Human Capital and Labor Force Participation Rate: Exploring the Role and Relationship to Poverty in Indonesia

Benjamin Drean[1]
[1]School Of Life and Wellness, France

Abstract

The relationship between human capital, labor force participation rate, and poverty rate in Indonesia is interconnected. This research aims to analyze and explore the influence between human capital, labor force participation rate, and poverty rate in Indonesia. The research was conducted from 2001 to 2021 using the VAR analysis approach. The research findings explain that education and health have a negative impact on poverty, supporting the hypothesis that the improvement of human capital affects the reduction of poverty in Indonesia. In addition, the labor force participation also has a negative impact on poverty. Interestingly, the health improvement is apparently related to the decrease in Indonesia's labor force participation rate. Therefore, policymakers need to pay attention to strategies for enhancing human capital through education and health and factors related to labor force participation to reduce poverty levels in Indonesia.

Keywords : Human Capital, Education, Health, Labor Force Participation Rate, Poverty.
JEL Classification : I15, I25,I32, J21.

Received: July 6,2024 Accepted: September 25,2024
DOI : 10.54204/TAJI/Vol152024006

Introduction

Human capital is a significant asset in a country's economic growth and poverty reduction (Bawono, 2021). Human capital includes the skills, knowledge, and experience individuals possess that can enhance productivity and work efficiency. In this context, investment in education, health, and skills training becomes vital to strengthening human capital (Tri, 2022). When individuals access quality education, they gain broader knowledge and relevant skills that can be applied in the workforce. Good education also facilitates individuals' critical and creative thinking, skills that are highly needed in this era of globalization (Ghafar, 2020). On the other hand, people in good health can work as efficiently as possible without being constrained by disease or other health issues, which maximizes their economic output. Additionally, skills training ensures that individuals remain relevant to technological advancements and dynamic market needs (Li, 2022). Thus, investing in human capital enhances individual abilities, creates a more prosperous society, and reduces economic disparities. A nation that invests in its human capital will be better able to face global challenges and ensure sustainable and inclusive economic growth (Zia et al., 2021).

Quality education enhances individuals' knowledge and skills and opens up opportunities for them to secure better jobs with higher salaries (Budiharso & Tarman, 2020). Using the most

up-to-date information and technology, people can build skills and abilities relevant to the needs of the modern labor market. In addition, quality education equips individuals with critical, analytical, and creative thinking skills highly valued in various industry sectors (Tohani & Aulia, 2022). Education also helps build professional and social networks that open doors to broader job opportunities. Internships or company collaborations are development programs to gain practical experience and valuable connections for future careers. In the long term, Good education helps build significant human capital, which propels economic expansion and the general well-being of society (Muringani, Fitjar, & Rodriguez-Pose, 2021).

Good health allows individuals to work optimally without being hindered by illness or other health conditions, thereby maximizing their contribution to the economy (Turner et al., 2021). When someone has excellent health, that individual can carry out work tasks and responsibilities with total energy and focus. This increases individual productivity and overall efficiency in the workplace. Healthy employees rarely take sick leave, reducing absenteeism that can disrupt workflow and company targets. In addition, a healthy work environment also contributes to increased morale and job satisfaction, which in turn can reduce turnover rates and recruitment costs (Ramlawati et al., 2021). On a larger scale, a healthy Population allows the country's economy to run more smoothly, with fewer expenditures on healthcare services and more investments that can be allocated for development and innovation (Flessa & Huebner, 2021). When spending on healthcare can be reduced due to a healthier Population, those funds can be used for other sectors that need attention, such as education, infrastructure, and research. Investment in health also drives long-term economic development, as a healthy Population can better adapt to emerging changes and challenges (Walker, Druckman, & Jackson, 2021).

Good health also has a positive impact on social well-being (Simon et al., 2021). When individuals feel healthy and fit, they tend to be happier and more satisfied with their lives, which can enhance the quality of social interactions and community cohesion. Healthy individuals can participate in social activities, build stronger relationships, and contribute to their communities. Good health enhances personal well-being and creates a more harmonious and productive community (Shoxrux, 2023). Thus, the Government and businesses must invest in comprehensive and long-lasting health programs to ensure that the workforce and the Population can contribute as much as possible to economic and social growth (Zhan & Santos-Paulino, 2021). Good health programs include easy and affordable access to healthcare services, education about healthy lifestyles, and work environments that support employee well-being (Pronk et al., 2021).

Being healthy means having the best possible physical, mental, and social well-being and not having any diseases (Fisher et al., 2021). Maintaining health and promoting a healthy lifestyle must be a priority to create a productive, prosperous, and highly competitive society on the global stage. Maintaining health encompasses various aspects, from a balanced diet, regular exercise, and good stress management (Briguglio et al., 2020). With a focus on holistic well-being, individuals will have better physical resilience and robust mental health, which is essential for facing life's daily challenges. Commitment to good health will create an environment where individuals can thrive optimally at work and in their personal lives (Moloney, Fieldes, & Jacobs, 2020). This will promote sustained economic growth and raise everyone's standard of living. Therefore, investing in health is an investment in a brighter and

more prosperous future for all. On the other hand, skills training helps individuals remain relevant amidst technological changes and dynamic market needs (Bennet & McWhorter, 2021). The necessities of the sector and the times might help people refine their talents. Information and communication technology training can open job opportunities in the rapidly growing technology sector. Additionally, skills training enables individuals to adapt to fast changes in the workplace, such as the emergence of new technologies or more efficient work methods (Ivaldi, Scaratti, & Fregnan, 2022).

Improving the quality and quantity of human capital enables a country to drive inclusive economic growth so that all layers of society feel the benefits of economic progress (Surya et al., 2021). Investing in the development of human capital, such as through education, skill training, and quality healthcare services, can result in increased productivity in the short term and substantial long-term gains. Good education produces more skilled and competent individuals, while good health ensures that the workforce can operate with maximum efficiency without health disruptions (Hays, Ramani, & Hassel, 2020). Skill training helps the workforce remain relevant and adaptive to market and technological changes. Sustainable investment in human capital is a key tactic that every nation must use to attain equitable and sustained economic growth (Nchofoung, Achuo, & Asongu, 2021). When all residents have access to quality education and adequate healthcare services, economic disparities can be reduced, and social stability can be achieved. Moreover, improving human capital significantly enhances a country's global competitiveness, allowing for greater participation in the global economy and higher opportunities for innovation (Indrawati & Kuncoro, 2021).

This investment also yields substantial long-term benefits in creating a more just, prosperous society ready to face future challenges (Goutte & Sanin, 2024). When humans are viewed as valuable assets and equipped with tools for growth, they become proactive agents of change in building a better future. Humans can tackle global challenges, such as climate change, health crises, and digital transformation, more effectively and innovatively. An investment in a better and more sustainable future for the country is made when human capital is developed via education, training, and excellent health (Adejumo, Asongu, & Adejumo, 2021). Therefore, every country must continue committing to developing and maximizing its human capital potential to achieve equitable and inclusive welfare for all its citizens. When humans are viewed as valuable assets and equipped with tools for growth, they become proactive agents of change in building a better future. Skills, knowledge, and adequate health enable individuals to improve their quality of life and contribute significantly to the progress of their community and country (Buss et al., 2020).

The number of working-age people actively employed, or the labor force participation rate, is a critical factor in a nation's economic dynamics (Amin et al., 2024). A low unemployment rate and a high level of engagement in various economic sectors usually indicate a high labor force participation rate (Wibangga, 2022). This shows that more people are working, creating better economic stability and increasing the overall purchasing power of society (Perez-Arce & Prados, 2021). When more people are employed, their steady wages enable them to meet their fundamental needs, enhance their standard of living, and boost the economy through increased expenditure (Büchs, 2021). In developing countries, increasing labor participation often becomes one of the main strategies to reduce poverty and improve the welfare of the people (Le &

Leshan, 2020). Increased household income and Government tax revenue from more residents working can be utilized to pay for infrastructure improvements and social services. However, it is essential to note that high labor participation must be accompanied by decent work (Blustein et al., 2020).

High labor participation can also drive economic growth by increasing national productivity (Salimova et al., 2022). When more people work, there is more contribution to economic output, which can increase Gross Domestic Product (GDP) and provide more resources for investment in infrastructure development and social services. With a high level of labor participation, the Government can collect more taxes from the income of working individuals, which can then be allocated for the development of public facilities such as roads, bridges, and schools (Ashford et al., 2020). Furthermore, with high labor participation, the private sector tends to grow due to increased demand for goods and services, ultimately creating more jobs (Bandiera et al., 2022). Additionally, high labor participation strengthens overall economic resilience. When more people work, the economy becomes more stable and less vulnerable to external shocks, such as global economic crises or natural disasters. High labor participation also promotes social inclusion, as more people engage in economic activities and have the opportunity to improve their standard of living (Ye & Yang, 2020).

The increase in labor participation also has a positive impact on poverty reduction (Chao, Biao, & Zhang, 2021). This is because more individuals and households have a steady income to meet basic needs such as food, shelter, and education (Chegini et al., 2021). With a stable income, they can improve their quality of life, invest in their children's education, and even save for the future. High labor participation allows greater access to various economic opportunities, helping families achieve financial independence and reducing the risk of falling into poverty (Huang et al., 2020). Moreover, high labor force participation can reduce the economic dependency burden on the productive age group, as more people work and contribute to the economy (Cristea et al., 2022). This creates a more inclusive society where everyone can participate in economic development. When more people work, the economic burden is no longer shouldered solely by the productive age group but is evenly distributed, thereby increasing overall economic stability. This also reduces pressure on the social security system, as fewer individuals rely on Government assistance for their daily needs. With decreased dependence on social assistance, the Government can allocate existing resources to other sectors requiring attention, such as education, health, and infrastructure (Durán Valverde et al., 2020). Thus, increasing labor participation contributes to poverty reduction and strengthens the country's economic foundation and creates a more independent and prosperous society (Zhu, Bashir, & Marie, 2022).

On the other hand, it is also essential to consider the quality of the available jobs. High labor participation will not effectively reduce poverty if the available jobs are low-wage or do not guarantee worker welfare (Alper, Hubber, & Stephens, 2021). Low-wage jobs often need help to meet basic living needs, such as food, shelter, and education. This will result in the fact that even if someone works, they may still be below the poverty line and depend on Government or other institutional assistance. Education is crucial in preparing individuals to enter the workforce with the necessary skills (Rios et al., 2020). Quality education provides individuals with access to better jobs with higher salaries. In addition, skills training is also essential to ensure that the workforce remains relevant and can adapt to technological changes and dynamic market

demands (Sanjuk, Caganova, & Sanjuk, 2023). This research explores the role of human capital and the labor participation rate in influencing the poverty rate in Indonesia.

Research Methods

This research explores the analysis of human capital and labor force participation in influencing the poverty rate in Indonesia. The data used is sourced from World Bank data covering 2001 to 2021. This research uses education and health variables as representatives of human capital, labor force participation rate variables, and poverty rate variables. Furthermore, data analysis employs vector autoregression to provide observations on human capital data, labor force participation, and poverty rates.

Table 1. Variables Research

Variable	Description	Source	Unit Analysis
Education	This variable explain that the number of new entrants (enrollments minus repeaters) in the final grade of primary education, regardless of age, is divided by the Population at the entrance age for the final grade of primary education to determine the primary completion rate, also referred to as the gross intake ratio to the last grade of primary education.	World Bank	Percent
Health	This variable explain that the amount of money currently spent on health care relative to GDP. Every year, estimates of current health expenditures include the goods and services utilized for medical care. Health-related capital expenditures including buildings, equipment, IT, and vaccine stocks for pandemics or emergencies are not included in this index.	World Bank	Percent
Labor Force Participation	This variable explain that the percentage of people in the 15–64 age range who are economically active, or who work to produce goods and services within a specific time period, is known as the labor force participation rate.	World Bank	Percent
Poverty	This variable explain that the percentage of the Population living below the national poverty line is known as the national poverty headcount ratio (s). House survey estimates of population-weighted subgroups serve as the basis for national statistics. The reported year is the income reference year, or the year before the survey year, for economies for which the data are taken from EU-SILC.	World Bank	Percent

$EDU_t = \beta_0 + \beta_1 HLTt + \beta_2 LFPt + \beta_3 POV_t + e_t$ eql 1
$HLT_t = \beta_0 + \beta_1 LFP_t + \beta_2 POV_t + \beta_3 EDU_t + e_t$ eql 2
$LFP_t = \beta_0 + \beta_1 POV_t + \beta_2 EDU_t + \beta_3 HLT_t + e_t$ eql 3
$POV_t = \beta_0 + \beta_1 EDU_t + \beta_2 HLT_t + \beta_3 LFP_t + e_t$ eql 4

Description:
EDU = Education
HLT = Health Expenditure
LFP = Labor Force Participation
POV = Poverty
β = the magnitude of the effect of causality
e = Error term

VAR is a statistical analysis method that models the dynamic interactions between multiple time variables. One of the research models that is a component of VAR is the Vector Error Correction Model (VECM). Stationarity testing is necessary to ensure that no trends or seasonal patterns in the data could distort the analysis findings. The Augmented Dickey-Fuller test method is used to test for stationarity (ADF). The best lag length is then determined by applying information criteria such as the Schwarz Bayesian Criterion (SBC) or the Akaike Information Criterion (AIC). For additional analysis, the VECM model can then be applied. The next step is to perform the Granger causality test to see if one variable may predict another. Furthermore, the Impulse Response Function study provides a general review of the short-term and long-term effects of changes in one variable on another variable (IRF). Finally, to determine the percentage of variability of each variable that can be explained by shocks to other variables, a Variance Decomposition (VD) analysis was conducted. This analysis makes a deeper understanding of the dynamic interactions between the variables studied possible.

H0: $\alpha=0$
H1: $\alpha\neq0$

Result and Discussion

Analysis through the VECM method is conducted by testing the research data using the stationarity test. This aims to ensure that the research data used is stationary. The stationarity test uses the ADF test method, explained in Table 2.

Table 2. ADF Stationary Test

Variabel	Unit Root	Statistics for the Augmented Dickey Fuller	Probability	Description
Education (EDU)	Level	-1.825133	0.3583	No Stationary
	First Different	-5.221311	0.0005	Stationary
Health (HLT)	Level	-1.770983	0.3808	No Stationary
	First Different	-3.750569	0.0131	Stationary

Labor Force Participation (LFP)	Level	-1.343966	0.5854	No Stationary
	First Different	-3.634115	0.0157	Stationary
Poverty (POV)	Level	-1.208686	0.6494	No Stationary
	First Different	-3.910798	0.0085	Stationary

The stationarity test using the ADF test method based on Table 2 above shows that the research variables are stationary at the same level. Next, the optimum lag test is conducted to determine the lag length through the Lag Length Criteria test in Table 3 below:

Table 3. Lag Length Criteria Test

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-112.7273	NA	1.379272	11.67273	11.87188	11.71161
1	-61.88407	76.26485*	0.044166*	8.188407*	9.184140*	8.382785*

Based on the optimal lag test in Table 3 above, the lag length was constant across all test models, namely lag 1. Next, the cointegration test was conducted to determine the use of the analysis model described in Table 4.

Table 4. Cointegration Test

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.759922	51.80158	47.85613	0.0203
At most 1	0.591071	24.69253	29.79707	0.1727
At most 2	0.318852	7.702467	15.49471	0.4978
At most 3	0.021190	0.406932	3.841466	0.5235

The cointegration test results in Table 4 above indicate no cointegration, so the VAR testing model is used.

Table 5. VAR Test Result

	EDU	HLT	LFP	POV
EDU(-1)	0.722131	-0.038191	0.013385	-0.053691
	(0.20873)	(0.01711)	(0.07521)	(0.06782)
	[3.45970]	[-2.23202]	[0.17797]	[-0.79172]
HLT(-1)	1.773379	0.580159	0.722158	-0.544484
	(2.61273)	(0.21418)	(0.94146)	(0.84887)
	[0.67875]	[2.70873]	[0.76707]	[-0.64142]
LFP(-1)	0.450338	-0.079396	0.503680	-0.298478
	(0.72497)	(0.05943)	(0.26123)	(0.23554)
	[0.62118]	[-1.33594]	[1.92808]	[-1.26719]
POV(-1)	0.136541	-0.115349	-0.025521	0.744145
	(0.47178)	(0.03867)	(0.17000)	(0.15328)
	[0.28942]	[-2.98257]	[-0.15013]	[4.85482]

Human capital contributes to its influence on the poverty rate. Based on Table 5 above, the test results show that education and health, as representations of human capital, have a negative

impact on poverty. Based on the testing, education (EDU) with a t-statistic value of [-0.79172] is greater than the coefficient value (0.06782). Additionally, health (HLT) has a negative impact on poverty (POV) with a t-statistic value of [-0.64142], which is greater than the coefficient value (0.84887). This supports the hypothesis and reinforces previous research that education and health as representative variables of human capital have a negative impact on poverty in Indonesia. Furthermore, the contribution of the labor force participation rate also negatively impacts poverty. Based on the test results, the labor force participation rate (LFP) negatively affects poverty (POV) with a t-statistic value of [-1.26719] that influences the coefficient value (0.23554). This shows that an increase in the labor force participation rate will reduce poverty. Therefore, this supports the research hypothesis that the level of labor participation has a negative impact on poverty in Indonesia.

The improvement in education positively impacts the labor force participation rate. Education (EDU) positively affects the labor force participation rate (LFP) with a t-statistic value of [0.17797] influencing the coefficient value (0.07521). This explains that a significant improvement in education will positively correlate with an increase in the labor force participation rate. Interestingly, the increase in the labor force participation rate (LFP) negatively affects health (HLT) with a t-statistic value of [-1.33594] impacting the coefficient value (0.05943). This indicates that a health improvement will decrease Indonesia's labor force participation rate. On the other hand, the labor force participation rate (LFP) also has a negative impact on poverty (POV) with a t-statistic value of [-1.26719] affecting the coefficient value (0.23554). Thus, the test results support the research hypothesis that an increase in the labor force participation rate negatively affects the poverty rate.

Table 6. Granger Causality Test

Null Hyphothesis :	Obs	F-statistic	Prob
HLT does not Granger Cause EDU	19	0.51862	0.6063
EDU does not Granger Cause HLT		0.95464	0.4086
LFP does not Granger Cause EDU	19	0.41437	0.6686
EDU does not Granger Cause LFP		1.33263	0.2953
POV does not Granger Cause EDU	19	0.04361	0.9575
EDU does not Granger Cause POV		0.12791	0.8810
LFP does not Granger Cause HLT	19	1.84731	0.1941
HLT does not Granger Cause LFP		2.01502	0.1702
POV does not Granger Cause HLT	19	3.41087	0.0621
HLT does not Granger Cause POV		6.51739	0.0100
POV does not Granger Cause LFP	19	2.15036	0.1533
LFP does not Granger Cause POV		4.29484	0.0351

Based on the Granger test results in Table 6, there is a one-way reciprocal relationship between health (HLT) and poverty (POV) with a probability value of 0.0100. A one-way reciprocal relationship also occurs between the labor force participation rate (LFP) and poverty (POV) with a probability value of 0.0351. Next, an Impulse Response test was conducted to provide a more detailed picture of the influence between variables for each period, as illustrated in Fig 1.

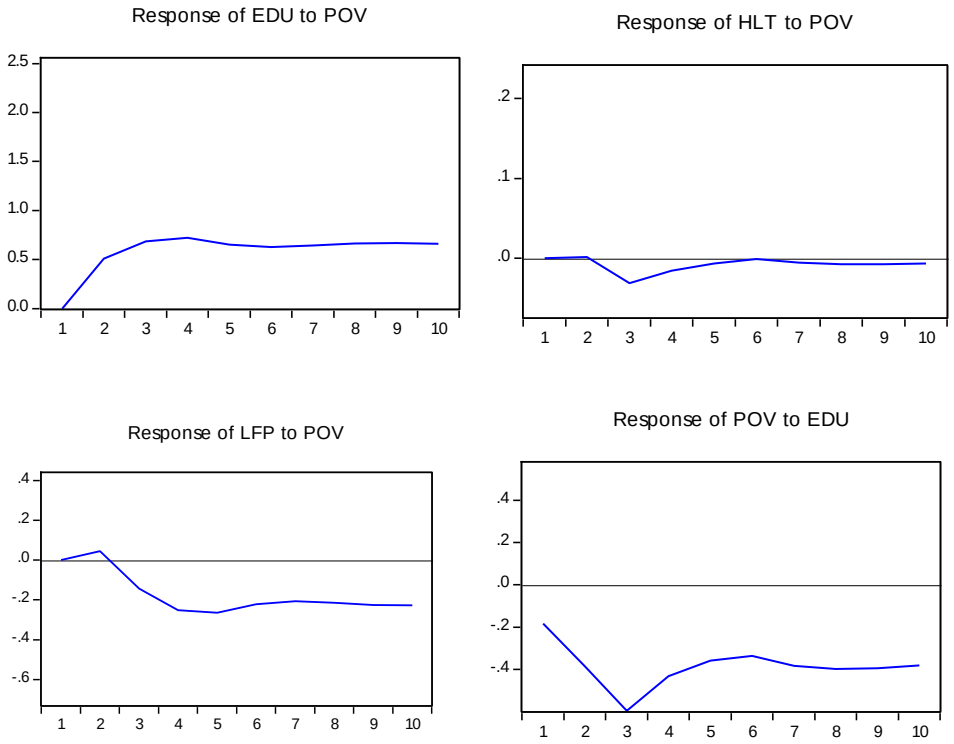

Fig 1. Impulse Response Function

Fig 1 explains the relationship between the research variables that changes when there is a disturbance in one of the research variables. The response of EDU to POV is considered stable, with an increase from the second period to the third period, and its value remains constant until the tenth period. The response of the HLT variable to POV showed a significant decrease from the second to the third periods. However, an increase occurred in the subsequent periods up to the tenth period. Furthermore, the response of the LFP variable to POV has a negative trend that tends to decline. The decline occurred until the fourth period; afterwards, the value remained constant. The response of the POV variable to EDU fluctuated significantly, with a sharp decline occurring from the first to the third period. However, a drastic increase occurred from the fourth period to the fifth period and then remained constant until the tenth period.

Table 7. Variance Decomposition Test

Period	S.E.	EDU	HLT	LFP	POV
1	0.584350	9.984853	4.157728	23.63995	62.21747
2	1.029814	17.24918	29.76968	27.78105	25.20008
3	1.436644	26.14800	31.48853	27.97938	14.38410
4	1.674412	25.93349	34.01489	28.13561	11.91601
5	1.854746	24.90099	35.07645	28.08558	11.93698
6	2.020434	23.75209	36.00894	28.09459	12.14438
7	2.188777	23.32284	36.62975	28.11376	11.93366
8	2.348532	23.14034	37.13255	28.15285	11.57425
9	2.495571	22.99252	37.50947	28.16710	11.33091
10	2.631237	22.78962	37.81818	28.17788	11.21432

The Variance Decomposition Test is conducted to determine the contribution of each variable and explain their respective variability. Based on Table 7 above, poverty (POV) contributes 62.21% in explaining its variability in the first period and decreases to a constant value of 11.21%, explaining its contribution by the tenth period. Interestingly, the labor force participation rate (LFP) explains the variability of the poverty variable (POV) with a contribution value of 23.63% in the first period, which increases to 28.17% by the tenth period. Furthermore, education (EDU) contributed 9.98% in the first period and increased to 22.78% by the tenth period. Lastly, health (HLT) contributes 4.15% in the first period. The second period shows a significant increase with a percentage value of 29.76%, and by the tenth period, the percentage value reaches 37.81%. This indicates that the poverty variable is essential in explaining its variability. Other variables also contribute to explaining the poverty variable, such as education, health, and labor force participation rates, with an increase in contribution values in each period.

Conclusion

The above research results show an interconnected relationship between education, health, labor participation rates, and poverty. The research results explain that education and health have a negative impact on poverty. Therefore, these results support the research hypothesis that human capital has a negative impact on poverty in Indonesia. Additionally, the level of labor force participation also negatively affects poverty, thereby supporting the hypothesis. Interestingly, health improvements will reduce workforce participation in Indonesia. Various factors, including the availability of decent jobs and access to adequate healthcare services, can cause this phenomenon. Healthier individuals may choose more flexible or less demanding jobs, recorded as decreased labor participation. This shows that although good health plays a vital role in poverty reduction, the complexity of other factors needs to be considered in understanding the dynamics of labor participation. Therefore, the appropriate strategy by policymakers to consider strategies for improving human capital through education and health, as well as the factor of labor force participation rate, can reduce the poverty rate in Indonesia.

Limitation and Originalitas

This research was conducted from 2001 to 2021 to uncover the relationship between human capital through education and health, labor force participation rates, and poverty levels in Indonesia. Although the analysis uses a long-term timeframe, the results of this study need to fully explain the dynamic changes that occur outside the measured period. Furthermore, this research focuses on the interaction of variables occurring in Indonesia, thus limiting generalization to a broader Population scope. The research method limits the influence between variables, so other methods are believed to provide more comprehensive results. This research fills the gap in the existing literature regarding analyzing the influence of human capital through education and health, labor force participation rates, and poverty levels. Policymakers are anticipated to use the research's findings as crucial information for evaluating policies that support the findings. Thus, this research provides new insights into the relationship between these variables and offers a strong foundation for better decision-making in reducing poverty levels.

Suggestion and Policy Contribution

This study is anticipated to make a scholarly contribution by shedding light on the connections between poverty levels, labor force participation rates, and the impact of human capital through health and education. Furthermore, the research limitations explained in the previous subsection suggest that future research should extend the research period to allow for more complex analytical exploration, yielding more comprehensive results. Thus, this research provides new insights into the relationship between these variables and offers a strong foundation for better decision-making in strategies to enhance human capital and labor participation in reducing poverty levels in Indonesia.

References

Adejumo, O. O., Asongu, S. A., & Adejumo, A. V. (2021). Education enrolment rate vs employment rate: Implications for sustainable human capital development in Nigeria. International Journal of Educational Development, 83, 102385.

Alper, K., Huber, E., & Stephens, J. D. (2021). Poverty and social rights among the working age population in post-industrial democracies. Social Forces, 99(4), 1710-1744.

Amin, M. A., Islam, M. A., Jelane, A. K., & Sumaia, U. (2024). Examining Factors Affecting Labor Force Participation: Global Economic Analysis. HISTORICAL: Journal of History and Social Sciences, 3(2), 96-109.

Ashford, N. A., Hall, R. P., Arango-Quiroga, J., Metaxas, K. A., & Showalter, A. L. (2020). Addressing inequality: the first step beyond COVID-19 and towards sustainability. Sustainability, 12(13), 5404.

Bandiera, O., Elsayed, A., Smurra, A., & Zipfel, C. (2022). Young adults and labor markets in Africa. Journal of Economic Perspectives, 36(1), 81-100.

Bawono, S. (2021). Human capital, technology, and economic growth: A case study of Indonesia. Journal of Asian Finance, Economics and Business.

Bennett, E. E., & McWhorter, R. R. (2021). Virtual HRD's role in crisis and the post Covid-19 professional lifeworld: Accelerating skills for digital transformation. Advances in Developing Human Resources, 23(1), 5-25.

Blustein, D. L., Perera, H. N., Diamonti, A. J., Gutowski, E., Meerkins, T., Davila, A., Erby, W., & Konowitz, L. (2020). The uncertain state of work in the US: Profiles of decent work and precarious work. Journal of Vocational Behavior, 122, 103481.

Briguglio, M., Vitale, J. A., Galentino, R., Banfi, G., Zanaboni Dina, C., Bona, A., Panzica, G., Porta, M., Dell'Osso, B., & Glick, I. D. (2020). Healthy eating, physical activity, and sleep hygiene (HEPAS) as the winning triad for sustaining physical and mental health in patients at risk for or with neuropsychiatric disorders: considerations for clinical practice. Neuropsychiatric disease and treatment, 55-70.

Büchs, M. (2021). Sustainable welfare: How do universal basic income and universal basic services compare?. Ecological Economics, 189, 107152.

Budiharso, T., & Tarman, B. (2020). Improving quality education through better working conditions of academic institutes. Journal of Ethnic and Cultural Studies, 7(1), 99-115.

Buss, P. M., Hartz, Z. M. D. A., Pinto, L. F., & Rocha, C. M. F. (2020). Health promotion and quality of life: a historical perspective of the last two 40 years (1980-2020). Ciencia & saude coletiva, 25, 4723-4735.

Chao, P. E. N. G., Biao, M. A., & Zhang, C. (2021). Poverty alleviation through e-commerce: Village involvement and demonstration policies in rural China. Journal of Integrative Agriculture, 20(4), 998-1011.

Chegini, K. R., Pakravan-Charvadeh, M. R., Rahimian, M., & Gholamrezaie, S. (2021). Is there a linkage between household welfare and income inequality, and food security to achieve sustainable development goals?. Journal of Cleaner Production, 326, 129390.

Cristea, M. S., Pirtea, M. G., Suciu, M. C., & Noja, G. G. (2022). Workforce participation, ageing, and economic welfare: New empirical evidence on complex patterns across the European Union. Complexity, 2022(1), 7313452.

Durán Valverde, F., Pacheco-Jiménez, J. F., Muzaffar, T., & Elizondo-Barboza, H. (2020). Financing gaps in social protection: Global estimates and strategies for developing countries in light of the COVID-19 crisis and beyond (No. 14). ILO Working Paper.

Fisher, A., Roberts, A., McKinlay, A. R., Fancourt, D., & Burton, A. (2021). The impact of the COVID-19 pandemic on mental health and well-being of people living with a long-term physical health condition: a qualitative study. BMC public health, 21, 1-12.

Flessa, S., & Huebner, C. (2021). Innovations in health care—a conceptual framework. International journal of environmental research and public health, 18(19), 10026.

Ghafar, A. (2020). Convergence between 21st century skills and entrepreneurship education in higher education institutes. International Journal of Higher Education, 9(1), 218-229.

Hays, R. B., Ramani, S., & Hassell, A. (2020). Healthcare systems and the sciences of health professional education. Advances in Health Sciences Education, 25, 1149-1162.

Huang, N., Burtch, G., Hong, Y., & Pavlou, P. A. (2020). Unemployment and worker participation in the gig economy: Evidence from an online labor market. Information Systems Research, 31(2), 431-448.

Indrawati, S. M., & Kuncoro, A. (2021). Improving competitiveness through vocational and higher education: Indonesia's vision for human capital development in 2019–2024. Bulletin of Indonesian Economic Studies, 57(1), 29-59.

Ivaldi, S., Scaratti, G., & Fregnan, E. (2022). Dwelling within the fourth industrial revolution: organizational learning for new competences, processes and work cultures. Journal of Workplace Learning, 34(1), 1-26.

Le, W., & Leshan, J. (2020). How eco-compensation contribute to poverty reduction: A perspective from different income group of rural households in Guizhou, China. Journal of Cleaner Production, 275, 122962.

Li, L. (2022). Reskilling and upskilling the future-ready workforce for industry 4.0 and beyond. Information Systems Frontiers, 1-16.

Moloney, W., Fieldes, J., & Jacobs, S. (2020). An integrative review of how healthcare organizations can support hospital nurses to thrive at work. International journal of environmental research and public health, 17(23), 8757.

Muringani, J., Fitjar, R. D., & Rodríguez-Pose, A. (2021). Social capital and economic growth in the regions of Europe. Environment and Planning A: Economy and Space, 53(6), 1412-1434.

Nchofoung, T. N., Achuo, E. D., & Asongu, S. A. (2021). Resource rents and inclusive human development in developing countries. Resources Policy, 74, 102382.

Perez-Arce, F., & Prados, M. J. (2021). The decline in the US labor force participation rate: a literature review. Journal of Economic Surveys, 35(2), 615-652.

Pronk, N., Kleinman, D. V., Goekler, S. F., Ochiai, E., Blakey, C., & Brewer, K. H. (2021). Promoting health and well-being in healthy people 2030. Journal of Public Health Management and Practice, 27(Supplement 6), S242-S248.

Ramlawati, R., Trisnawati, E., Yasin, N., & Kurniawaty, K. (2021). External alternatives, job stress on job satisfaction and employee turnover intention. Management Science Letters, 11(2), 511-518.

Rios, J. A., Ling, G., Pugh, R., Becker, D., & Bacall, A. (2020). Identifying critical 21st-century skills for workplace success: A content analysis of job advertisements. Educational Researcher, 49(2), 80-89.

Salimova, G., Ableeva, A., Galimova, A., Bakirova, R., Lubova, T., Sharafutdinov, A., & Araslanbaev, I. (2022). Recent trends in labor productivity. Employee Relations: The International Journal, 44(4), 785-802.

Saniuk, S., Caganova, D., & Saniuk, A. (2023). Knowledge and skills of industrial employees and managerial staff for the industry 4.0 implementation. Mobile Networks and Applications, 28(1), 220-230.

Shoxrux, S. (2023). The Importance Of Mutual Respect And Kindness In Sports. American Journal Of Social Sciences And Humanity Research, 3(12), 215-225.

Simon, J., Helter, T. M., White, R. G., Van der Boor, C., & Łaszewska, A. (2021). Impacts of the Covid-19 lockdown and relevant vulnerabilities on capability well-being, mental health and social support: an Austrian survey study. BMC public health, 21(1), 1-12.

Surya, B., Menne, F., Sabhan, H., Suriani, S., Abubakar, H., & Idris, M. (2021). Economic growth, increasing productivity of SMEs, and open innovation. Journal of Open Innovation: Technology, Market, and Complexity, 7(1), 20.

Tohani, E., & Aulia, I. (2022). Effects of 21st Century Learning on the Development of Critical Thinking, Creativity, Communication, and Collaboration Skills. Journal of Nonformal Education, 8(1), 46-53.

Tri, N. M. (2022). Factors affecting the role of education and training in human resource development of Vietnam. International journal of health sciences, 6(S1), 1-14.

Turner, H. C., Archer, R. A., Downey, L. E., Isaranuwatchai, W., Chalkidou, K., Jit, M., & Teerawattananon, Y. (2021). An introduction to the main types of economic evaluations used for informing priority setting and resource allocation in healthcare: key features, uses, and limitations. Frontiers in public health, 9, 722927.

Walker, C. C., Druckman, A., & Jackson, T. (2021). Welfare systems without economic growth: A review of the challenges and next steps for the field. Ecological Economics, 186, 107066.

Wibangga, W. A. M. P. (2022). Impact And Influence Of Inflation, Economic Growth, And Inflation In Indonesia: VECM Analysis: English. Jurnal Akuntansi Jayanegara, 7(1), 28-34.

Ye, L., & Yang, H. (2020). From digital divide to social inclusion: A tale of mobile platform empowerment in rural areas. Sustainability, 12(6), 2424.

Zhan, J. X., & Santos-Paulino, A. U. (2021). Investing in the Sustainable Development Goals: Mobilization, channeling, and impact. Journal of International Business Policy, 4(1), 166.

Zhu, Y., Bashir, S., & Marie, M. (2022). Assessing the relationship between poverty and economic growth: does sustainable development goal can be achieved?. Environmental Science and Pollution Research, 29(19), 27613-27623.

Zia, S., Rahman, M. U., Noor, M. H., Khan, M. K., Bibi, M., Godil, D. I., Quddoos., M. U., & Anser, M. K. (2021). Striving towards environmental sustainability: how natural resources, human capital, financial development, and economic growth interact with ecological footprint in China. Environmental Science and Pollution Research, 28(37), 52499-52513.