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The Impact of Economic Policy on Human Resource Quality: An Indonesia Case

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Abstract

This study investigates the differential impacts of public policies, such as education budgets, health budgets, and general allocation funds, alongside economic, population, and employment sectors across overall provinces, expansion areas, and non-expansion areas in Indonesia. Guided by a Positivist research philosophy, the study utilized panel data encompassing the economic sector (gross fixed capital formation), education sector (education budget), health sector (health budget), fiscal sector (general allocation fund), population sector (population), and labor sector (labor force participation rate) from 34 provinces. Data collection involved documentation techniques to gather secondary data on HDI, IMM, gross fixed capital formation, education budget, health budget, general allocation fund, population, and labor force participation rate. The findings reveal that the economic sector positively impacts HDI but negatively affects IMM across the provinces. The education sector shows a positive effect on both HDI and IMM. Similarly, the health sector positively influences HDI but has a negative impact on IMM. The fiscal sector positively affects both HDI and IMM. The population sector positively influences HDI but does not affect IMM. Conversely, the employment sector does not impact either HDI or IMM in the 34 provinces. These results highlight the varied effects of public policy in different sectors on HDI and IMM, suggesting the need for more targeted and specific policies to enhance development across different regions in Indonesia.

Keywords: *Economic Policy, Human Resource Quality, HDI, HCI*

INTRODUCTION

Economic development in each region is vital in increasing economic income and people's welfare. Economic activity is essentially a process of using the factors of production provided by society. Changes in economic development in the future will increase human capital (Bashir et al. 2019). Economic development that only focuses on centralized growth without being accompanied by social, political, and economic conditions will create fragile development (Rauhut and Humer 2020). Therefore, it is necessary to accompany the participation of the community as the main actors and subjects most affected by development.

The economy of a nation is influenced by economic gifts in the form of natural resources, population, human capital, physical capital, technology, and infrastructure (Hussain et al. 2021). Human resources refer to the capital provided by an individual consisting of knowledge, information, relationships, general abilities, and health accumulated throughout life that allows the development of his potential as a productive force (Simon et al., 2018).

In increasing human resources in a sustainable manner, a country must be carried out as a development strategy. Human development is about empowering people and identifying in order to meet their own needs for a meaningful life (Fuchs et al. 2021). Simply put, as a process of expanding human choice in increasing human opportunities for education, health care, income and employment. As a development process, it is therefore important to see the existing needs while responding to changes that occur in society and the demands of time shifts due to the development of civilization, social systems, and more advanced technology. This underlies the Human Development Index (HDI) which in its calculation consists of three dimensions, namely long and

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healthy life, access to knowledge, and a decent standard of living (Liu, Nie, and Ren 2021). The United Nations Development Programme (UNDP) published the Human Development Report (HDR) for the first time (Baumann 2021). According to the Central Statistics Agency that the Human Development Index (HDI) is an important indicator because it can measure success in efforts to build the quality of human life.

The Human Development Index (HDI) is one approach to measuring the level of success of human resource development (Hickel 2020). The Human Development Index (HDI) explains how residents can access development results in obtaining income, health, education, and so on (Acheampong, Erdiaw-Kwasie, and Abunyewah 2021). The Human Development Index (HDI) is obtained from the results of comparative measurements of life expectancy, literacy rates as seen from the last level of education completed and people's purchasing power for all countries throughout the world.

The main goal of development is to create an environment that allows people to enjoy long, healthy lives and lead productive lives (Organization 2021). HDI measures human development achievements based on a number of basic components of quality of life. HDI as a measure of quality of life is built using a basic three-dimensional approach. These dimensions include a long and healthy life; knowledge, and a decent life (BPS 2020). These three dimensions have a very broad meaning because they are related to many factors. To measure the dimensions of health, life expectancy at birth is used. Furthermore, to measure the knowledge dimension, a combination of indicators of average years of schooling and expected years of schooling is used. Meanwhile, to measure the dimensions of a decent life, indicators of people's purchasing power for a number of basic food and non-food needs are used, which are seen from the average amount of expenditure per capita as an income approach that represents development achievements for a decent life.

HDI as a human resource indicator measures the contribution of health and education to labor productivity. These indicators can be used to assess how much revenue it has to fill the current human resource quality gap and how quickly it can turn this problem into profit. Many developing countries have been slow to identify human resource problems (Olopade et al. 2020). Improving the quality of human resources in Indonesia needs serious attention from the government, religious and social institutions, international institutions, communities and families so that Indonesian society is able to compete in the 4.0 era (Salesman 2021). The focus of development often prioritizes the development of visible basic infrastructure, while ignoring the budget for education and health which are the main components in increasing human resources. According to the World Bank (2018), investment in human resources in Indonesia has remained low for decades. Although Indonesia has made great progress in the field of physical development, it is experiencing a human resource deficit due to accumulation underinvestment over the last few decades, Indonesia has been ranked 87th out of 157 countries in the world.

In the HDI Report which is released annually globally by United Nation Development Programme (UNDP), in 2020 Indonesia was ranked 107th out of 189 countries analyzed by UNDP (Table 1). Indonesia is in the middle ranking. However, if we refer to the UNDP RI HDI score, the status is relatively high. Compared with neighboring countries in Southeast Asia, Indonesia is ranked fifth. Indonesia's HDI is still lower than Singapore, Brunei Darussalam, Malaysia and Thailand.

For all aspects evaluated, Indonesia is clearly far behind Singapore, which has a very high HDI title and is ranked 11th in the world. When compared with Brunei, it is still lagging behind, in fact in all aspects Indonesia is still inferior to Malaysia. However, when compared with Thailand, Indonesia is still superior in terms of average length of schooling. Indonesia and the Philippines are in the same ranking. The only thing that differentiates Indonesia is superior in terms of life expectancy (UHH), expected length of schooling (HLS) and national income per capita. Meanwhile, the Philippines is ahead in terms of average length of schooling. When compared with the rest of ASEAN countries, Indonesia is still far superior in all aspects.

Table 1. Human Development Indicators for ASEAN Countries in 2021

`Negara	Order	IPM	UHH (year)	HLS (year)	RLS (year)	GNI/Kapita (USD)
Singapore	11	0.938	83.6	16.4	11.6	88.16
Brunei Darussalam	47	0.838	75.9	14.3	9.1	63.97
Malaysia	62	0.810	76.2	13.7	10.4	27.53
Thailand	79	0.777	77.2	15.0	7.9	17.78
Indonesia	107	0.718	71.7	13.6	8.2	11.46
Filipina	107	0.718	71.2	13.1	9.4	9.78
Vietnam	117	0.704	75.4	12.7	8.3	7.43
Laos	137	0.613	67.9	11.0	5.3	7.41
Kamboja	144	0.594	69.8	11.5	5.0	4.25
Myanmar	147	0.583	67.1	10.7	5.0	4.96

Information: HDI (Human Development Index), UHH (Life Expectancy), HLS (Old School Expectations), RLS (Average Years of Schooling), and GNI (*Gross National Income).* The importance of public policy in human resource development has been carried out in various research. Many studies show the role of public policy, which is reflected in the government budget, especially the education and health budget, as being able to encourage improvements in the quality of human resources. However, the impact of public policy on the quality of human capital is still a controversial issue in many countries, including Indonesia.

Omodero (2019) states that public policy through government budget allocations is aimed at ensuring the long life and health of citizens, ensuring they have knowledge and enjoy a decent standard of living. Human development is a strategy for improving human skills, creating pathways for people to make better choices that promote healthier, longer, and more fulfilling lives (Sigelman et al. 2018). Government spending on human development provides an opportunity for a country to have a suitable, competent, healthy and educated workforce to make a meaningful contribution to national development.

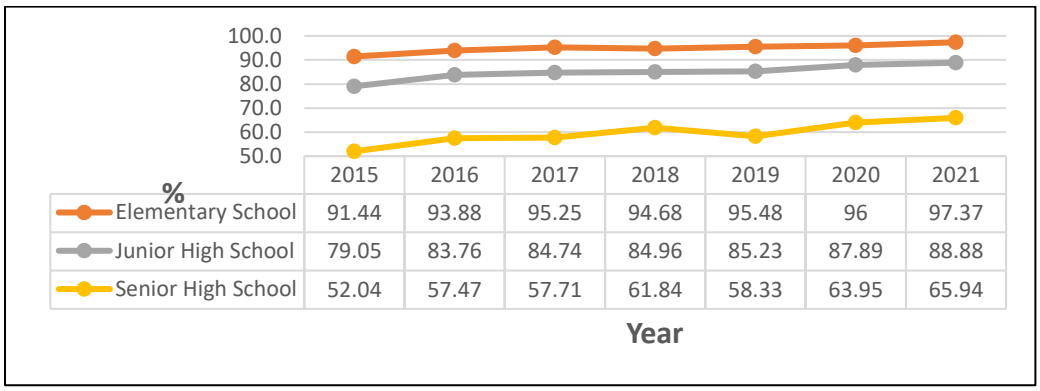
Government spending on education and health has been able to contribute to the development of human resources in the Czech Republic (Linhartová 2020). Sun et al (2018) also explains the importance of the education budget in developing human resources in China because it can reduce dependence on natural resources. Health budgets also have a positive effect on human resource development in Iran (Razmi, Abbasian, and Mohammadi 2012), OECD countries (Akbar et al. 2021), and developing countries (Terrelonge 2014). Anwar (2017) uses life expectancy as a health indicator that influences the quality of human resources, while Jojo et al. (2018) uses a health budget. The health sector is a priority for the government to continue to optimize the achievements of the five percent budget allocation for several aspects of health. Among them, improving the quality and access to quality health services/facilities for everyone, including in terms of fulfilling nutrition and reducing stunting. Apart from that, increasing the competency of health workers, and strengthening the national health insurance system. Strengthening the national health sector, which is Indonesia's national priority, will continue to be carried out through efforts to improve health facilities, support for medical personnel, and the provision of vaccines.

Government spending on investment in health infrastructure leads to an improvement in the overall quality of life in these countries (Yukotan et al., 2024). The health budget is able to reduce child mortality rates in developing countries, improve living standards and increase the quality of human resources. The study Olievska and Romanov (2021) shows that high-income countries can finance human resource development better than low-income countries. Inadequate levels of government spending on education and health have a negative impact on human capital development.

However, other research provides different results where the education budget was unable to encourage an increase in the quality of human resources in Southeast Asian countries in the 1990-2018 period (Hong Vo, Tran, and Nguyen 2021), in China (Hong Vo et al 2021). Likewise, Omodero (2019) found that government capital expenditure has no effect on human development in Nigeria, in fact routine government expenditure has a positive influence on human development. This implies that the government allocates greater funds for salaries and wages of education and health personnel compared to capital expenditure such as building schools, hospitals, improving skills and research and development.

Miranda-Lescano, Muinelo-Gallo, and Roca-Sagalés (2023) conducted research on 57 developed and developing countries during the period 2000 to 2018, showing that health spending helps increase HDI for both central government budgets allocated to regions and regional government budgets, whereas in terms of education spending the effect is still unclear. These results will confirm that decentralized spending is of great importance when analyzing the impact of decentralization of public resources on human development. In Indonesia, the General Allocation Fund is a variable that can be used to analyze factors that influence human resource development.

In the education sector in Indonesia, completion of education at each level of education tends to increase from 2015-2021 (Figure 1.2). Education is a major contributor to the quality of human resources (Sun et al. 2018). Education is an investment for a country, where high quality human resources will produce new innovations in terms of economic development. Especially in the current era of digitalization, human resources are needed who can master technology.



%	2015	2016	2017	2018	2019	2020	2021
Elementary School	91.44	93.88	95.25	94.68	95.48	96	97.37
Junior High School	79.05	83.76	84.74	84.96	85.23	87.89	88.88
Senior High School	52.04	57.47	57.71	61.84	58.33	63.95	65.94

Fig 1. Education Completion Rates According to Education Level in Indonesia 2015-2021

Providing education and health is the responsibility of the government, both central and regional. In accordance with Article 31 of the 1945 Constitution in its fourth amendment, paragraph (4), the government must provide an education budget of at least 20% of the government budget to meet the needs of providing national education. The budget allocation is expected to meet needs related to improving the quality of education. In accordance with research results Adur, Apriyanto, and Sutriswanto (2019) which state that Regional Original Income and regional expenditure in the education sector jointly and partially have a positive and significant effect on outcomes human quality in the field of education.

Thus, analyzing the impact of public policy in Indonesia is an interesting focus of discussion to observe. This attraction is based on at least three important things. First, the context of government decentralization which colors the discourse on regional government administration. Second, studies on the impact of policies are always criticized by various parties (academics and practitioners). Third, the essence and urgency of evaluating public policies, because the benefits of the policies being evaluated can be seen through their impact on the intended targets (Swan, 2021).

Apart from public policy aspects, there are several aspects that can influence human development. These aspects include the economic, population and employment sectors. One important indicator to see the development of an economy is capital accumulation. In Solow's growth theory, capital accumulation is one of the determining factors of economic growth. The influence of investment on human development has become the focus of research in several countries, such as (Tudorache 2020) in European societies and (Gökmenoğlu, Apinran, and Taşpınar 2018) in Nigeria. Economic growth plays an important role in human resource development in South Asian countries (Bangladesh, Bhutan, India, Nepal, Pakistan and Sri Lanka), Indonesia, Saudi Arabia, Southeast Asia and Thailand.

Increased investment encourages higher economic growth resulting in better quality human resources, through increasing human ability to produce changes in the social structure, being free from hunger, malnutrition and illiteracy, having a decent home, and being able to get out of the cycle of poverty. However, several other

studies show different results where economic growth is unable to encourage an increase in the quality of human resources.

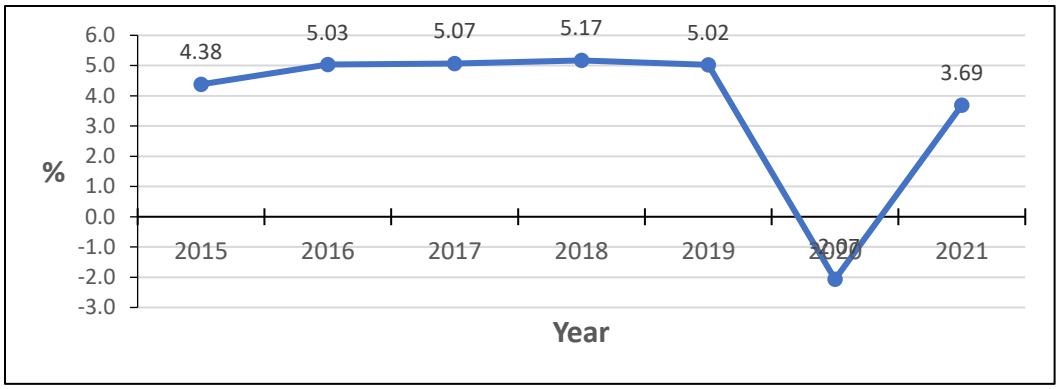


Fig 2. Economic Growth in Indonesia 2015-2021

In Indonesia, economic growth experienced a significant decline in 2020 (Figure 2). In 2020 economic growth reached -2.07% during the Covid-19 pandemic which hit the entire world, including Indonesia. The Covid-19 pandemic also affects human development indicators, namely health. Public health in the form of reducing the under-five mortality rate, reducing the prevalence of stunting, improving the quality of life are parameters that contribute to the quality of human resources (Salesman 2021).

Economic growth is a multidimensional concept that reflects the process of economic and societal change. This important process leads to changes in social welfare such as education, life expectancy, mortality and many others. The formation of the ASEAN economic community requires member countries to increase high school enrollment rates and form innovative economies. The demand for highly qualified labor is increasing due to the demand for an innovation-oriented economy. Access to quality higher education is one way to overcome this problem (Muhamad, Sulaiman, and Saputra 2018).

On the other hand, Indonesia experienced a decline in growth in the number of its workforce from 2015-2021 (Figure 3). This decline is due to low levels of education and poor career guidance, young people usually complete their education and enter the world of work armed only with qualifications that do not match the needs of employers. Nearly half of Indonesia's unemployed youth have lower qualifications for their jobs due to their low educational background. With a low-qualified workforce, they face challenges related to low productivity growth rates and a slower structural transition towards high value-added activities.

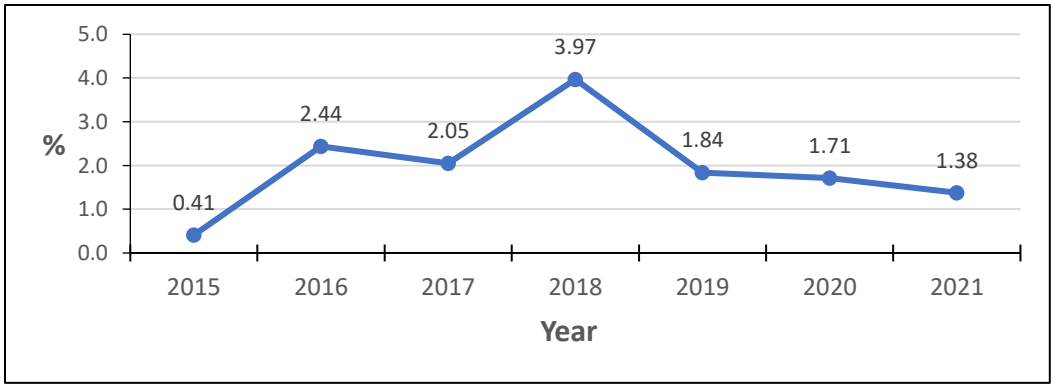


Fig 3. Growth in the Number of Labor Forces in Indonesia 2015-2021

Several studies show that increasing the workforce has a positive impact on human development. The increasing population also opens up opportunities for greater innovation and better quality human resources. Research Purwanto and Sinaga (2021), shows that population size has a positive effect on improving the quality of human

resources in Thailand. However, research results (Sun et al. 2018) and (Purwanto and Sinaga 2021) show that an increasingly large workforce has not been able to encourage an increase in the quality of human resources.

Research on the determinants of human resources has been widely carried out in Indonesia. However, no one has analyzed the impact of regional expansion on the quality of human resources. So this research fills the research gap (research gap) This is done by comparing research models for provinces not resulting from expansion with provinces resulting from expansion. Do the determinants of human resources including the economic, education, health, fiscal, population and employment sectors have the same influence for provinces resulting from expansion and non-expansion? Research gap others relate to human resource indicators. Many previous research only use simpler proxies for the quality of human resources, namely school enrollment rates (Sun et al. 2018), (Sethi, Mishra, and Bhujabal 2019), education budgets (Olopade et al. 2020), and average years of schooling and returns. to education (Purwanto and Sinaga 2021).

Other studies also only use one indicator of human resource quality, such as HDI (Arisman 2018), HCI (Bashir et al. 2019). This research will close this research gap by using two indicators of human resource quality, namely the Human Development Index (HDI) and the Human Capital Index (HCI).

This research aims to investigate the influence of public policy on the quality of human resources in Indonesia. This research also tests whether public policies through the education budget, health budget and general allocation funds, as well as the economic, population and employment sectors have different impacts between the entire province area, areas resulting from expansion and areas not resulting from expansion. As for novelty of this research lies in: 1) testing models with various regional characteristics, and 2) using more complex research variables, using two indicators of human resource quality, namely the Human Development Index and the Human Capital Index.

METHOD

Data Types and Sources

In this research, the type of data used is panel data. Panel data is a combination of time range data (time series) and cross data (cross section). This research takes cross section data from the economic sector (gross fixed capital formation), the education sector (education budget), the health sector (health budget), the fiscal sector (general allocation funds), the population sector (population), and the employment sector (participation level). workforce) in 34 provinces in Indonesia. Time range data (time series) used is annual data for the period 2015-2022. The basis for considering the period selection is that the new HCI formula was introduced in 2015 at the IMF-World Bank Summit held in Bali, Indonesia. One of the components that forms the HCI is the stunting figure which has only been published by BPS since 2015.

The type of data used in this research is secondary data. Secondary data is a source of data obtained by researchers indirectly or obtained and recorded by other parties. Secondary data was obtained from the website pages of related agencies, including the Central Statistics Agency (BPS), Ministry of Finance, and the World Bank.

Data Collection Techniques

The data collection technique in this research uses documentation techniques. Documentation is to obtain data directly from the research site, including relevant books, regulations, activity reports, photographs, documentary films, and research-relevant data. Documentation was carried out in research to collect secondary data on HDI, HCI, gross fixed capital formation, education budget, health budget, general allocation funds, population size, and labor force participation rate.

The method for collecting secondary data is by examining documents that are already available in various government agencies. The results of previous research and the results of browsing on the internet are also secondary data that are used as comparisons and input for conducting analysis. The main data will be taken from the Central Statistics Agency (BPS).

Data Analysis

The data analysis used in this research is a quantitative descriptive model. Quantitative descriptive research is to describe, examine, and explain something that is studied as it is, and draw conclusions from phenomena that can be observed using numbers. Quantitative descriptive research is research that only describes the content of a variable in research, not intended to test certain hypotheses (Noerdhoek et al., 2019). The data analysis technique in quantitative research uses statistics with the help of SPSS.

The statistical data analysis techniques used to test classical assumptions are the multicollinearity test, heteroscedasticity test and autocorrelation test. Then to test the hypothesis using a partial test (t test), simultaneous regression coefficient test (f test), coefficient of determination test (R2).

RESULTS AND DISCUSSIONS

Results

Test *t* This was done to determine the significance of the influence of the independent variable on the dependent variable partially. Each independent variable has a significant effect on the dependent variable if value t_{count} greater than value t_{table}. Following are the test results *t* for model 1 with the HDI variable as the dependent variable, and model 2 with the HCI variable as the dependent variable.

Table 2. Test *t* Model 1: All Provinces *(Fixed Effect Model)*

Variable	Value prob t_{hitung}	Conclusion
LNPMTB	0.000	Significant
LNDAU	0.000	Significant
LNAK	0.035	Significant
LNAP	0.000	Significant
LNPOP	0.000	Significant
LNTPAK	0.983	Insignificant

Table 3. Test *t* Model 1: Provinces are not the result of expansion *(Fixed Effect Model)*

Variable	Value prob t_{hitung}	conclusion
LNPMTB	0.000	Significant
LNDAU	0.000	Significant
LNAK	0.013	Significant
LNAP	0.000	Significant
LNPOP	0.000	Significant
LNTPAK	0.322	Insignificant

On the test *t* model 1 for all provinces (Table 2) and model 1 for provinces not resulting from expansion (Table 3), shows that all independent variables except the TPAK variable have a significant effect on HDI in *a*=5%. Test results *t* for model 1 (province resulting from expansion), only the education budget variable (LNAP) has a significant effect on HDI in *a*= 5%, while the investment variable (LNPMTB) and general allocation funds (LNDAU) have a significant effect on HDI at *a*=10%. Three other variables, namely the health budget (LNAK), population (LNPOP), and labor force participation rate (LNTPAK) do not have a significant effect on HDI in the expansion provinces (Table 4)

Table 4. Test *t* Model 1: Provinces resulting from expansion *(Random Effect Model)*

Variable	**Value prob t_{hitung}**	**Conclusion**
LNPMTB	0.060	Significant *
LNDAU	0.058	Significant *
LNAK	0.757	Insignificant
LNAP	0.000	Significant ***
LNPOP	0.197	Insignificant
LNTPAK	0.765	Insignificant

Table 5. Test *t* Model 2: All Provinces *(Random Effect Model)*

Variable	**Value prob t_{hitung}**	**Conclusion**
LNPMTB	0.005	Significant ***
LNDAU	0.000	Significant ***
LNAK	0.000	Significant ***
LNAP	0.002	Significant ***

LNPOP	0.014	Significant **
LNTPAK	0.191	Insignificant

On the test *t* model 2 for all provinces (Table 5) and model 2 for provinces not resulting from expansion (Table 6), show that all independent variables except the TPAK variable have a significant effect on HDI in *a*= 5%, unless the population variable (LNPOP) is significant at *a*=10%.

Table 6. Test *t* Model 2: Provinces are not the result of expansion *(Random Effect Model)*

Variable	Value prob t_{hitung}	Conclusion
LNPMTB	0.007	Significant ***
LNDAU	0.000	Significant ***
LNAK	0.000	Significant ***
LNAP	0.004	Significant ***
LNPOP	0.061	Significant *
LNTPAK	0.498	Insignificant

Test results *t* for model 2 (divided provinces), only the general allocation fund (LNDAU) and health budget (LNAK) variables have a significant effect on HDI in *a*= 5%, while other variables, namely investment (LNPMTB), education budget (LNAP), population (LNPOP), and labor force participation rate (LNTPAK) do not have a significant effect on HCI in the expansion provinces (Table 7).

Table 7. Test *t* Model 2: Provinces resulting from expansion *(Random Effect Model)*

Variable	Value prob t_{hitung}	Conclusion
LNPMTB	0.292	Insignificant
LNDAU	0.000	Significant
LNAK	0.002	Significant
LNAP	0.876	Insignificant
LNPOP	0.152	Insignificant
LNTPAK	0.000	Insignificant

Test*F* carried out to determine the significance of the influence of the independent variable on the dependent variable simultaneously. The independent variables together have a significant effect on the dependent variable if the probability value F_{count} smaller than 0.05 (*a* = 5%). Following are the test results *F* for model 1 with the HDI variable as the dependent variable, and model 2 with the HCI variable as the dependent variable. The results in Table 8 show that all independent variables simultaneously have a significant effect on the dependent variable, both model 1 and model 2.

Table 8. *F-Test* Models 1 and 2

Type	$F_{calculate}$ value	$F_{calculate}$ Prob Value	Conclusion
Model 1: province-wide (FEM)	493.753	0.000	Significant***
Model 1: non-expansion provinces (FEM)	679.856	0.000	Significant***
Model 1: expansion province (REM)	23.831	0.000	Significant***
Model 2: province-wide (REM)	20.363	0.000	Significant***
Model 2: non- expansion provinces (REM)	20.201	0.000	Significant***
Model 2: expansion (REM) provinces	4.012	0.000	Significant***

Coefficient of determination (R^2) measures the variation of the dependent variable around its mean as explained by the regression model R^2 used to determine the percentage change in the dependent variable (Y) caused by the independent variable (X)". Carried out to determine and predict how big or important the contribution of influence provided by the independent variables together on the dependent variable, with numbers 0-1. IfR^2 The larger it is, the higher the percentage change in the dependent variable (Y) caused by the independent variable (X). In model 1 (all provinces), valueR^2 amounting to 0.990 indicates that the variation in the independent variable is able to explain the variation in HDI by 99 percent, the remaining 1 percent is explained by variables outside the model. Or 99 percent of the dependent variable around the average is explained in the regression model. In model 1 (province not resulting from expansion), valueR^2 amounting to 0.993073 shows that the variation in the independent variable is able to explain the variation in HDI by 99.31 percent, the rest is explained by variables outside the model. In model 1 (divided provinces), valueR^2 amounting to 0.744774 shows that the variation in the independent variable is able to explain the variation in HDI by 74.48 percent, the rest is explained by variables outside the model.

Table 9. Determination Coefficient Values for Models 1 and 2

Model	R2 value
Model 1: province-wide (FEM)	0.990
Model 1: non-Expansion provinces (FEM)	0.993
Model 1: Expansion province (REM)	0.744
Model 2: province-wide (REM)	0.348
Model 2: non- Expansion provinces (REM)	0.413
Model 2: Expansion (REM) provinces	0.329

In model 2 (all provinces), value R^2 amounting to 0.348907 shows that the variation in the independent variable is able to explain the HCI variation of 34.89 percent, the rest is explained by variables outside the model. In model 2 (province not resulting from expansion), valueR^2 amounting to 0.413 shows that the variation in the independent variable is able to explain the variation in HCI by 41.34 percent, the rest is explained by variables outside the model. In model 2 (province resulting from expansion), value R^2 amounting to 0.330 shows that the variation in the independent variable is able to explain the variation in HCI by 32.94 percent, the rest is explained by variables outside the model.

DISCUSSION

Estimation Results Model 1: Human Development Index

All Provinces

The estimation results of model 1 (all provinces) in table 10 show that all variables except TPAK have a significant positive effect on HDI. The PMTB variable has a significant positive effect on HDI with a regression coefficient of 0.03 percent. This means that every 1 percent increase in PMTB causes an increase in HDI of 0.03 percent. PMTB has the second biggest influence after the population variable in influencing HDI in Indonesia. The results of this research support research (Tudorache 2020) which shows that gross fixed capital formation has a positive effect on HDI in the European Economic Community for the 2010-2017 period. Investment which has a positive and significant effect on HDI is also in accordance with the results of research Baghirzade (2012) examining the effect of foreign direct investment on human development in middle and low-income countries, finding a positive impact for both groups of countries. Erwanti, Wahyunadi, and Mahmudi (2023) also found that investment had a positive effect on HDI in Indonesia for the 2013-2018 period.

In the Harrod-Domar investment theory, capital formation or investment is an important factor that determines economic growth. This capital formation can be obtained through the accumulation of savings. Capital formation is not only seen as expenditure that will increase the ability of an economy to produce goods and services, but will also increase the effective demand of society. In investment activities there is a close relationship to the creation of new jobs, because it will give rise to increased production activities so that the people who are absorbed will have income to meet their living needs to achieve prosperity. People who were previously unemployed will get jobs and income through investment activities. As income increases, people's purchasing power, which is part of the HDI component, will also increase.

Table 10. Estimation Results for Model 1: All Provinces *(Fixed Effect Model)*

`Variable	Coefficient	*Std. Error*	*t-Statistic*	Prob.
C	2.900	0.191	15.167	0.000
LNPMTB	0.030	0.005	5.825	0.000
LNDAU	0.014	0.003	5.029	0.000
LNAK	0.003	0.001	2.122	0.035
LNAP	0.007	0.001	6.442	0.000
LNPOP	0.102	0.019	5.354	0.000
LNTPAK	-0.001	0.027	-0.021	0.983

General Allocation Funds (DAU) are provided by the central government to reduce fiscal gaps between regions so that there is equitable development in each region. DAU is expected to help the government meet regional needs so as to improve the quality of human development in the region. Therefore, regional governments are expected to be able to manage these funds well and allocate them to finance regional expenditures that are oriented towards improving community welfare through development and improving services to the community which are allocated to capital expenditure. The research results show that DAU has an effect on

HDI with a regression coefficient of 0.014. This means that every 1 percent increase in DAU will increase HDI by 0.014 percent. These results are consistent with research (Wuladari, Wahyudi, and Rani 2018)

In the health sector, the health budget is also able to encourage an increase in the HDI in all provinces in Indonesia. These results are consistent with research (Razmi et al. 2012) in Iran and (Van 2017) in 130 countries which show that health budgets have a positive effect on HDI. A regression coefficient of 0.003 shows that every 1 percent increase in the health budget can increase the HDI by 0.003 percent. Through the allocation of government spending in the health sector, it is hoped that it can provide opportunities for all people to obtain health services. such as free health programs, health insurance, and use of poverty cards.

The education budget has a significant positive effect on HDI with a regression coefficient of 0.007. This means that every 1 percent increase in the education budget can increase the HDI by 0.007 percent. These results are consistent with research Mongan (2019) but not consistent with (Mahuze, Masinambow, and Lapian 2022). Education expands a person's opportunities. Education increases creativity and imagination. As an added value, education will also expand other options. Educated people will pay more attention to their health level in order to live longer. Not only that, educated people will also have a greater chance of getting a more decent job and income. Therefore, education becomes important as a means of improving human quality in order to expand their opportunities.

The population is able to increase the HDI in all provinces in Indonesia. A regression coefficient of 0.102 indicates that every increase in population of 0.102 will increase the HDI by 0.102 percent. The increasing population increases the opportunities for creating innovation and higher technological progress. Technological progress is a source of economic growth and high economic growth encourages improvements in the quality of human resources.

From the employment side, the increasingly high labor force participation rate (TPAK) is unable to encourage an increase in HDI. These results support research Sethi et al (2019) in the sampled South Asian countries (Bangladesh, Bhutan, India, Nepal, Pakistan, and Sri Lanka) and in 9 countries in Southeast Asia showing that TPAK has no effect on resource quality man. The labor force reflects the number of employed and unemployed people. This means that the impact of increasing the number of people working has not been able to have a multiplier effect on the economy through increased consumption and investment, thereby limiting access to all facilities that can improve the quality of human resources. However, these results are not in line with research (Akbar, Siti, and Anna n.d.) which shows that TPAK has a positive effect on HDI.

Provinces Are Not the Result of Expansion

The estimation results of model 1 (provinces not resulting from expansion) in table 11 show that all variables except TPAK have a significant positive effect on HDI. The PMTB variable has a significant positive effect on HDI with a regression coefficient of 0.07 percent. This means that every 1 percent increase in PMTB causes an increase in HDI of 0.07 percent. In provinces that are not the result of expansion, PMTB also has the second biggest influence after the population variable in influencing HDI in Indonesia.

The results of this study relating to the investment variable (PMTB) are in accordance with Sharma and Gani's research which assessed the impact of investment on human development for two groups of countries and found that countries with higher levels of human development attracted more foreign direct investment, which also positively influences human development for both groups of countries. Foreign investment has a positive relationship and is closely related to increasing human development. A country's foreign investment policy restricts foreign companies from entering some sectors and also restricts foreign investors from certain domestic companies.

DAU in provinces that are not the result of expansion has a significant positive effect on HDI. A regression coefficient of 0.01 means that every 1 percent increase in DAU can increase HDI by 0.01 percent. This shows that the regional government is able to manage DAU funds well and allocate them to finance regional expenditures that are oriented towards improving community welfare, through improving community services such as increasing decent living standards, improving the quality of education, creating a healthy life in the community, and finally increase the human development index.

Table 11. Estimation Results for Model 1: Provinces Not the Result of Expansion *(Fixed Effect Model)*

`Variable	Coefficient	*Std. Error*	*t-Statistic*	Prob.
C	2.718	0.207	13.147	0.000
LNPMTB	0.071	0.008	8.759	0.000
LNDAU	0.010	0.003	3.723	0.000
LNAK	0.003	0.001	2.507	0.013
LNAP	0.005	0.001	3.719	0.000
LNPOP	0.087	0.021	4.187	0.000
LNTPAK	-0.028	0.028	-0.993	0.322

The health budget also has a significant positive effect on HDI with a regression coefficient of 0.003. This shows that every 1 percent increase in the health budget will increase the HDI in the province, not the result of expansion by 0.003 percent. Several recent studies show the influence of the health budget on the Human Development Index. Health spending by improving health indicators will increase human capital inventory and labor productivity. Since a healthy workforce is more motivated and has higher productivity, it can lead to increased production through increased efficiency.

The education budget also has a significant positive effect on HDI in provinces that are not the result of expansion. The regression coefficient is 0.005. This shows that every 1 percent increase in the education budget will increase the HDI in the province, not the result of expansion by 0.005 percent. Education is one of the determining factors for the success of development, in an effort to increase quality human resources. Because education can develop knowledge and improve the quality of life and human dignity as expected.

Likewise, the population sector (LNPOP) as a determining factor for increasing HDI in the province is not the result of expansion. The LNPOP regression coefficient of 0.087 indicates that an increase in population of 1 percent will increase the HDI by 0.087 percent. A higher population expands markets and increases the level of specialization in the economy. Specialization increases individual skills and expertise and improves the quality of human resources. These results are in line with research (Purwanto and Sinaga 2021) Purwanto & Sinaga (2021), population growth in Thailand is able to encourage an increase in the quality of human resources. However, this result contradicts research (Zheng and Wang 2022) where higher population growth causes a decrease in HDI in China, while a study (Van 2017) in 130 countries shows that increasing population has a positive effect on HDI in the short term, but negatively in the short term. long-term.

The results of this research are also in accordance with the results of research conducted by Zakari in Central Java Province and Indonesia, namely that population size has a positive and significant effect on HDI. This is because when the population increases, people's needs will increase, people's consumption will increase and employment opportunities will also increase. The impact on HDI is also due to migration from one area to another where a person is already in the workforce and is mature to work so that it will improve the quality of human resources in that area. Increasing migration flows will have an impact on regional or national development as well as for the population and the country. With migration, development will develop due to the contribution of immigrants and the skills they bring, which will increase income.

Expanded Provinces

The estimation results of model 1 (provinces resulting from expansion) in table 12 show that the PMTB variable has a significant positive effect on HDI with a regression coefficient of 0.016 percent. This means that every 1 percent increase in PMTB causes an increase in HDI of 0.016 percent. The results of this study support Anderson's research which analyzed the influence of increased trade and investment in the US and Mexico, showing that investment has a large impact on human development indices. Research Gökmenoğlu et al. (2018) states that very high levels of foreign direct investment are important for host countries, contributing to human development and increasing incomes of highly skilled graduates.

Table 12. Estimation Results for Model 1: Provinces Resulting from Expansion *(Random Effect Model)*

`Variable	Coefficient	*Std. Error*	*t-Statistic*	Prob.
C	3.754	0.292	12.876	0.000
LNPMTB	0.016	0.008	1.924	0.060
LNDAU	0.019	0.010	1.944	0.058
LNAK	0.001	0.004	0.311	0.757
LNAP	0.012	0.002	6.204	0.000
LNPOP	0.024	0.018	1.309	0.197
LNTPAK	-0.019	0.063	-0.301	0.765

DAU in the provinces resulting from expansion also has a significant positive effect on HDI. A regression coefficient of 0.019 means that every 1 percent increase in DAU can increase HDI by 0.019 percent. This shows that the regional government is able to manage DAU funds well and allocate them to finance regional expenditures that are oriented towards improving community welfare. However, this research contradicts research (Harahap 2011).

In the health sector, the health budget has not been able to encourage an increase in the HDI in the provinces resulting from expansion in Indonesia. The implementation of decentralization cannot be separated from various problems that arise, including the lack of commitment of the Regional Government in health development, the lack of services for the poor and the lack of capacity of regional staff. Apart from these problems, there are problems with the quality and financing of health services. The health sector will of course compete with other sectors to obtain sufficient funding allocation for community service programs. Health is one of the factors that influences the quality of human resources. Lack of calories, nutrition, or low level of health for the population will result in low human quality with an underdeveloped mental level. The results of this research support research (Widodo et al. 2019), where the health budget had no effect on HDI in Indonesia in the 2007-2016 period. However, these results are not consistent with research (Razmi et al. 2012) in Iran and in 130 countries showing that the health budget has a positive effect on HDI.

Education is one of the determining factors for the success of development, in an effort to increase quality human resources. Because education can develop knowledge and improve the quality of life and human dignity as expected. The education budget can increase the HDI in the provinces resulting from expansion. A regression coefficient of 0.012 means that an increase in the education budget of 1 percent will increase the HDI by 0.012 percent. With regional expansion, regional governments can organize and prepare educational facilities from elementary to advanced levels as well as teaching staff. The closer the span of control between the regional government and the community over educational facilities will improve the quality of human resources in the regions resulting from expansion.

Population and employment variables do not have a significant effect on HDI in the provinces resulting from expansion. The increasing population can be a burden on the economy if the level of productivity is low. Likewise, a labor force participation rate that is increasingly high but has not been fully absorbed in the labor market can hamper productivity and reduce income. Populations with low incomes cause limitations in accessing their needs, including meeting needs in the fields of education and health. So it has no effect on increasing the human development index. This result is in line with research (Kiha, SERAN, and LAU 2021), where population cannot increase the HDI in Belu Regency.

Estimation Results Model 2: Human Capital Index

All Provinces

The Human Capital Index in the model for all provinces in Indonesia is negatively influenced by investment variables (LNPMTB), general allocation funds (LNDAU), and health budget (LNAK). The education budget (LNAP) and population (LNPOP) variables have a positive effect, while the employment sector (LNTPAK) has no effect on HCI in the model for all provinces in Indonesia (Table 13).

The economic variable regression coefficient of -0.03 means that an increase in gross fixed capital formation of 1 percent actually reduces HCI by 0.03 percent. This can occur due to a lack of appropriate targeting of gross fixed capital expenditure on physical facilities that should be funded or carried out development that is capable of driving HCI index growth. The research results show that the increase in investment has not been able to increase HCI, but has actually reduced the quality of human resources. This is because existing investments tend to be capital and technology intensive investments, not labor intensive. Based on data from the Chamber of Commerce and Industry (Kadin), as a comparison, in 2013, an investment worth IDR 1 trillion could still absorb up to 4,594 workers. That number has decreased over time. In 2016, IDR 1 trillion investment could only absorb 2,271 people. In 2021, an investment of IDR 1 trillion will only be able to absorb 1,340 people. So that labor absorption in the formal sector continues to decline.

The increasingly large workforce is more absorbed in the informal sector. This result is different from the influence of investment on HDI in Indonesia, where an increase in investment is able to encourage an increase in HDI in Indonesia because of the influence of investment on national income and increasing people's purchasing power. Indicators in measuring HDI tend to measure human resources from quantitative aspects such as average years of schooling, and not from aspects of learning quality such as test scores which are one of the indicators in measuring HCI.

The regression coefficient value for general allocation funds is -0.034, indicating that an increase in general allocation funds of 1 percent can reduce HCI by 0.034 percent. This decline in HCI could occur because DAU allocations are more focused on other goals, such as encouraging economic growth. Apart from that, DAU is mostly used for employee spending. This can be seen from the DAU formulation which includes the basic allocation component as the main component that dominates the overall DAU received by the regions. Basic allocation is the budget allocation used for employee expenditure. These results support research (Rahmawati and Intan 2020).

Table 13. Estimation Results for Model 2: All Provinces *(Random Effect Model)*

`Variable	Coefficient	*Std. Error*	*t-Statistic*	Prob.
C	0.112	0.279	0.400	0.690
LNPMTB	-0.030	0.010	-2.841	0.005
LNDAU	-0.034	0.005	-6.568	0.000
LNAK	-0.014	0.003	-4.846	0.000
LNAP	0.007	0.002	3.147	0.002
LNPOP	0.034	0.014	2.466	0.014
LNTPAK	-0.083	0.063	-1.312	0.191

The increase in the health budget was also not matched by the increase in HCI. This can be seen from the regression coefficient of -0.014. A health budget that increased by 1 percent caused HCI to decrease by 0.014 percent. One of the causes is the problem of stunting. The increase in health budgets is not accompanied by a reduction in stunting as one of the determining components of HCI. According to WHO, stunting is a disruption in the growth and development of children due to chronic malnutrition and recurrent infections, which is characterized by their body length or height being below standard.

In fact, this stunting problem does not only occur in Indonesia, but also in various countries. WHO estimates that the total number of disease cases that occur at a certain time in a particular area (prevalence) of stunting (dwarf toddlers) throughout the world is 22 percent or 149.2 million people in 2020. In Indonesia, based on data from the Asian Development Bank, in 2022, the percentage of prevalence of stunting among children under 5 years of age in Indonesia will be 31.8 percent. This number causes Indonesia to be in 10th place in the Southeast Asia region.

The variables that can encourage an increase in HCI in the model for all provinces in Indonesia are the education sector (LNAP) and the population sector (LNPOP) with regression coefficients of 0.007 and 0.034

respectively. This means that every 1 percent increase in the education budget can increase HCI by 0.007 percent and every 1 percent increase in population will increase HCI by 0.034 percent.

In the last decade, Indonesia has carried out many reforms in the education sector. This is done to prepare Indonesian human resources to be able to compete on the international stage. For this reason, since 2009, the government has allocated 20 percent of the government budget for the education budget (mandatory spending). This allocation makes Indonesia one of the countries with the largest public spending on education in Asia. Although, if you look at the GDP percentage, Indonesia's education spending is still lagging behind compared to Vietnam, Malaysia, and even Timor Leste. There is mandatory spending This can be seen from improved access to education. This is shown in the increasing school enrollment figures.

In the context of development, views of the population are divided into two, namely those who consider them as obstacles to development and those who consider them as drivers of development (Zakaria, 2018). The results of this research show that population is a potential that can encourage an increase in HCI in Indonesia.

The employment sector (LNTPAK) has not been able to encourage an increase in HCI. This result is in line with research (Hong Vo et al. 2021) where the labor force has no effect on human capital accumulation in the short term in Southeast Asia in 1990-2018, although it can encourage human capital accumulation in the long term. These results do not support research (Sethi et al. 2019), where the level of labor force participation can encourage HCI in several countries in South Asia for the period 1984-2015.

Provinces Are Not the Result of Expansion

The influence of each independent variable in model 2 for provinces not resulting from expansion gives the same results as model 2 for all provinces in Indonesia. Investment variables (LNPMTB), general allocation funds (LNDAU), and health budget (LNAK) have a negative effect on HCI. The education budget (LNAP) and population (LNPOP) variables have a positive effect, while the employment sector (LNTPAK) has no effect on HCI in provinces that are not the result of expansion (Table 14).

Table 14. Estimation Results for Model 2: Provinces Not the Result of Expansion *(Random Effect Model)*

`Variable	Coefficient	*Std. Error*	*t-Statistic*	Prob.
C	0.125	0.350	0.358	0.721
LNPMTB	-0.045	0.016	-2.750	0.007
LNDAU	-0.037	0.006	-6.619	0.000
LNAK	-0.014	0.003	-4.368	0.000
LNAP	0.008	0.003	2.903	0.004
LNPOP	0.040	0.021	1.885	0.061
LNTPAK	-0.053	0.078	-0.678	0.498

The magnitude of the influence of the economic sector on HCI can be seen in the LNPMTB regression coefficient value of -0.045. This means that an increase in gross fixed capital formation of 1 percent will reduce HCI by 0.045 percent. This result is the same as the model for all provinces where the increase in investment has not been able to provide a positive multiplier effect for improving the quality of human resources in this region. Investments that tend to be capital intensive encourage increases in national income only enjoyed by capital owners. A workforce that is mostly absorbed in the informal sector causes relatively low incomes, thus hampering access to better education and health.

The fiscal sector (LNDAU) has a negative effect on HCI with a respective regression coefficient of -0.037. This means that every 1 percent increase in general allocation funds can reduce HCI by 0.037 percent. This decline in HCI could occur because DAU allocations are more focused on other goals, such as encouraging economic growth. Apart from that, DAU is mostly used for personnel spending, including in provinces, not as a result of expansion.

The health sector (LNAK) also has a negative effect on HCI with a respective regression coefficient of -0.014. This means that every 1 percent increase in the health budget will reduce HCI by 0.014 percent. The health problem faced is unequal access to balanced nutritious food, which has an impact on cases of stunting. The main factor in stunting is the lack of nutritional intake of children in the First 1000 Days of Life (HPK). Brain and body growth develops rapidly at 1000 HPK starting from the fetus until the child is two years old. Fulfillment of nutrition at this stage is very important so that children's growth and development can be optimal.

Similarly, in the case of all provinces, the variables that can encourage an increase in HCI in the provincial model, which is not the result of expansion, are the education sector (LNAP) and the population sector (LNPOP) with regression coefficients of 0.008 and 0.04 respectively. This means that every 1 percent increase in the education budget can increase HCI by 0.008 percent and every 1 percent increase in population will increase HCI by 0.04 percent. A higher education budget increases people's access to better education services. Likewise, an increase in population with better access to education encourages an increase in the quality of human resources. Research (Purwanto and Sinaga 2021) shows that population has a positive effect on the Human Capital Index in Thailand.

Regarding the employment sector (LNTPAK) in provinces that are not the result of expansion, it shows the same results as the model for all provinces. The labor force participation rate in provinces that are not the result of expansion in this region has also not been able to encourage an increase in HCI. The increase in TPAK does not yet reflect the increase in labor productivity, so the income received is not enough to improve the quality of human capital, especially in improving the quality of education and health. The results of this study support research (Hong Vo et al. 2021) in Southeast Asia.

Expanded Provinces

Based on the estimation results in Table 15, the fiscal sector (LNDAU) has a positive effect on HCI in the provinces resulting from expansion, while the health sector (LNAK) and the employment sector (LNTPAK) have a negative effect on HCI. Other sectors, namely the economic sector (LNPMTB), education sector (LNAP) and population (LNPOP) have no effect on HCI in the provinces resulting from expansion.

The magnitude of the influence of the fiscal sector can be seen from the LNDAU regression coefficient value of 0.104. This means that every 1 percent increase in general allocation funds can increase HCI by 0.104 percent. This shows that the provinces resulting from the expansion are able to allocate DAU to improve the regional economy and better the quality of human resources.

Table 15. Estimation Results for Model 2: Provinces Resulting from Expansion *(Random Effect Model)*

`Variable	Coefficient	*Std. Error*	*t-Statistic*	Prob.
C	1.101	0.377	2.921	0.005
LNPMTB	0.004	0.004	1.065	0.292
LNDAU	0.104	0.016	6.495	0.000
LNAK	-0.012	0.004	-3.348	0.002
LNAP	-0.001	0.004	-0.157	0.876
LNPOP	-0.008	0.005	-1.457	0.152
LNTPAK	-0.547	0.083	-6.585	0.000

The magnitude of the regression coefficient for the employment sector variable (LNTPAK) is -0.547, indicating that every 1 percent increase in the labor force participation rate will reduce HCI by 0.547 percent. The higher labor force participation rate actually reduces the HCI in the provinces resulting from expansion. This can happen because labor force productivity is still low in the provinces resulting from expansion. The labor force consists of the number of people who work and are looking for work. The still high level of unemployment in the provinces resulting from expansion causes the community's decent living index to fall and reduces the human capital index through decreasing access to education and health.

The education budget does not have a significant effect on HCI in the provinces resulting from expansion. The education budget allocation has not been able to improve the quality of education in the provinces resulting

from expansion. There are at least four aspects of the problem that lead to the low quality of education in Indonesia, namely the authority of the central and regional governments, inadequate teacher quality, low accountability and suboptimal quality of monitoring and evaluation. The most prominent problem is the disparity in education quality between regions and the low quality of teachers. When adequate funding is no longer an issue, the government needs to take education quality indicators seriously. For this reason, the education budget needs to be mapped well. The aim is to find out at what point the government must make improvements so that education programs can be implemented and have more impact.

The increase in investment in the resulting provinces has no effect on the quality of human resources as measured by HCI. The increasing investment value has not been matched by better quality education and health. Educational issues such as PISA scores (Programme for International Student Assessment), teacher competency, and disparities in education quality between regions are just a few of the educational performance indicators that still require serious attention from the government. Indonesia's PISA score since 2001 has not experienced a significant increase. Even in 2018, after almost a decade the government allocated 20 percent of the education budget, around 52 percent of Indonesian students in the PISA sample were in the low performer category in all three test subjects (literacy, mathematics and science), much lower than the country's achievements. -neighboring countries.

PISA really depends on the quality of the teaching staff/teachers. Currently, the welfare of teachers in Indonesia is relatively better with the provision of incentives/allowances. However, this increase in welfare has not been fully accompanied by an increase in the quality of teachers. The results of the Teacher Competency Examination (UKG) released by the Ministry of Education and Culture (Kemendikbud) in 2019 showed that the quality of teachers was inadequate, with the average competency score for civil servant teachers only reaching the 50s (out of 100) and only 4 percent. teachers who get a score of 70 or higher, while the competency of contract teachers is still below a score of 50.

So that the overall estimation results of all research models are presented in outline in the following summary table:

Table 16. Summary of Estimation Results on the Human Development Index

Variable	Model 1: LNIPM								
	All Provinces			Provinces Are Not Expansion			Expanded Provinces		
	Coefficient	Prob	Is	Coefficient	Prob	Is	Coefficient	Prob	Is
LNPMTB	0.030	0.000	***	0.071	0.000	***	0.016	0.060	**
LNDAU	0.014	0.000	***	0.010	0.000	***	0.019	0.058	**
LNAK	0.003	0.035	**	0.003	0.013	**	0.001	0.757	
LNAP	0.007	0.000	***	0.005	0.000	***	0.012	0.000	***
LNPOP	0.102	0.000	***	0.087	0.000	***	0.024	0.197	
LNTPAK	-0.001	0.983		-0.028	0.322		-0.019	0.765	

Description = * on *a*=10%; ** on *a*=5%; *** on *a*=1%.

Table 17. Summary of Estimation Results on the Human Capital Index

Variable	Model 1: LNIMM								
	All Provinces			Provinces Are Not Expansion			Expanded Provinces		
	Coefficient	Prob	Is	Coefficient	Prob	Is	Coefficient	Prob	Is
LNPMTB	-0.030	0.005	***	-0.045	0.007	**	0.004	0.292	
LNDAU	-0.034	0.000	***	-0.037	0.000	***	0.104	0.000	***
LNAK	-0.014	0.000	***	-0.014	0.000	***	-0.012	0.002	***
LNAP	0.007	0.002	***	0.008	0.004	***	-0.001	0.876	
LNPOP	0.034	0.014	**	0.040	0.061	*	-0.008	0.152	
LNTPAK	-0.083	0.191		-0.053	0.498		-0.547	0.000	***

Description = * on *a*=10%; ** on *a*=5%; *** on *a*=1%.

CONCLUSIONS

The economic sector has a positive effect on HDI in 34 provinces in Indonesia and in provinces not resulting from expansion and in provinces resulting from expansion. The economic sector has a negative effect on HCI in 34 provinces in Indonesia and in provinces not resulting from expansion, but it has no effect on HCI in provinces resulting from expansion.

The education sector has a positive effect on HDI in 34 provinces in Indonesia, in provinces resulting from expansion and in provinces not resulting from expansion. The education sector has a positive effect on HCI in 34 provinces in Indonesia and in provinces not resulting from expansion, but does not have a significant effect on HCI in provinces resulting from expansion.

The health sector has a positive effect on HDI in 34 provinces in Indonesia and in provinces not resulting from expansion, but it has no effect on HDI in provinces resulting from expansion. The health sector has a negative influence on HCI in 34 provinces in Indonesia, in provinces resulting from expansion and in provinces not resulting from expansion.

The fiscal sector has a positive effect on HDI in 34 provinces in Indonesia, in provinces resulting from expansion and in provinces not resulting from expansion. The fiscal sector has a positive effect on HCI in provinces resulting from expansion, but has a negative effect on HCI in 34 provinces in Indonesia and in provinces not resulting from expansion.

The population sector has a positive effect on HDI in 34 provinces in Indonesia and in provinces not resulting from expansion, but has no effect on HDI in provinces resulting from expansion. The population sector has a positive effect on HCI in 34 provinces in Indonesia and in provinces not resulting from expansion but has no effect on HCI in provinces resulting from expansion.

The employment sector has no effect on HDI in 34 provinces in Indonesia, in provinces resulting from expansion and in provinces not resulting from expansion. The employment sector has no effect on HCI in 34 provinces in Indonesia and in provinces not resulting from expansion, but has a negative effect on HCI in provinces resulting from expansion.

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