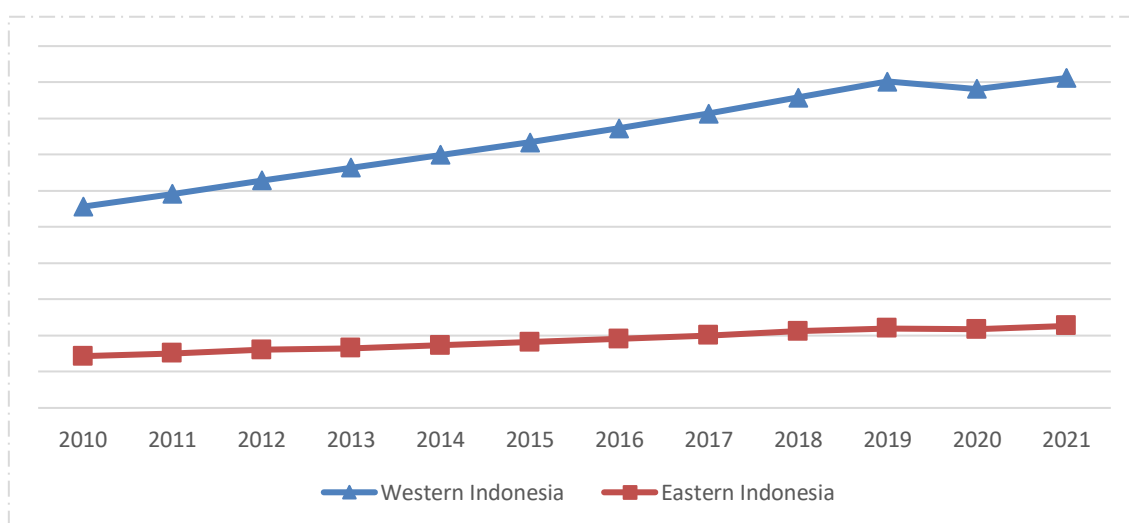


Figure 3. GRDP development in Western Indonesia and Eastern Indonesia in 2010-2021 (in billions of IDR).

Source: Data Processed, 2022

Based on Figure 3, the GRDP gap between Western Indonesia and Eastern Indonesia is very far apart. Albeit showing an increasing trend during the observation time, the resulting gap is still a consequential problem. If we take a closer look, the increasing tendency in Western Indonesia is also far more significant than in Eastern Indonesia.

Efforts to eradicate poverty are carried out in various ways, one of which is by utilizing domestic and foreign resources to encourage economic growth and increase people's income which impacts reducing the poverty rate. Domestic investment is an investment to do business in the territory of Indonesia, which is carried out by domestic investors using domestic capital, which can be carried out by individuals

or business entities (Soegoto et al., 2022). This domestic investment has a role, which is one of the aggregate expenditures, where an increase in investment will increase aggregate demand and national income (Wulandari et al., 2022). Several previous studies have found a significant negative effect of domestic investment on the number of poor people or domestic investment has proven to have a beneficial influence on poverty alleviation (Okungbowa & Eburajolo, 2014; Permana, 2019; Soegoto et al., 2022).

Foreign direct investment has a paramount role in increasing the welfare of destination countries. It does not merely assist in remedying capital shortages but serves as a conduit for transferring new technologies, new management, techniques, and skills, and

improving worker qualifications, leading to economic growth, employment opportunities, and increased country budgets for target countries (Do et al., 2021). According to Dada & Akinlo (2021), the foreign direct investment provides financial resources to supplement domestic investment, and transfer essential

knowledge, and technology through its byproducts. According to theoretical literature, foreign direct investment will decrease poverty by spurring economic growth. (Agarwal et al., 2017; Ganić, 2019; Magombeyi & Odhiambo, 2017; Soumaré, 2015; Ucal, 2014; Utama, 2015).

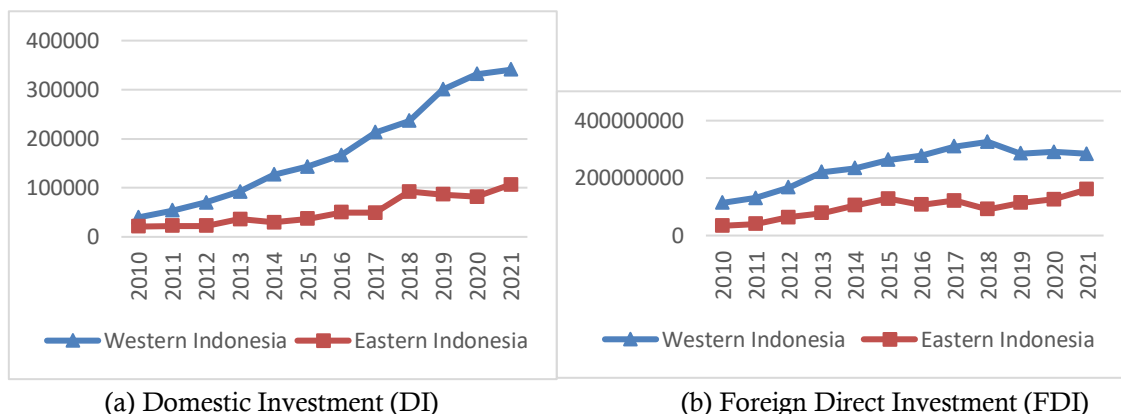


Figure 4. Development of Domestic Investment and Foreign Direct Investment in Western Indonesia and Eastern Indonesia in 2010-2021 (in billions of IDR).

Source: Data Processed, 2022

Figure 4 shows the development of domestic investment and foreign direct investment in Western Indonesia and Eastern Indonesia areas. Both of these areas show an upward trend in domestic and foreign direct investment during the year of observation. However, Western Indonesia consistently outperforms Eastern Indonesia in the number of domestic and foreign direct investments each year. There was a significant upward trend in the number of domestic investments in Western Indonesia during the year of observation compared to the upward trend in Eastern Indonesia. Meanwhile, in foreign direct investment, both Western Indonesia and Eastern Indonesia showed almost the same upward trend.

The Human Development Index (HDI) is important in poverty alleviation. To calculate the HDI, several data components are used namely life expectancy data representing the health sector, the average length of schooling representing the education sector, and purchasing power parity (PPP) of society

calculated based on real per capita expenditure (Prasetyoningrum & Sukmawati, 2018).

According to the theory of human capital, capital in education will produce graduates who have high productivity. The higher the quality, the better. So that education can get someone out of the cycle of poverty (Faritz & Soejoto, 2020). The availability of education and health facilities will significantly help increase productivity and increasing income. Human Development Index is one of the indicators used for development in the long term. Considering human development progress, two aspects need, namely speed and achievement status. Danasari & Wibowo (2017) stated that the increasing life expectancy and old school expectancy rates from year to year shows that achieve human development. Bancin & Usman (2020) found that life expectancy has a negative effect on the number of poor people. Other research on the effect of life expectancy on the number of poor people also found negative results (Anggadini, 2015; Dores et al., 2014; Finkayana & Dewi, 2016).

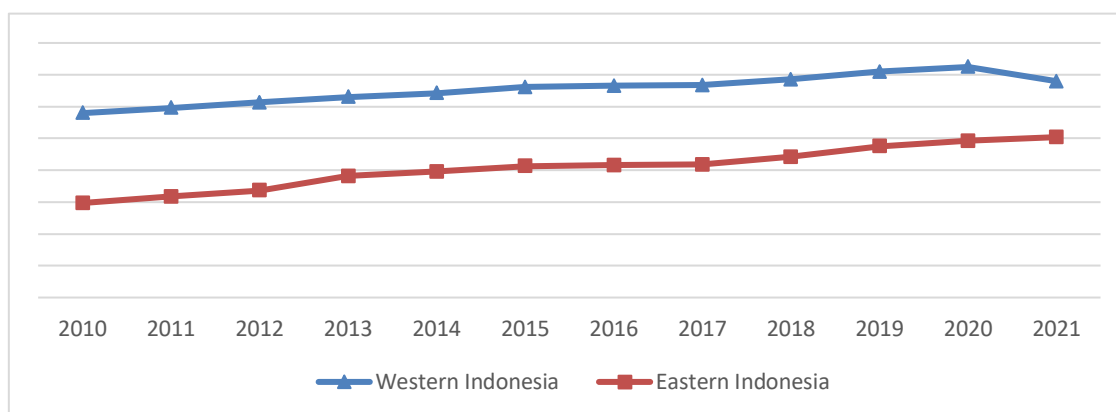


Figure 5. Development of life expectancy in Western Indonesia and Eastern Indonesia during 2010-2021 (Percent)

Source: BPS, data processed, 2022

Figure 5 shows the development of life expectancy in Western Indonesia and Eastern Indonesia during 2010-2021. Western Indonesia has a higher life expectancy within that time frame than Eastern Indonesia. The same thing happened to the previous variables, such as GRDP, domestic investment, and foreign direct investment where Eastern Indonesia's position was always below Western Indonesia. If one looks closely, the development of life expectancy in both Western Indonesia and Eastern Indonesia has experienced an increasing trend during the observation period (2010-2021). The increasing life expectancy shows that successfully achievement of human development so that the social conditions of the people have improved.

Various indicators point to the field of education. One indicator used to explain improvements in the quality of human resources in an area based on the education sector is an indicator of the average length of schooling. The average length of schooling is a helpful indicator for tracking progress at the general level of education in a particular area. This indicator describes the length of time residents aged 15 years have been in an area. The Central Bureau of Statistics, authorized to provide primary statistical data in Indonesia, calculated the average length of schooling. The government's focus on developing human resources in Indonesia from the education sector also evaluation the average length of schooling as a measurement tool. Any increase in the number of

qualified human resources will increase labor productivity in general, increasing the economy and income per capita in Indonesia. This increase will affect a person's consumption level, so later increased consumption levels are estimated to lessen the percentage of poor people in Indonesia (Firdaus et al., 2021). The role of education manifested in the average length of schooling, shown a significant effect on reducing the number of poor people (Faritz & Soejoto, 2020; Finkayana & Dewi, 2016; Hadi, 2019; Syabrina et al., 2021).

The average length of schooling in both Western Indonesia and Eastern Indonesia during the observation period (2010-2021) experienced an increasing trend. The higher a person's level of education, the better the quality. So that education can make a person out of the cycle of poverty. However, as with the previous variables, the position of Eastern Indonesia is always under Western Indonesia.

The vicious circle theory explains the causes of endless poverty. The cause is the underdevelopment of the human development index level in the form of (education, health, work skills, Etc.) which affects productivity. Low productivity will reduce gross regional domestic product income, along with low income will reduce labor levels because labor wages are not proportional to income; this will affect the unemployment rate, and unemployment will affect low savings and investment.

The government's role in efforts to eradicate poverty are through various policies. One of them is by targeting the improvement and improvement of HDI quality. The policy in the form of regional expenditure in sectors that are expected to have a significant impact on reducing the poverty rate. This expenditure is in the form of social protection sector expenditure, education sector expenditure, and health sector expenditure. Increased spending on the education sector will improve public facilities and access to education. According to the National Team for the Acceleration of Poverty Reduction (TNP2K), poverty alleviation based on social assistance and protection aims to fulfill fundamental rights, reduce the burden of living, and improve the quality of life of the poor. With the establishment of social protection from the state for the community, the community is guaranteed access to social protection. It will get access to opportunities both in the economic and educational fields. The existence of education spending will improve the quality of human resources, which will increase employment opportunities and will reduce the current poverty rate. The allocation of health funds by the Regional Government functions, so that all poor people access proper health facilities. Guaranteed public health will improve the quality of life that is more feasible so it will increase people's productivity.

Sihombing et al. (2022) stated that the social protection spending function and education function spending had a significant adverse effect on the percentage of poverty in Indonesia. Pasaribu & Hendarto (2016) also stated that spending on social protection areas and health functions has a negative effect on poverty. Palenewen et al. (2018) and Hasanah et al. (2021) state that public expenditure in the health sector has a negative effect on poverty. Demak et al. (2020) in the City of Manado also found that Health Sector spending had a significant negative effect on poverty. Febriandika et al. (2022) stated that the number of poor people in Eastern Indonesia would decrease with increasing government spending on health.

The development of social protection spending, education sector spending, and health sector spending in Western Indonesia and Eastern Indonesia has significant differences. This difference tends to be the same as the previous variables, where Eastern Indonesia conditions are always below Western Indonesia. The exception was in 2014, when education sector spending soared. The position of Eastern Indonesia, which is constantly under Western Indonesia, seems that the government needs to pay special attention to this matter so that this imbalance continues, which will impact the failure of development efforts in a better direction.

Differences in poverty conditions and the factors that influence them to make the regions of Western Indonesia and Eastern Indonesia different so the focus on poverty alleviation cannot be generalized to all regions. The challenge Indonesia faces in poverty alleviation efforts is the effect of rapid economic growth in Western Indonesia and Eastern Indonesia but without equal income distribution, resulting in an increase in extreme poverty in the long term. The task of the regional and central government is to develop alternative policies to reduce poverty levels, especially in the Eastern Indonesia region.

Several previous studies that obtained different results were also one of the vital reasons this research had to be carried out. Hanafi (2020) research found that GRDP has a positive and significant influence on poverty in the Wanarakuti-Banglor region, Indonesia. Research by Hasan (2021) also found that economic growth positively effect on poverty in Indonesia. However, Segoro & Pou (2016) research found that GRDP positively effect on poverty but not significantly. Also, Agustini & Kurniasih (2017); Alhudori (2017); Giovanni (2018); Puspita (2015); Safuridar & Damayanti (2018); Tahir et al. (2014) found that PRDB has a negative effect on the number of poor people. Syabrina et al.(2021) in Jambi and Hadi (2019) in East Java obtained the same results. However, Hasanah et al.(2021) research obtained results that did not significantly affect the average length of schooling on the number of poor people.

Agarwal et al. (2017); Ganić (2019); Magombeyi & Odhiambo (2017); Soumaré (2015); Ucal (2014); Uttama (2015) found a significant positive effect of FDI on the number of poor people. However, Ali & Nishat (2009); Aneter et al. (2020); Meyer & Sinani (2009) found the opposite result with this research, namely that FDI has a negative impact on reducing the level of poverty. Melati et al. (2021); Sendouw et al. (2017) state that social protection spending has no significant positive effect on the poverty level. On the other hand, Sihombing et al. (2022) state that the regional spending function for social protection has a significantly negative effect on the percentage of poverty in Indonesia. Pasaribu & Hendarto (2016) state that spending on the education function has a positive effect on poverty. But Sihombing et al. (2022) state that spending on the education function has a significant negative effect on the percentage of poverty in Indonesia. Pasaribu & Hendarto (2016) also states that spending on health functions has a negative effect on poverty levels. But Palenewen et al. (2018); Tahir et al. (2014) state that public expenditure in the health sector has a negative effect on poverty.

Based on this, this study seeks to find out not only the effect of human development index on the poverty level, but tries to include several other variables based on previous theory. The research which are thought to be able to have a large impact on the poverty rate in Indonesia. In addition, this study involved Western Indonesia and Eastern Indonesia as dummy.

RESEARCH METHODS

This study uses a quantitative structural model. This study aims to analyze the effect of GRDP, life expectancy, the average length of schooling, domestic investments, foreign direct investments, social protection sector spending, education sector spending, and health sector spending on poverty in Western Indonesia and Eastern Indonesia in 2010-2021. The variables used are the number of poor people as the dependent variable and the following independent variables: GRDP, life expectancy,

average length of schooling, domestic investments, foreign direct investments, social protection spending, health sector spending, education sector spending, and Western Indonesia and Eastern Indonesia areas as dummy variables. The data used in this study is panel data consisting of 34 provinces in Indonesia. Annual data for each variable during the 2010-2021 period obtained from the Central Bureau of Statistics and related institutions. So this study uses the total amount of data, namely 408, and uses secondary data.

Parameter results can be essential information for formulating appropriate policies and material for evaluating policies that have been implemented (Suaedi, 2013). The equation proposed in this study based on the panel data regression model is as follows.

$$Y_{it} = \alpha + \beta_1 X_{1it} + \dots + \beta_k X_{kit} + u_{it} \dots \dots \dots (1)$$

where Y is dependent variable; α is constant; $X(1\dots k)$ is independent variable; $\beta(1\dots k)$ is coefficient; u is error; i is cross section; t is time series. The function model used to find out poverty in Western Indonesia and Eastern Indonesia, namely:

$$\begin{aligned} \text{LogK} = & \beta_0 + \beta_1 \text{LogGRDP}_{it} + \beta_2 \text{LE}_{it} + \beta_3 \text{ALS}_{it} \\ & + \beta_4 \text{LogDI}_{it} + \beta_5 \text{logFDI}_{it} + \beta_6 \text{logSOCAL}_{it} \\ & + \beta_7 \text{logEDU}_{it} + \beta_8 \text{logHEALTH}_{it} + D + e_{it} \quad (2) \end{aligned}$$

Where K is Poverty (Number of Poor People); β_0 is Constant; $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8$ is Coefficient; GRDP is Total Gross Regional Domestic Product (in billions of IDR); LE is Life Expectancy (percent); ALS is Average Length of Study (percent); DI is Domestic Investment (in billions of IDR); FDI is Foreign Direct Investment (in billions of IDR); SOCIAL is Social Protection Spending (in billions of IDR); EDU is Education Sector Spending (in billions of IDR); HEALTH is Health Sector Spending (in billions of IDR); D is Dummy variables for Western Indonesia and Eastern Indonesia; e_{it} is Error; i : provincial cross section data in Indonesia; t : time series data for 2010-2021; and $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8 < 0$.

Panel data regression has the advantage of providing flexibility to model behavior among

individuals as objects of observation (Greene, 2007). Panel data regression does not need to test the assumptions of the classical regression model because the panel data regression method is a combination of data from several individuals in several periods. There are three kinds of disturbances in panel data: cross-section disturbances, time series-related disturbances, and inter-temporal and inter-individual disturbances. The reason for doing logarithms is to distribute data that is not normal (Safuridar & Damayanti, 2018). In addition, using logarithms can facilitate the interpretation of the results.

The scope of discussion in this research study limited to the balanced panel, in which each individual (in this case the province) is observed based on the number of time series observations with the same year of observation. So, the total observations are N (number of cross sections/provinces) x T (number of time series/year). Regression analysis using panel data has three estimator models: Common Effect, Fixed Effect and Random Effect.

According to Widarjono (2005), three specific tests are used to select the best panel data estimator model to analyze existing problems, namely the chow test, the hausman test, and the lagrange multiplier test. The Chow test determines which model to use, whether the Common Effect Model (CEM) or the Fixed Effect Model (FEM). If the p-value is less than 5%, the FEM is better than CEM. The Hausman test select a model whether to use a fixed effect model or a random effect model. If the p-value is less than 5%, FEM is better than the Random Effect Model (REM). The Lagrange Multiplier test aims to analyze the best panel data regression model between the random and common effect models. Determination of a good model follows the Breush-Pagan Probability by looking at whether the probability (p-value) is greater or less than alpha (α). If the value of both $< \alpha$ (0.05), then H0 is accepted so the model follows the Random Effect. If the value of both $> \alpha$ (0.05), then H0 is rejected so that the model follows the Common Effect .

The hypothesis in this study follows, H1: GRDP affects on poverty, H2: life expectancy affects on poverty, H3: average length of schooling affects on poverty rate, H4: domestic investment affects on poverty, H5: FDI affects on poverty, H6: social protection affects on poverty, H7: education sector spending affects on poverty, H8: health sector spending affects on poverty, H9: there is a significant difference in poverty in western Indonesia and eastern Indonesia.

RESULTS AND DISCUSSION

The best model was determined in panel data regression analysis to find the best model to be used in research including CEM, FEM, or REM. This determination was carried out using the Chow, Hausman, and Lagrange Multiplier tests. The Chow test is used to determine the best model between CEM and FEM. Then the Hausman test determines the best model between FEM and REM. In comparison, the Lagrange Multiplier test is used to determine the best model between REM and CEM.

Table 1. Chow Test Result

Effect Test	Statistic	Prob
Period F	1.943040	0.0329
Period Chi-square	21.932999	0.0249

Source: Data Processed, 2022

The Chow test results in Table 1 show the Period F value of 1.943040 with a probability of 0.0329. The probability of the chow test has a value less than 0.05 ($\alpha=5\%$) so H0 is rejected, and the appropriate model is the Fixed Effects Model (FEM).

Table 2. Hausman Test result

Test Summary	Chi-Sq. Statistic	Prob.
Cross-section random	55.156064	0.0000

Source: Data Processed, 2022

Table 2 shows the results of the Hausman test. The Hausman test results show a Chi-Square probability of 0.0000, which is less than 0.05 ($\alpha = 5\%$). So that H0 is accepted, which means that the Fixed Effects Model (FEM) is appropriate

Table 3. Fixed Effect Model Results

Variables	Coefficient	t-Statistik	Prob
Constant	2.087613	1.111483	0.2267
LOG(GRDP)	0.827683	10.24969	0.0000***
LE	-0.067109	-3.872734	0.0001***
ALS	-0.491046	-11.82638	0.0000***
LOG(DI)	-0.079553	-3.172211	0.0016***
LOG(FDI)	-0.105138	-3.747667	0.0002***
LOG(SOCIAL)	0.180217	2.357936	0.0189**
LOG(EDU)	0.164143	3.644523	0.0003***
LOG(HEALTH)	-0.140119	-2.042397	0.0418**
D	-0.232903	-2.711520	0.0070***

Note: **) significance at the test level α (5%); ***)significance at the test level α (1%)

Source: Data Processed, 2022

Table 3 shows the equation of the research results obtained in the Fixed Effect Model regression model in this study as follows:

$$\begin{aligned} \text{LogK} = & 2.087613 + 0.827683*\text{Log}(\text{GRDP}) - \\ & 0.067109*\text{LE} - 0.491046*\text{ALS} - \\ & 0.079553*\text{Log}(\text{DI}) - 0.105138*\text{Log}(\text{FDI}) + \\ & 0.180217*\text{Log}(\text{SOCIAL}) + \\ & 0.164143*\text{Log}(\text{EDU}) - \\ & 0.140119*\text{Log}(\text{HEALTH}) - 0.232903*D... \quad (3) \end{aligned}$$

Based on the analysis results as in equation two, it is known that the coefficient value of the GRDP variable is 0.827683 with a probability of 0.0000. These results indicate that GRDP affects the number of poor people in Indonesia from 2010-2021. When there is an increase of 1% in GRDP, it will increase the number of poor people by 0.82%. The increase in GRDP is an essential measure to assess the success of the economic development of a region. The higher the GRDP of an area, the greater the income of the people of that area. The higher GRDP, the more prosperous the population of a region, or in other words, the number of poor people will decrease (Alhudori, 2017). A higher the GRDP per capita will increase the number of jobs and increase population's income. Thus enabling the government to collect more taxes that can be used for poverty alleviation programs (Safuridar & Damayanti, 2018). Garza-Rodriguez (2018) found an equilibrium relationship between poverty reduction and

economic growth, both in the short and long term.

However, the high GRDP does not guarantee that all residents in a region enjoy prosperity. High GRDP growth must be balanced with overall income distribution so everyone can feel it. Especially in developing countries, high GRDP growth will increase people's income inequality. Hassan (2015) research in Nigeria found that as GDP growth increases, the unemployment rate will increase. It is explained that citizens are unable to work for an income, will remain poor. Unemployment implies that GDP growth does not benefit the poor by creating enough jobs to reduce both unemployment rate and poverty rate.

This study's results align with Hanafi (2020) research which found that GRDP has a positive and significant influence on poverty in the Wanarakuti–Banglor region, Indonesia. Then Segoro & Pou (2016) found that GRDP positively affected on poverty but not significantly. Research by Hasan (2021) also found that economic growth positively affects poverty in Indonesia. On the contrary, this study is in contrast to other studies which state that PRDB has a negative effect on the number of poor people (Agustini & Kurniasih, 2017; Alhudori, 2017; Giovanni, 2018; Puspita, 2015; Safuridar & Damayanti, 2018; Tahir et al., 2014).

Based on table 4 shows the coefficient of Life Expectancy of -0.067109 with a probability

of 0.0001, so it is known that life expectancy has a significant adverse effect on the number of poor people in Indonesia. When life expectancy increases by 1%, it will reduce the number of poor people by 0.067%. These results indicate that government policies in overcoming health problems have produced results that the quality of public health improve, increasing life expectancy. The increasing life expectancy shows that the achievement of human development has been successfully carried out so that the social conditions of the community have improved, which is marked by a decrease in the number of poor people in an area (Danasari & Wibowo, 2017).

This study's results align with Hasan (2021) research which states that the HDI, which consists of the life expectancy index, education index, and living standards, has a significant negative effect on the poverty rate in Indonesia. Bancin & Usman (2020) found that life expectancy had a negative effect on the number of poor people in Aceh province, but not significantly. Research by Dores et al. (2014) in West Sumatra and research by Finkayana & Dewi (2016) found that life expectancy has a significant adverse effect on the number of poor people. Anggadini (2015) states that life expectancy has a negative and significant effect on poverty. One of the indicators in looking at health development is life expectancy. Improved health or life expectancy will extend the working period and improve the quality of the immune system, which will further increase the output produced to meet life's needs.

One of the indicators used to explain the improvement in the quality of human resources in an area based on the education sector is the average length of schooling. According to the theory of human capital, capital in education will produce graduates who have high productivity. The higher the quality, the better. So that education can get someone out of the cycle of poverty (Faritz & Soejoto, 2020) based on this study also found that the greater the average length of schooling, the lower the number of poor people. The coefficient on this variable is -0.491046 with a probability of 0.0000, so every 1

year increase in the average length of school will reduce the number of poor people by 0.491%. The greater the average length of schooling will have an impact on reducing the number of poor people. Conversely the smaller the average length of schooling will increase the number of existing poor people.

Syabrina et al.(2021) proved that the length of time it takes to reach the level of education is inversely (negative) with the number of poor people. The results of this study are also in line with the research of Faritz & Soejoto (2020), who examined the effect of economic growth and the average length of schooling on poverty in Central Java province, which found that the average length of schooling had a significant adverse effect on poverty. Research by Finkayana & Dewi (2016) in Bali also found that the average length of schooling had a significant negative affected on the number of poor people. Other studies by Syabrina et al. (2021) in Jambi and Hadi (2019) in East Java obtained the same results. However, Hasanah et al. (2021) research obtained results that did not significantly affect the average length of schooling on the number of poor people.

Based on the results of the regression analysis, the DI variable has a significant adverse effect on the number of poor people in Indonesia with a coefficient of -0.079553 with a probability of 0.0016, which means that when there is an increase of 1% in DI, it will reduce the number of poor people by 0.07%. Domestic investment (DI) is an investment activity to do business in the territory of the Republic of Indonesia which is carried out by domestic investors using domestic capital which individuals or business entities can carry out. DI is a form of investment by building, totally buying, or acquiring a company. This Domestic Investment (DI) has a role, which is one of the aggregate expenditures, where an increase in investment will increase aggregate demand and national income (Wulandari et al., 2022). The results of this study are in line with the results of research by Okungbowa & Eburajolo (2014), Permana (2019), Soegoto et al. (2022), which state that DI has a negative impact

on the poverty rate or is capable of being a supporter in poverty alleviation efforts.

Based on table 4 shows that the coefficient value of the FDI variable is -0.105138 with a probability of 0.0002. When there is an increase in FDI by 1%, it will reduce the number of poor people by 0.1%. Foreign Direct Investment (FDI) is one of the investments aimed at investing to do business in the territory of the Republic of Indonesia which foreign investors carry out. FDI is encouraged to spur economic growth and equity, increase the community's active role in economic activities and expand business and employment opportunities. Investment is always followed by technological developments so that it will provide an increase in productivity and per capita income of the community. Investment activities enable a community to continuously increase investment and employment opportunities, increasing national income and community prosperity (Wulandari et al., 2022). Foreign investors's investments are expected to accelerate the reduction of a country's poverty rate. This study's results align with research conducted by Do et al. (2021) in Vietnam which concluded that foreign investment tends to reduce poverty rates in a province. Ahmad et al. (2019) confirmed a positive and highly significant relationship between net FDI inflows and poverty alleviation in Asia. Other studies have also obtained similar results Agarwal et al. (2017); Ganić (2019); Magombeyi & Odhiambo (2017); Soumaré, (2015); Ucal (2014); Utama (2015). In contrast, research by Ali & Nishat (2009); Anetor et al. (2020); Huang et al. (2010); Meyer & Sinani, (2009) found the opposite result with this research, namely that FDI has a negative impact on reducing the level of poverty.

To eradicate poverty, the government, as the holder of power and authority, certainly needs to provide interventions and efforts to overcome poverty. One of these forms of intervention is in the form of policies through regional spending on sectors that are considered to have an essential role in alleviating poverty including social protection, health, and education. It is known from the analysis results that the coefficient of the variable social

protection spending is 0.180217 with a probability value of 0.0189. So it is known that an increase in social protection spending by 1% will increase the number of poor people by 0.18%.

According to the National Team for the Acceleration of Poverty Reduction (TNP2K), poverty alleviation based on social assistance and protection aims to fulfill fundamental rights, reduce the burden of living, and improve the quality of life of the poor. With social protection from the state for the community, the community is guaranteed access to social protection. It will get access to opportunities both in the economic and educational fields. However, the results of this study note that social protection spending has yet to be able to have a good impact on reducing the number of poor people. Spending can be due to the ineffectiveness of existing policies or assistance that has not been on target. This study's results align with the research of Melati et al. (2021); Sendouw et al. (2017) state that social protection spending has no significant positive effect on the poverty level. On the other hand, this research is different with the research of Sihombing et al. (2022) which states that the regional spending function for social protection has a significant negative effect on the percentage of poverty in Indonesia. Pasaribu & Hendarto (2019) also stated that spending on social protection areas negatively affected on poverty.

Based on the results of the analysis, it is known that the coefficient value of the education sector spending variable is 0.164143 with a probability of 0.0003. This means that when there is an increase in the education sector spending of 1%, the number of poor people by 0.16%. Increased spending on the education function will improve public facilities and access to education. The existence of education spending will improve the quality of human resources, which will increase employment opportunities and will reduce the current poverty rate. On the contrary, the results of this study show that the greater the education sector spending, the more the number of poor people will increase. This can be due to the ineffectiveness of existing policies or

expenditures that have yet to be on target. This study's results align with Pasaribu & Hendarto (2016) which state that spending on the education function has a positive effect on poverty. On the other hand, Sihombing et al. (2022) state that spending on the education function has a significant negative effect on the percentage of poverty in Indonesia.

The analysis results show that the health sector spending variable coefficient is -0.140119 with a probability of 0.0418. When there is an increase in the health sector spending of 1%, it will reduce the number of poor people by 0.14%. The provision of health facilities for the poor must be increased as a top priority in pro-poor policy programs. Health fund allocation by the Regional Government needs to be maintained and increased by considering the aspect of equity so that all poor people can access proper health facilities. The existence of a serious role from the government to overcome this problem by absorbing the maximum health expenditure budget and being on target for programs and activities that are pro-poor can reduce poverty levels. This research is in line with the research of Pasaribu & Hendarto (2016), which states that spending on health functions has a negative effect on poverty levels. Palenewen et al. (2018); Tahir et al. (2014) state that public expenditure in the health sector has a negative effect on poverty. Demak et al. (2020) in the City of Manado also found that health sector spending had a significant negative effect on poverty. Febriandika et al. (2022) stated that the number of poor people in Eastern Indonesia would decrease with increasing government spending on health.

In the dummy variable, Western Indonesia is denoted as (0), and Eastern Indonesia is denoted as (1). Based on the results, shows that the coefficient of the dummy variable is -0.232903 with a probability of 0.0070. This shows that there is a significant difference between the percentage of poor people in Western Indonesia and Eastern Indonesia. Due to the negative coefficient value (-), Eastern Indonesia has a higher percentage of poor people

than Western Indonesia, or Western Indonesia has better poverty conditions.

Much of Indonesia's socio-economic development is concentrated Western Indonesia. Eastern Indonesia is basically rich in natural resources, which so far have not been adequately exploited for shared prosperity, or it has been exploited but only for the benefit of West Indonesia, or many resource concessions are allocated for the benefit of the state/central government (Farid, 2019). Research by Nurmala & Hutagaol (2022) shows that infrastructure reduces poverty in both regions, but the effect is greater in the Western Region of Indonesia. It is said that the effect of infrastructure on poverty will be more effective the quality and accessibility of the infrastructure follow it.

The results showed that the value of R² was 0.673219, which means that 67.3% of the variation in the Y variable could be explained by variations in the X variable set (GRDP, Life Expectancy, Average Length of Schooling, DI, FDI, Social Protection Sector Spending, Education Sector Spending, Health Sector Spending), variations in other variable sets outside the model explain the remaining 32.7%. The value of the F-statistic shows 39.86393 with a probability of 0.000000. In this study, simultaneously, the set of variables X significantly affects the number of poor people

CONCLUSION

Based on the research results, it is known that the variables life expectancy, average length of schooling, DI, FDI, and health sector spending have a significant adverse effect on the number of poor people in Indonesia (Western Indonesia and Eastern Indonesia) in 2010-2021. While GRDP, social protection spending, and education sector spending have a significant positive effect. Furthermore, from the results of the dummy variable, there is a significant difference between the percentage of poor people in Western Indonesia and Eastern Indonesia. Due to the negative coefficient value (-), Eastern Indonesia has a higher percentage of poor people than Western Indonesia, or Western Indonesia has better poverty conditions.

Life expectancy, average length of schooling, domestic investment, foreign direct investment, and health sector spending have a significantly negative affect on the number of poor people. This means that these five variables can reduce the poverty rate properly so that the government needs to pay full attention to these variables to reduce poverty. The GRDP, social protection spending, and education sector spending variables have a positive effect, meaning that an increase in this variable will increase the number of poor people. This shows that income is not evenly distributed in society and needs special attention because, it will further increase existing inequality if left unchecked. The government needs to reassess the direction of growth in order to give priority to critical sectors. In addition, social protection spending and education sector spending, which should be able to reduce the number of poor people. The results of this study got the opposite result. This requires an in-depth analysis of whether the existing spending are practical and on target.

The novelty in this research is find out that it is not limited to the effect of HDI on the poverty level, but include several other variables based on previous theory and research which are thought to have impact on the poverty level in Indonesia. In addition, this study involved Western Indonesia and Eastern Indonesia as dummy variables to see the differences between the two. This study also observed on the latest conditions, namely the 2010-2021 timeframe. In further research, it is hoped that the model can be improved for future research by adding new variables and increasing data coverage.

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