Eradicating Poverty And Human Capital Development In Indonesia: An Approach with Multilevel Logistic Regression Model

Suryana [1], Kadek Swarniati[2]

[1] BPS-Statistics of DKI Jakarta Province

[2] BPS-Statistics of DKI Jakarta Province

* Corresponding Author. E-mail:suryana@gmail.com

Abstract: This study investigated the socio-economic determinants at the individual and contextual level of household poverty in Indonesia. The data used in this study is drawn from the March 2020 Indonesia-National Socio-Economic Survey (Susenas) provided by BPS, Statistics-Indonesia. The data were analyzed using the Multilevel Logistics Regression Model. This study indicates that the achievement of the Human Development Index at the provincial level affects the reduction of the poor at the household level. Moreover, at the individual level, household size, education level, and employment status of the household head significantly affect household poverty. The results of this study underscore the need to look beyond the influence of individual-level factors in addressing regional variations in household poverty in Indonesia. Therefore, Government policies to increase human development in provinces with low HDI are needed.

Keywords: Human Development Index, education level, informal employment, demographic trap.

INTRODUCTION

Poverty is characterized by a lack of opportunities, an inability to exert control, and fragility. In such an environment, poverty is a really multifaceted phenomena that demands multifaceted policy and program interventions to improve individuals' well-being and thus their ability to escape poverty (Krishnan, 2014). Moreover, The COVID-19 pandemic is expected to push an additional 88 million to 115 million people into extreme poverty, with the total rising to 150 million by 2021, depending on the severity of the economic contraction (World Bank, 2021).

The issue of poverty has been on the agenda of the Indonesian government for many years. In the Sustainable Development Goals (SDGs), Indonesia aims to eradicate extreme

poverty for all those currently earning less than US$1.9 PPP per day or around 3.8% of Indonesia's population by 2020 (BPS, 2020a). In addition, by 2030, Indonesia also targets to reduce at least half the proportion of men, women, and children of all ages living in poverty in all national dimensions.

In Indonesia, an appreciable decline in poverty occurred recently in March 2010-September 2019, except for September 2013 and March 2015. The percentage of the poor decreased from 13,33 percent in March 2010 to 9,22 in September 2019. The increase in the number and rate of poor people in the period September 2013 and March 2015 was triggered by the rise in the price of basic goods due to the increase in the price of fuel oil (BPS, 2020d). Therefore, it can be concluded that, in general, the trend of poverty in Indonesia has decreased. This trend was, however, getting disturbed, unnoticed at the time, by the COVID-19 pandemic. The percentage of the poor swelled from 9,22 percent in September 2019 to 9,78 in March 2020 and 10,19 percent in September 2020.

Existing poverty researches have tended to focus on the causes of poverty at the individual level rather than considering group diversity. However, Nurkse (1953) idea is still significant in studying the theory of the poverty cycle that binds the poor. Poverty, she claims, is caused by low productivity, which influences real income, savings, purchasing power, and investment, making poor people synonymous with low capital. The lack of capital for the poor is created by a demographic trap, in which low-income families opt to have a large number of children, resulting in income that is solely utilized for consumption, leaving them unable to invest (Cooper & Sachs in Rouf, 2014). In addition to numerous children, low education causes financially low-income families to find it difficult to send their kids to school, resulting in an illiterate generation, number illiterate, and becomes poor (Cosgrove, S., & Curtis, 2017).

Household poverty studies in Indonesia are very diverse. (Setiawan, A., Bakri, S., Effendi, A., & Nurhaida, 2014) discovered that structural poverty, not cultural poverty, was the source of poverty on the West Lampung coast. Meanwhile, according to Nurcahyono (2014), physical weakness and fragility are strongly associated with material poverty. Other researcher mention about problems of a lack of formal education and employment opportunities were also associated with poverty ((Taufiq, N., & Dartanto, 2020); (Sumarno, 2020); and (Pratiwi, E. D., Ashar, K., & Syafitri, 2020).

Although many government policies to reduce poverty have been promoted, poverty that has risen again after the pandemic indicates the need for new policies that are more

targeted. Most studies on household poverty in Indonesia rely on individual determinants, so it still needs to be developed. For example, poverty in Indonesia varies from the lowest 3.78 percent in Bali Province to the highest 26.64 percent in Papua Province (BPS, 2020c). This extensive range indicates that there are factors of variation between provinces that lead to poverty in Indonesia. While the literature on measuring poverty is currently relatively growing and abundant, very few household poverty studies use regional variables. Here is a need for research about the contextual determinants of poverty.

Poverty can also be an excess of a policy. Economic growth that is not in favour of reducing inequality is harmful to social security, such as the entry of the poor and unemployed into criminal activities (Rhee, 2012). Democratization as an agenda for reducing economic inequality is quite tricky to see (Bonica et al., 2013). Human Development builds human capacity to be able to increase choices (UNDP, 1990). Contextually, development programs designed and implemented at the group level starting from the state, province, district/city, to the smallest local environmental unit impact the welfare of the population as individuals.

The empirical literature on the determinants of household poverty is well established (Majeed, M. T., & Malik, 2015); (Woolard, Ingrid; Klasen, 2004); (Geda, 2005); (De Janvry, A., & Sadoulet, 2000); (Khan, R. E. A., Rehman, H., & Abrar ul Haq, 2015)). In measuring poverty, scholars often adopt various approaches. For example, some studies have embraced principal component analysis and adopting the FGT poverty index (see, for instance, (Achia et al., 2010); (Akerele & Adewuyi, 2011). In comparison, another strand of literature has endorsed the use of the fixed effect and a robust alternative based on random effect probit estimation (Biyase & Zwane, 2018) discriminant analysis (Omotesho, O. A., Adewumi, M. O., & Fadimula, 2008), and used Panel Study (Brown & Hirschl, 1995).

The concept and definition of household poverty used in this study refer to the concept of poverty used by BPS-Statistics Indonesia. Households living below the poverty line or poor households have per capita expenditures more diminutive than the poverty line. BPS used the basic needs approach (basic need approach) to calculate the poverty line since 1964 and was updated again in 1998. BPS officially released the poverty line on 15 July 2020 and differentiated between urban and rural poverty lines (BPS, 2020d).

In this study, a household is defined as an individual or group with one management on monetary aspect. As Cooper & Sachs in (Rouf, 2014) state, poor households are trapped

demographically with many children, resulting in poor households having no choice to invest other than spending their existing income for consumption. Therefore, household size is the number of household members, including the head of the household who usually lives and settles in the household. Most empirical literature shows that household size has a significant negative effect on household chances of becoming poor. This is because the larger the household size, the greater the basic needs that must be met (Lanjouw, P., & Ravallion, 1995); (Geda, 2005), and (Baulch & McCulloch, 2002).

The most intensively studied determinants of household poverty include education of the head of household and job status of head of household. In this study, the head of household education is defined level of formal education they have completed, marked by the highest diploma owned. According to Amanullah (2018), education is an investment. Education is an essential variable in alleviating poverty (Awan et al., 2011); (Srinadi, 2017); and (Amalia, 2012). Then, the job status of the head of the household is the role performed by a worker. BPS distinguishes work status as informal if working alone, assisted by temporary/unpaid workers, casual workers, or family workers/unpaid workers, and informal if working as a business is assisted by permanent/paid workers and laborers/employees/employees. More than that, Indrayanti (2018) suggests that work is the fruit or result of human investment. Decent work leads people to earn sufficient income so that they can live in prosperity.

In this study, to develop poverty research literature, we use Human Development Index, Annual Economic Growth, and Indonesia Democracy Index as contextual variables. The Human Development Index is a geometric mean of education, health, and economic indexes. The expected years of schooling and the mean years of schooling measured the education index; the life expectancy assessed the health index, and the adjusted purchasing power parity estimated the economic index. Mirza (2012) found that poverty harms HDI in Central Java Province. Afterward, the annual economic growth rate compares the added value generated by the entire population in an area between years measured based on constant prices. The rate of inclusive economic growth could reduce poverty (Rhee, 2012). Later on, the Indonesian Democracy Index is a composite index consisting of civil liberties, political rights, and democratic institutions. Sen (2000) describes democracy as the main corridor in understanding the problem of poverty.

In summary, Table 1 presents all variables in this study.

Table 1. Variables used in the empirical analysis

Variables Code	Variables	Description	Type
Dependent variables			
Poverty	Poverty incidence	0 : Non-Poor 1 : Poor	Nominal
Independent variables			
Individual Level			
Size	Total number of household member	0 : 4 people or less 1 : more than 4 people	Nominal
Edu	The highest diploma owned by the head of the household	1 : Do not have a diploma 2 : Elementary School 3 : Secondary School 4 : High School 5 : College	Ordinal
Work	Job Status of the head of household	0 : formal 1 : informal	Nominal
Regional level			
HDI	Human Development Index in 2020		Ratio
EGR	Economic growth in 2020		Ratio
IDI	Indonesian Democracy Index in 2020		Ratio

This study therefore contributes and improves upon the existing poverty literature by using individual and contextual determinants to provide recommendations for policy formulation that could help reduce poverty. This study seeks to obtain a more comprehensive understanding of poverty alleviation in Indonesia. The main objective of this study is to determine the effect of the Human Development Index, the rate of economic growth, and the Indonesian Democracy Index as group variables upon the probability of being poor of household in Indonesia. Due to the vast dimensions of poverty, some other personal characteristics such as household size, job status, and education of the head of household will also be analyzed.

METHODOLOGY

Data source

The data used to analyze household poverty is taken from the March 2020 Indonesia-National Socio-Economic Survey (Susenas). The survey covers both urban and rural areas. Surveys collect data on individual characteristics such as demographics, education, and health and household characteristics such as housing, social protection, and spending on household consumption. A household is a group of people who usually live together in one building and there is one person who manages the daily needs of all members.

The Susenas sample design uses a two-stage sample. The first stage is selecting the census block sample using probability proportional to the size, and the second stage is choosing the household sample in a selected census block using systematic sampling. The implementation of Susenas in March 2020 covered 345,000 sample households spread across 34 provinces and 514 districts/cities throughout Indonesia (BPS, 2020a).

Multilevel Regression Model

The multilevel regression model is a model that combines fixed effects and random effects simultaneously in one model (Hox, J. J., Moerbeek, M., & Van de Schoot, 2017). This model fits in hierarchical data, often found in survey studies where the units of analysis come from groups (clusters) or data taken through gradual sampling (cluster sampling).

Multilevel research divides the model into two parts, which consist of the null model and the conditional model. The null model is a scenario without included explanatory variables at levels 1 and 2. Meanwhile, conditional models are conditions where explanatory variables, both at level 1 and level 2 models, have been entered into the model.

Multilevel Logistic Regression Model

Hox, J. J., Moerbeek, M., & Van de Schoot (2017) argues that there are two basic types in the logistic regression multilevel model, such as the multilevel regression model. The difference is the linearity of the independent variables in the multilevel logistic regression model on the transfer function with a logistic distribution.

The formulation of the multilevel logistic regression mathematical model with three independent variables at level 1 and three independent variables at level 2 is as follows:

$$
\begin{aligned}
Logit_{ij} = ln\left(\frac{p_{ij}}{1 - p_{ij}}\right) \\
= \gamma_{00} + \gamma_{01}Z_{1j} + \gamma_{02}Z_{2j} + \gamma_{03}Z_{3j} + u_{0j} \\
+ (\gamma_{10} + \gamma_{11}Z_{1j} + \gamma_{12}Z_{2j} + \gamma_{13}Z_{3j} + u_{1j})X_{1j} \\
+ (\gamma_{20} + \gamma_{21}Z_{1j} + \gamma_{22}Z_{2j} + \gamma_{23}Z_{3j} + u_{2j})X_{2j} \\
+ (\gamma_{30} + \gamma_{31}Z_{1j} + \gamma_{32}Z_{2j} + \gamma_{33}Z_{3j} + u_{3j})X_{3j}
\end{aligned}
$$

so formed a *Fixed Coefficient* to measure the fixed effect

$$\gamma_{00} + \gamma_{01}Z_{1j} + \gamma_{02}Z_{2j} + \gamma_{03}Z_{3j} + (\gamma_{10} + \gamma_{11}Z_{1j} + \gamma_{12}Z_{2j} + \gamma_{13}Z_{3j})X_{1j}$$
$$+ (\gamma_{20} + \gamma_{21}Z_{1j} + \gamma_{22}Z_{2j} + \gamma_{23}Z_{3j})X_{2j}$$
$$+ (\gamma_{30} + \gamma_{31}Z_{1j} + \gamma_{32}Z_{2j} + \gamma_{33}Z_{3j})X_{3j}$$

and *Random Coefficient* to measure the random effect

$$u_{0j} + (u_{1j})X_{1j} + (u_{2j})X_{2j} + (u_{3j})X_{3j}$$

Sommet, N., & Morselli (2017) simplify multilevel logistic regression analysis into three steps as follows:

Step 1: Run a null model and calculate the coefficient of intraclass correlation (ICC).

Step 2: Run a restricted and increased intermediate model and carry out a probability ratio test to see if it improves model fitness by considering the low-level variable's cluster-based effects.

Step 3: Run the Final model and the ratio of probability and intervals of confidence to assess if the assumption fits with the data.

RESULTS AND DISCUSSIONS

RESULTS

This study finds evidence that inter-group variability in 34 provinces significantly affects poverty in Indonesia. The intraclass correlation (ICC) value of 0.0971 indicates that the variation in household poverty that can be explained by the diversity between provinces is 9.71 percent, and the remaining 90.29 percent is explained by the diversity within each province. The random effect coefficient on the null model is 0.354 at a significant level of 0.01. Heck, R. H., Thomas, S., & Tabata (2013) set the ICC limit of 0.05 as a threshold to consider the diversity between groups.

As there is evidence of variability between provinces in the probability of poor households, we developed a multilevel model to explain this variation. The next phase is to build a model involving the independent variables at the individual level and the interactions between variables and independent variables at level-2. In this study, the formulation for the developed model is as follows:

$$Logit_{ij} = ln\left(\frac{p_{ij}}{1 - p_{ij}}\right)$$
$$= \gamma_{00} + \gamma_{01}HDI_j + \gamma_{02}EGR_j + \gamma_{03}IDI_j + u_{0j}$$
$$+ \left(\gamma_{10} + \gamma_{11}HDI_j + \gamma_{12}EGR_j + \gamma_{13}IDI_j + u_{1j}\right)SIZE_j$$
$$+ \left(\gamma_{20} + \gamma_{21}HDI_j + \gamma_{22}EGR_j + \gamma_{23}IDI_j + u_{2j}\right)EDU_j$$
$$+ \left(\gamma_{30} + \gamma_{31}HDI_j + \gamma_{32}EGR_j + \gamma_{33}IDI_j + u_{3j}\right)WORK_j$$

Table 2 presents the simulation results for selecting the best model. Model 1 is a null model without including independent variables. Model 2 contains independent variables at level-1 without involving independent variables at level-2. Model 3 and Model 4 have independent variables at both level-1 and level-2. The best model selection by considering the slightest difference in the value of -2log-likelihood between models containing independent variables, both level-1 and level-2, and the null model.

Table 2 The Coefficients of Multilevel Logistic Regression

Variable	Model 1 (*Null Model*)	Model 2	Model 3	Model 4
Intercept	-2,456***	-2,808***	0,000	2,655
Level-1				
HOUSEHOLD SIZE				
More than 4 people		1,339***	1,339*	1,339***
4 people or less		0^b	0^b	0^b
EDU				
College		-1,995***	-1,994***	-1,994***
High School		-0,993***	-0,993***	-0,993***
Secondary School		-0,525***	-0,524***	-0,524***
Primary School		-0,261***	-0,261***	-0,261***
Not Have		0^b	0^b	0^b
WORK				
Informal		0,391***	0,391***	0.391***
Formal		0^b	0^b	0^b
Level-2				
EGR				0,029
HDI			-.071***	-0,047
IDI				-0,027
Var(Intercept)	0,354***	0,339***		0,0000
Var(EGR)				0,011825
Var(HDI)			0,000060***	0,000048*
Var(IDI)				0,0000
-2log likelihood	1.819.964,749	1.911.634,376	1.911.654,862	1.911.716,434
Different between -2log likelihood and Null Model		91669.627	**91690.113**	91751.685
ICC	0,0971			

Notes:
*** = significant at p < 0,01; ** = significant at p < 0,05 dan * = significant at p < 0,1

0^b = reference category

Model 3 is relatively the best among the four models. The difference in the value of -2log likelihood between Model 3 and Model 1 is smaller than that of Model 4 and Model 1. Although the difference in the value of -2log likelihood between Model 3 and Model 1 is still more significant than the -2log likelihood between Model 2 and Model 1, Model 2 has not explained the diversity between levels-2 (provinces). Model 3 can explain the diversity between provinces as indicated by the variance (HDI) of 0.00006 with a significance level of less than 0.01. On the other hand, the variables of economic growth and IDI achievements in 2020 in 34 provinces in Indonesia are not yet sufficiently proven to influence poverty reduction in Indonesia.

The best model formed is

$$Logit_{ij} = ln\left(\frac{p_{ij}}{1 - p_{ij}}\right)$$
$$= -0,071 * HDI_j + 1,339 * SIZE_j - 1,994 * EDU_{Coollege_j} - 0,993$$
$$* EDU_{High\_School_j} - 0,524 * EDU_{Secondary_j} - 0,261 * EDU_{Primary_j}$$
$$+ 0,391 * WORK_j$$

The partial test of each independent variable at level-1 and level-2 proves that differences influence the opportunities for poor households in 34 provinces in Indonesia in HDI achievement, the number of household members, household education level, and employment status of the head of the household. The coefficient value of the HDI variable is -0.071, which very significantly indicates that the greater the HDI value of a province, the smaller the chance for households in that province to become poor. On average, every one-point increase in HDI will decrease poverty by 0.068 percentage points.

Table 3 shows the relationship between the number of household members, employment status, and education level of the head of the household and poverty trends. In general, the probability of a household with more than four household members being impoverished is 3.8 times more likely than that of a household with less than four household members.

Table 3 Coefficient, Odd Ratio dan "95% Confidence Interval for Odd Ratio)"

Variables	Coefficient	Odd Ratio	95% Confidence Interval for Odd Ratio	
			Lower	Upper
Level-1				

HOUSEHOLD SIZE				
More than 4 people	1,339*	3,813	3,718	3,911
4 people or less	0^b			
EDU				
College	-1,994***	0,136	0,125	0,148
High School	-0,993***	0,371	0,357	0,385
Secondary School	-0,524***	0,592	0,568	0,616
Primary School	-0,261***	0,770	0,747	0,794
Not Have	0^b			
WORK				
Informal	0,391***	1,478	1,434	1,525
Formal	0^b			
Level-2				
HDI	-.071***	0,932	0,888	0,977
Var(HDI)	0,000060***			

Notes:
*** = significant at p < 0,01; ** = significant at p < 0,05 dan * = significant at p < 0,1
0^b = reference category

The degree of education of the head of the household dramatically influences the tendency of household poverty. The Odd Ratio value in Table 3 for the education variable of the head of the household shows that the higher the education level, the smaller the Odd Ratio value, which means the smaller the chance of becoming a poor household compared to the head of the household who does not attend a school or does not finish elementary school. The probability of a household with a head of household who is not in school or has not finished elementary school is seven times (=1/0.136) tend to be impoverished compared to the head of a household who has graduated from college.

The employment status of the head of household also has a significant effect on the tendency to become a poor household. Those working in the informal sector tend to be poor households 1.4 times higher than household heads who work in the formal sector.

DISCUSSIONS

The multilevel logistic regression model used to examine the effect of the variable number of household members, education and occupation of the head of the household, and the HDI achievement of a province can answer the research problem.
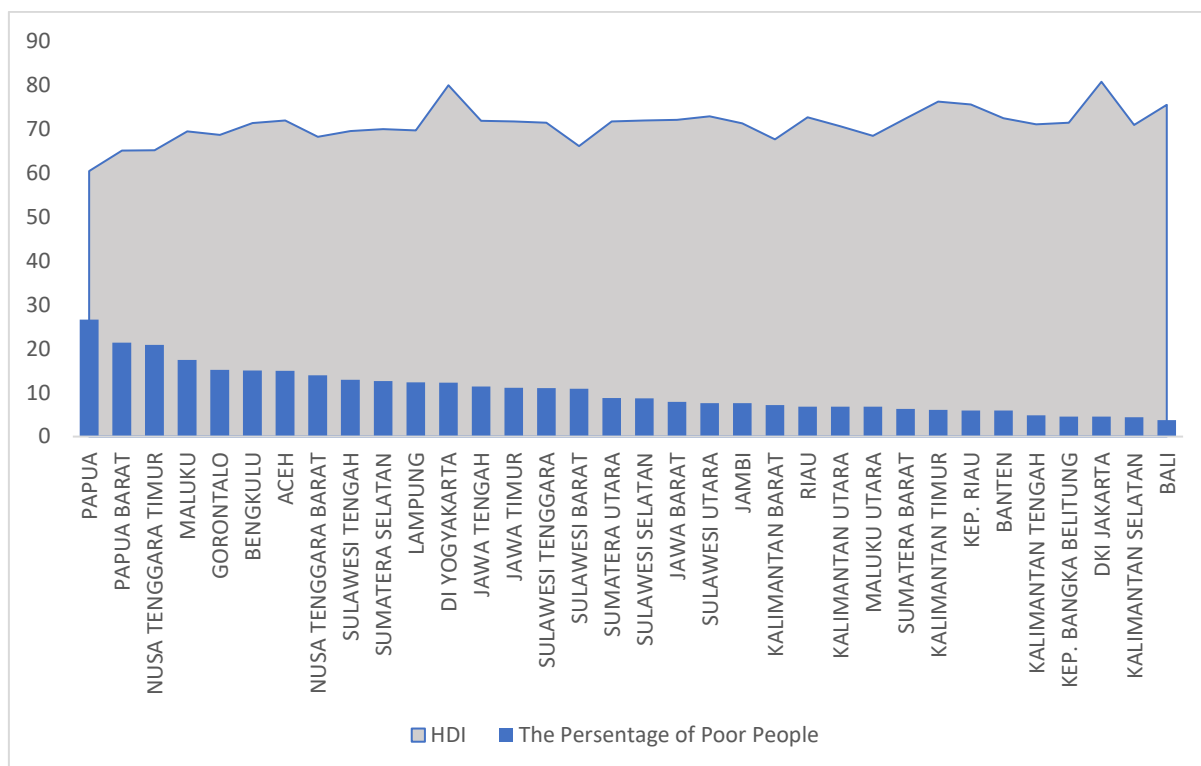
Figure 1
The Percentage of Population Living Below the Poverty Line and HDI
by Province in Indonesia

HDI becomes the independent variable at the second level, which significantly affects the reduction of poor households. Until 2020, the percentage of poor people tends to be low in provinces with high HDI achievements (Figure 1). This finding is supported by UNDP (1990), Ul Haq (1995), and Alkire, S., & Deneulin (2009), which state that human development makes humans have more choices to live healthier so that they live long, are more intelligent and more productive so that they are economically stable. This finding is also in line with the results of Nussbaum (2009), which states that building people means developing opportunities for everyone. On the other hand, poverty is a form of not being free to choose because it causes the poor to lose the opportunity to be economically active and limit their enjoyment of public facilities (Sen, 2000).

One of the dimensions of human development is education, which significantly affects the head of the household being not poor. For example, a household head who does not attend a school or does not finish primary school is 1.3 times as poor as those who have finished elementary school; 1.7 times compared to those who finished junior high school; 2.7 times compared to those who finished high school, and seven times compared to those who graduated from college.

This finding is similar to those of Awan et al. (2011) that an increase in a person's education in Pakistan is consistent with a decrease in a person's chances of becoming poor through an increase in income which will eventually remove him from poverty. This finding is also in line with Srinadi (2017), which states that the higher the level of education, the lower the poverty rate in Indonesia, and Amalia (2012), which found that education is an important variable that affects poverty in Eastern Indonesia.

The study also shows that household leaders working in the informal sector are 1.5 times poorer than those working in the official sector. Taufiq, N., & Dartanto (2020) and Taufiq (2017) indicate that the more jobs are transferable from the informal to the formal sector, the lower the risk of chronic poverty.

Household heads who work in the informal sector tend to be poorer than those in the formal sector because of different incomes or wages in the two industries. BPS recorded that the wages of informal and formal workers in 2020 were IDR 1.37 million for casual workers, IDR 1.71 million for self-employed workers, and IDR 2.76 million per month for workers/employees/employees (BPS, 2020b).

The number of people in the household strongly influenced the use of income earned by households. This study found that households with more than four household members were 3.7 times more likely to be inferior than households with few household members (4 people or less). This finding supports the demographic trap theory by Cooper & Sachs in Rouf (2014), which reveals that poor households with many children have no choice but to use their current income only for consumption and minimal investment. Furthermore, Trisnu, C. G., & Sudiana (2019) shows that the higher the population growth, the higher the poverty rate in districts/cities in Bali Province.

CONCLUSIONS

The primary purpose of this study is to examine the influence of individual and contextual variables on household poverty in Indonesia. The study establishes evidence of a significant effect of household size, education of the head of the household, and the employment status of the head of the household on the probability of a household being poor. Households with a larger size (members), households with a head of household with low education, and working in the informal sector have a higher chance of falling into poverty. At the contextual level, the achievement of the Human Development Index (HDI) affects the reduction of poor households in Indonesia at the group (provincial) level, while

economic growth and the Indonesian Democracy Index (IDI) are not sufficiently proven to affect reducing poor households.

Therefore, this study recommends increasing the improvement of human resources through investment in formal education. It should also involve training in life skills that will help cultivate entrepreneurial abilities to generate income and become more productive. Furthermore, policies that develop facilities and guarantees for informal employment can help informal workers become more prosperous and move out of poverty. More importantly, these results suggest that regional variations in household poverty in Indonesia should be addressed. Therefore, government policies in increasing human development in provinces with low Human Development Index (HDI) are needed.

This analysis has certain limitations: First, this study mainly focuses on the contextual variable and some selected control variables. Second, it is a cross-sectional analysis using household survey data, so it does not take into account time dynamics. Third, the final logistic regression model does not involve the interaction of variables. Future research can make an extended model incorporate more control variables. In addition, poverty determinants can be compared between the different times of household surveys. Furthermore, we highly recommended the addition of interaction variables in further research.

REFERENCE

Achia, T. N. O., Wangombe, A., & Khadioli, N. (2010). A logistic regression model to identify key determinants of poverty using demographic and health survey data. *European Journal of Social Sciences*, *13*(1), 38–45.

Akerele, D., & Adewuyi, S. A. (2011). *Analysis of Poverty Profiles and Socioeconomic Determinants of Welfare among Urban Households of Ekiti State*, Nigeria. *3*(1), 1–7.

Alkire, S., & Deneulin, S. (2009). *A Normative Framework for Development. In S. Deneulin, & L. Shahani, An Introduction to the Human Development and Capacity Approach: Freedom and Agency (pp. 3-13).* Eartscan.

Amalia, F. (2012). Pengaruh Pendidikan, Pengangguran dan Inflasi Terhadap Tingkat Kemiskinan di Kawasan Timur Indonesia (KTI) Periode 2001-2010. *Econosains Jurnal Online Ekonomi Dan Pendidikan*, *10(2)*, *158.*

Amanullah, A. (2018). *Pendidikan sebagai Investasi: Kuantitas dan Kualitas Pendidikan di Indonesia. In S. M. Adioetomo, & E. L. Pardede, Memetik Bonus Demografi: Membangun Manusia Sejak Dini (p. xx).* Raja Grafindo Persada.

Awan, M., Malik, N., Sarwar, H., & Waqas, M. (2011). Impact of education on poverty reduction. *International Journal of Academic Research*, *3*(1), 659–664.

Baulch, B., & McCulloch, N. (2002). Being poor and becoming poor: poverty status and

poverty transitions in rural pakistan. *Journal of Asian and African Studies*, *37*(2), 168–185. https://doi.org/10.1177/002190960203700208

Biyase, M., & Zwane, T. (2018). An Empirical Analysis of the Determinants of Poverty and Household Welfare in South Africa. *The Journal of Developing Areas*, *52*(1), 115–130. https://doi.org/10.1353/jda.2018.0008

Bonica, A., McCarty, N., Poole, K. T., & Rosenthal, H. (2013). Why hasn't democracy slowed rising inequality? *Journal of Economic Perspectives*, *27*(3), 103–124. https://doi.org/10.1257/jep.27.3.103

BPS. (2020a). *Buku Pedoman Kepala BPS Provinsi/Kabupaten/kota Susenas Maret 2020.*

BPS. (2020b). *Indikator Pekerjaan Layak di Indonesia Tahun 2020.*

BPS. (2020c). *Penghitungan dan Analisis Kemiskinan Makro di Indonesia Tahun 2020.*

BPS. (2020d). *Profil Kemiskinan di Indonesia Maret 2020. No 56/07/Th.XXIII, 15 Juli 2020.*

Brown, D. L., & Hirschl, T. A. (1995). Household Poverty in Rural and Metropolitan-Core Areas of the United States. *Rural Sociology*, *60*(1), 44–66. https://doi.org/10.1111/j.1549-0831.1995.tb00562.x

Cosgrove, S., & Curtis, B. (2017). *Understanding Global Poverty: Causes, capabilities and human development*. Routledge.

De Janvry, A., & Sadoulet, E. (2000). Rural poverty in Latin America: Determinants and exit paths. *Food Policy*, *25(4)*, 389.

Geda, A. (2005). Determinants of Poverty in Kenya : A Household Level Analysis Department of Economics Working Paper Series. *ORPAS - Institute of Social Studies*, *August*, 1–25.

Heck, R. H., Thomas, S., & Tabata, L. (2013). *Multilevel modeling of categorical outcomes using IBM SPSS*. Routledge.

Hox, J. J., Moerbeek, M., & Van de Schoot, R. (2017). *Multilevel analysis: Techniques and applications*. Routledge.

Indrayanti, R. (2018). *Memasuki Dunia Kerja dan Kondisi Ketenagakerjaan di Indonesia. In S. M. Adioetomo, & E. L. Pardede, Memetik Bonus Demografi: Membangun Manusia Sejak Dini (p. xx)*. RajaGrafindo Persada.

Khan, R. E. A., Rehman, H., & Abrar ul Haq, M. (2015). Determinants of rural household poverty: the role of household socioeconomic empowerment. *American-Eurasian J. Agric. & Environ. Sci*, *15(1)*, 93-.

Krishnan, R. (2014). *Introduction to Povert Analysis. April*, 2014.

Lanjouw, P., & Ravallion, M. (1995). Poverty and household size. *The Economic Journal*, *105(433)*,.

Majeed, M. T., & Malik, M. N. (2015). Determinants of household poverty: Empirical evidence from Pakistan. *The Pakistan Development Review*, *701–717*.

Mirza, D. S. (2012). Pengaruh kemiskinan, pertumbuhan ekonomi, dan belanja modal terhadap indeks pembangunan manusia di Jawa Tengah tahun 2006-2009. *Economics Development Analysis Journal*, *1(2)*.

Nurcahyono, O. H. (2014). *PERANGKAP KEMISKINAN PADA WARGA RELOKASI (Studi Korelasional Unsur-Unsur Perangkap Kemiskinan pada Warga Relokasi Pucang Mojo, Kedungtungkul, Mojosongo, Jebres, Surakarta)*. UNS (Sebelas Maret University).

Nurkse, R. (1953). *Problems of capital formation in underdevelopment countries*. Basil Blackwell.

Nussbaum, M. C. (2009). Creating capabilities: The human development approach and its implementation. *Hypatia*, *24(3)*, 211.

Omotesho, O. A., Adewumi, M. O., & Fadimula, K. S. (2008). *Food security and poverty of the rural households in Kwara State, Nigeria. 307-2016–4.*

Pratiwi, E. D., Ashar, K., & Syafitri, W. (2020). Dampak Kemiskinan Terhadap Pola Mobilitas Tenaga Kerja Antarsektor di Indonesia. *Jurnal Kependudukan Indonesia, 15(1), 1–1.*

Rhee, C. (2012). *Framework of Inclusive Growth Indicators 2012: Key Indicators for Asia and the Pacific Special Supplement.*

Rouf, K. A. (2014). The End of Poverty: Economic Possibilities forour Time. New York: The Penguin Press. *Global Journal of Management and Business Research: B Economics and Commerce, 14(6), 19.*

Sen, A. (2000). *Devleopment as freedom.* Alfred A. Knof Publishing.

Setiawan, A., Bakri, S., Effendi, A., & Nurhaida, I. (2014). Karakterisasi parameter model prediksi untuk eleviasi dari perangkap kemiskinan melalui intervensi kebijakan fiskal. *Masyarakat, Kebudayaan Dan Politik, 27(2), 65-.*

Sommet, N., & Morselli, D. (2017). Keep calm and learn multilevel logistic modeling: A simplified three-step procedure using stata, R, Mplus, and SPSS. *International Review of Social Psychology, 30, 203–21.*

Srinadi, I. G. A. M. (2017). Model Partial Least Square Regression (PLSR) Pengaruh Bidang Pendidikan dan Ekonomi Terhadap Tingkat Kemiskinan di Indonesia. *Jurnal Matematika, 7(1),* 67. https://doi.org/10.24843/jmat.2017.v07.i01.p83

Sumarno, S. (2020). Angka Partisipasi Sekolah Kasar Sma Rendah Dampak Dari Tingkat Kemiskinan Dan Upaya Mengatasinya Di Provinsi Kepulauan Bangka Belitung. *Jurnal Dinamika Sosial Budaya, 21(1), 28-.*

Taufiq, N., & Dartanto, T. (2020). Education, Informal Turnover and Poverty Dynamics in Indonesia. *International Journal of Economics & Management, 14(1).*

Taufiq, N. (2017). Pengaruh Dinamika Sektor Pekerjaan Terhadap Dinamika Kemiskinan (Poverty Dynamics) di Indonesia. *SOSIO KONSEPSIA, 7, 1–14.*

Trisnu, C. G., & Sudiana, I. K. (2019). Pengaruh Pertumbuhan Penduduk, Pengangguran, Dan Pendidikan Terhadap Tingkat Kemiskinan Kabupaten/Kota di Provinsi Bali. *Ekonomi Pembangunan Universitas Udayana, 2501–2806.*

Ul Haq, M. (1995). Reflections on human development. In *oxford university Press.*

UNDP. (1990). *Human Development Report 1990.* UNDP.

Woolard, Ingrid; Klasen, S. (2004). Determinants of Income Mobility and Household Poverty Dynamics in South Africa. *Journal of Development Studies, 41(5), 865.*

World Bank. (2021). *COVID-19 to Add as Many as 150 Million Extreme Poor by 2021.* PRESS RELEASE. https://www.worldbank.org/en/news/press-release/2020/10/07/covid-19-to-add-as-many-as-150-million-extreme-poor-by-2021