Research Article

Contribution of Health and Education to Improve the Human Capital Index in Indonesia

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ABSTRACT

Objectives: To analyze the position Indonesia's HCI compared to ASEAN countries in terms of the quality of health and education

Study design: Analyzing secondary data published by the World Bank on the calculation HCI in 2018, Basic Health Research Report 2018 from the Indonesian Ministry of Health, Publication the Central Bureau of Statistics, various international research reports. The validity of interpreting numbers through deducto verificato which has scientific truth because it passes through the stages of scientific methodology that are generally accepted in the world of science.

Principal findings: Acquisition of HCI in 2018; Singapore 0.90, Vietnam 0.67, Malaysia 0.65, Thailand 0.61, Philippines 0.58, Indonesia 0.55, Camboja 0.49, Myanmar 0.49, Timor Leste 0.47, and Laos 0.46. Indonesia's position is in 6th place among ASEAN Countries, above Cambodia, Myanmar, Timor Leste, and Laos. This means that children born in Singpura have the opportunity to utilize their abilities to generate an income of 0.90, while every child born in Indonesia only has 55% of the resources to manage available opportunities. The remaining 0.45% is used as idle capacity. The remaining capacity is probably due to low supply of nutrition, growth and development constraints, low Quality Adjusted Life Year due to various diseases, low access to modern health services, low quality of classroom learning, and low purchasing power which is robbing the poor.

Conclusion: Increasing HCI in Indonesia needs to be a serious concern of the Government, religious and social institutions, international agencies, communities, and families so that Indonesian people can compete in the 4.0 era.

Keywords: Resources; HCI; Positioning; Life expectancy; Domestic product

INTRODUCTION

The measurement of the quality of my human resources is known as the Human Development Index (HDI), first developed in 1990 by Indian Nobel laureates Amartya Sen and Pakistani economist Mahbub ul Haq, assisted by Gustav Ranis of Yale University and Lord Meghnad Desai of the London School of Economics. The three main variables forming the Human Development Index, namely; (1) Life expectancy is the average number of years of life lived by a group of people in an area; (2) Education is calculated from the average number of school expectations and the average number of years of schooling that a group of people aged 15 years and over has attended; and (3) Expenditure is measured by real Gross Domestic Product (GDP) per capita, that is, per capita expenditure is measured using Purchasing Power Parity (PPP). The United Nations Development Program uses the HDI as a measure of the success of human resource development in each country [1].

In 2018, the Indonesian Human Development Index figure reached 71.39, increased by 0.58 points or grew by 0.82 percent compared to 2017, with details of the age of babies born in 2018 have the hope to live up to 71.20 years, 0.14 years longer than those who were born In the previous year, children aged 7 years in 2018 had the hope of enjoying education for 12.91 years (Diploma I), 0.06 years longer than those of the same age in 2017, and the population aged 25 years and over the average has taken education for 8.17 years (Class IX), 0.07 years longer than the previous year [2,3]. Indonesian people meet the needs of life with an average per capita expenditure of 11.06 million rupiah or US 790 per year, an increase of 395 thousand rupiah compared to previous year's expenditure.

The use of HDI as a measure of the success of a country's development is sometimes ignored by decision-making in developing countries. The focus of development prioritizes the

development of basic infrastructure that can be seen with the naked eye, ignoring budgets in the field of education to improve the quality of learning (appointment and improvement of teacher and lecturer competencies, procurement of books and laboratories, strengthening of competency-building oriented curricula, research and development). The health sector budget still prioritizes the development of health service infrastructure, on the other hand the ratio of services between health workers and the population is still imbalanced compared to the ratio indicated by the Regulation of the Minister of Health of the Republic Indonesia Number 33 of 2015 concerning Guidelines for Planning for Health Human Resource Needs [4,5,]. Budget in the sector -the economic sector to improve the fulfillment of food and nutrition needs of the poor in urban and rural areas for the formation of the quality of human resources has not received much attention from policy makers.

The age of the HDI theory has entered its 30th year. We analyze the theories containing weaknesses in the content of the determining variable. For example; the index of life expectancy is expressed in years without considering the quality of life throughout life, the average school expectancy, the average length of schooling only calculates the number of years carried out without considering the quality of learning that produces competencies according to job requirements; and real purchasing power per capita regardless of nutritional supply, medical care to achieve national and international standard human capital. In the future, measuring the quality of human resources as the capital of nation development must be reviewed from the substantive content contained in each indicator.

The World Bank introduced the Omnibus Theory to measure the quality of humans as a capital for the development of a nation. According to the World Bank, human capital consists of the knowledge, skills and health accumulated throughout a human's life which enables the development of its potential as a productive force. Human resources are the main driver of sustainable growth and poverty reduction. We can end extreme poverty and create a more inclusive society by developing quality human resources. For that, investment in humans is needed through nutritional intake, health care, quality education, skills and decent work [6]. However, apart from the substantial progress in the quality of human resources, a significant gap in investment in the formation of human capital makes the State of Indonesia not ready to face and manage the future, especially the quality of the millennial generation in global competition.

The purpose of this paper is to analyze the contribution of the degree of public health in Indonesia in the formation of the Human Capital Index in order to get a picture of the portrait of the quality of Indonesian people today and the starting point of human development strategies and policies towards the golden generation in 2045.

MATERIALS AND METHODS

This type of retrospective quantitative research by processing and analyzing secondary data published by the World Bank in 2018 concerning the Human Capital Index and its components, the methodology used by the World Bank regarding the calculation of the Human Capital Index in 2018, Basic Health Research Report 2018 from the Indonesian Ministry of Health, Publication Central Bureau of Statistics, various research results and international journal publications. The validity of the interpretation of the numbers in this scientific oration is through deducto verificato

and has scientific truths that have passed the correctness of the scientific methodology stages that are generally accepted in the world of science and knowledge.

There are two independent variables analyzed, namely quality of life and quality of education. The variables of quality of life were analyzed through infant mortality rate, stunting, and Survival to adulthood. The variable of education quality was analyzed through the harmonization of the test score by Programme for International Students Assessment (PIZA). While the dependent variable is the Human Capital Index.

Human Capital Index (HCI)

The Human Capital Index (HCI) measures the contribution of health and education to workforce productivity. Countries can use it to assess how much income they have to fill the current human capital gap, and how quickly they can turn this problem into profit if they do so now [6,7].

The HCI is a new methodology that Watson Wyatt first used to calculate the correlation between human capital formation and the value of profits received by shareholders in the company. A set of measures was developed to calculate the programs and costs of HR quality improvement activities and then correlated them into company benefits and profits. With this measure, the HCI score of a company is obtained. The better an organization manages its human resources, the better the benefits and profitability for shareholders. The World Bank is expanding the HCI calculation to a wider extent as a reference for public policy.

Experts found a way to calculate how to obtain HCI by multiplying the contribution of survival, education and learning quality, and health correlated with the relative productivity of a work force leading to the formation of the Human Capital Index, using formula [8]

HCI=Survival x School x Health (1)

Obtained from the statistical calculation of the contribution value; (a) Infant Mortality Rate under 5 years of age to adulthood:

Survival=P/P *=1-Under 5 Mortality Rate /1 (2)

Legend: P= Probability of Life

Meanwhile, to obtain the contribution value (b) the school expectation figure with the quality of learning to obtain the competence:

Health=eY(zNG-s *)=e [YASR x (Adult Survival Rate–1)+Y Stunting x (Not Stunted Rate-1)] /2 (4)

Legend: e=Estimated Value of School Year Expectations until the age of 14

Harmonization Test Score=Harmonization of results test PISA, TMSS, dan PIRLS

To obtain a contribution (c) health value using the formula:

Health=eY(zNG-s*)=e[YASR x (Adult Survival Rate –1)+Y Stunting x (Not Stunted Rate-1)] /2 (4)

Legend: e=Estimated Vallue

Y=Height by age; ASR=Age Specific Rate

HCI is measured in units of relative labor productivity as a resultant contribution to the value of quality education and a reliable degree of health. In terms of survival, the effect of the interpretation of labor productivity is very clear, namely: children who are sick

during childhood will never become productive adults in the future, in other words, the expected future productivity of labor will come from. of a child born today with a quality life with a set of competencies according to international standards.

In the World Bank summit meeting with the IMF in Nusa Dua Bali in 2018, the HCI was launched as a new measure of the success of a country's development. The premise is that without human quality as the capital for development, this country will undoubtedly be able to produce and compete in the global market in the four point zero era or the pre five point zero era. The World Bank assesses that Indonesia has experienced weak investment in the human resources sector for decades. "This value reflects that although Indonesia has made great progress in the field of physical development, it is experiencing a deficit in human capital due to accumulated underinvestment over the past few decades". Indonesia is ranked 87th out of 157 countries in the world. Indonesia's position is worse than the five ASEAN countries, but better than the three other ASEAN countries [8-10]. HCI acquisition in ASEAN countries can be seen in Table 1.

Components of the human capital index

The methodology for calculating HCI according to the World Bank combines indicators of health and quality education into a measure of human capital that can be obtained by a child from birth until his 18th birthday. HCI is measured in units of productivity relative to quality education and comprehensive health. The HCI score ranges from 0 to 1. The x value (between 0 to 1) on the HCI shows the chance that a child born today can produce up to 100%, accompanied by the enjoyment of attending quality education and complete health. With the support of quality education and a reliable degree of health, a person can achieve and develop competence as a talent he has. Experts agree on the 5 components that make up HCI; (a) Infant Mortality Rate; (b) the school expectation rate is expressed in years; (c) stunting (failure to thrive as a normal infant by age 5); (d) survival to adulthood; and (e) the score of the harmonization test [11].

Infant Mortality Rate (IMR)

Various factors cause the incidence of under-five mortality in the community. The resultant social, economic, and natural environment variables affect infant and under-five mortality in the family. Under-five mortality is the peak of an iceberg on the surface of the sea, below the surface there are a bunch of causal variables that influence one another and have an impact on a child's survival.

Empirical studies in developing countries such as India and Kenya on child survival show that it is not only factors in the health sector, such as the number of health centers, midwives, and health infrastructure that affect children's survival, but also factors outside the health sector such as the level of parental education. And level of household income, and environmental sanitation [12]. In Indonesia, infant and under-five mortality rates in 2017 are 24 and 32 per thousand live births. The infant mortality rate of 24 shows that among 1000 children born alive, 24 of them do not have time to celebrate their first birthday. Likewise, the under-five mortality rate is 32, showing that out of 1000 children born alive, 32 of them cannot celebrate their birthday until the age of five [13]. Infographics on infant and under-five mortality is one of the Key Performance Indicators of a country's socio-economic development. The World Bank uses it as a barometer of progress and competitiveness of a country in the global arena. The results of the 2018 HCI analysis show that the opportunity for children in Indonesia to be able to celebrate their birthday until the age of 5 is 0.98 the same as the chance for children in the Philippines and Thailand, but below Singapore is 1, and above 6 other countries in ASEAN (see Table 1 above).

The World Bank uses the under-five mortality rate in its contribution to HCI on the grounds that under-five mortality represents a country's level of welfare. Institute for Health Metrics and Evaluation identified 10 clinical causes of under-five mortality, namely; acute respiratory infections, complications of preterm infants, diarrhea, asphyxia and neonatal trauma (newborns less than 28 days old), congenital birth defects, malaria, other neonatal disorders, sepsis and neonatal infections, meningitis, and nutritional deficiencies[14]. In addition, there are indirect causes, namely; environmental sanitation, lack of clean water, education of family heads, culture, and family income.

That the child who dies is likely to have achievements as a reliable

Table 1: It shows that the HCI in 2018 for Singapore 0.90, Vietnam 0.67, Malaysia 0.65, Thailand 0.61, Philippines 0.58, Indonesia 0.55, Camboja 0.49, Myanmar 0.49, Timor Leste 0.47, and Laos 0.46. Indonesia's position is in 6th place among ASEAN Countries, above Cambodia, Myanmar, Timor Leste and Laos. This means that children born in Singpura have the opportunity to utilize their ability to produce to generate income of 0.90 [9,10], while every child born in Indonesia only has a 55 percent opportunity to produce and seize the opportunities available. The remaining 0.45 percent is used as idle capacity. The remaining 45 percent of capacity utilization is probably due to low supply of nutrition, growth and development constraints, low The Quality Adjusted Life-Year (QALY; number of healthy days experienced in a year) due to various illnesses, low access to health services modern, and the low quality of learning and competence that is implied by the Indonesian National Qualifications Framework at each level of education, as well as low purchasing power that robs the poor.

Number	Country name	Probability of survival to Age 5 years	Expected years of school	Harmonized Test Scores (HTS)	Learning-adjusted years of school	Fraction of kids under 5 not stunted	Adult Survival Rate (ASR)	Human Capital Index (HCI)
1	Indonesia	0.98	12.4	408	8.1	0.67	0.86	0.55
2	Singapore	1	13.9	585	13	..	0.96	0.9
3	Cambodia	0.97	9.5	452	6.9	0.68	0.83	0.49
4	Malaysia	0.99	12.4	473	9.4	0.81	0.92	0.65
5	Myanmar	0.96	10	431	6.9	0.72	0.84	0.49
6	Timor-Leste	0.96	10.1	378	6.1	0.5	0.88	0.47
7	Thailand	0.99	12.1	444	8.6	0.91	0.91	0.61
8	Philippines	0.98	13	418	8.7	0.68	0.87	0.58
9	Vietnam	0.98	12.3	519	10.2	0.75	0.88	0.67
10	Laos	0.94	10.8	374	6.4	0.67	0.83	0.46

human capital in the future, but for some reason or another he is deceased before the age of five. This indicator represents more than 90 percent of global deaths among which are children under 18 years of age. The under-five mortality rate contributes to the formation of a country's HCI. Both are negatively correlated. This means that the higher the under-five mortality, the lower its contribution to the formation of a country's HCI.

Stunting

This indicator measures the percentage of children under the age of two or more who are below the average height of the reference population. Stunting in children reflects the widespread effects of chronic malnutrition. Stunting in children can have a serious impact on children's physical, mental, and emotional development, and evidence suggests that the effects of stunting in toddlers, particularly on brain development, are difficult to correct in older adults despite receiving proper nutrition. Therefore, this indicator shows how important it is to provide adequate nutrition for children [15].

Indonesia is one of 47 countries out of 122 countries that have a prevalence of stunting in the world. Stunting as an event of failure to grow and develop is indicated by the results of measurements of height/age, weight/age. The incidence of stunting can be classified from two causes; (1) direct causes: malnutrition, infectious diseases; (2) indirect causes: barriers to accessibility to modern health care centers, child care during infancy; and availability of food in the family. The root causes are poverty, the low level of education of the head of the household, the availability of food in the community, and the lack of employment opportunities.

The results of Basic Health Research in 2018, reported the nutritional status of children and adolescents in Indonesia in 2018 [16]. Using the standard anthropometric formula according to WHO 2017 and the Z-score TB/U, the prevalence of nutritional status of children and adolescents at the national level was obtained. Child prevalence 5-12 year; Very short; 6.70%, Short; 16.90%, and Normal; 76.30%, while the prevalence of nutritional status of adolescents aged 16-19 years; Very short; 4,50%, Short; 22.40%; and Normal; 73.10%. The prevalence of nutritional status based on the category of body mass index/age (BMI/U) of population aged <or=18 years, obtained the results; Normal; 55.30%, Overweight; 13.60%. Obesity 21.80%. Prevalence of Nutritional Status (BW/TB) in Children aged 0-59 Months (Toddlers): Very thin; 3.50%, Normal; 81.80%, and fat 8%. The number of infants under five years who received complete basic immunization is 57.90%, incomplete immunization 32.90%, and did not receive immunization 20% [17]. The prevalence of stunting in Indonesia 2017 amounted to 29.70%. According to the World Bank, every child in Indonesia has a chance of stunting 0.33, compared to 0.32 in the Philippines, and 0.0916 in Thailand.

Increasing balanced nutritional intake from an early age in the long term can increase height and weight at working age. In 2016 conducted a cohort study providing evidence that stunting during childhood reduces the normal height of adults by about 6 cms. Reporting from the Ministry of Health's Nutrition Adequacy Figures, the ideal height for men in Indonesia aged 19-64 years is 168 cm with a normal nutritional status and a body weight of around 60-62 kg, while the ideal height for women aged 19-64 years is 159 cm, with normal nutritional status and a body weight of about 54-55 kg. That means, if from the age of five a child is malnourished with a stunting condition, then the person's height will decrease 6 cm from normal conditions after reaching

adulthood Human height 60%-80% is determined by genetics, and 20-40% determined by nutritional intake and environmental factors.

The Indonesian Ministry of National Development Planning stated that stunting can cause economic losses to the country of 2-3 percent of the Gross Domestic Product (GDP) per year.

Economic losses as a catastrophe experienced by Indonesians today are caused by negligence in overcoming stunting mitigation in Indonesia in the past. Stunting also causes harm to a child's future. A child or teenager will miss the opportunity to study at college and work in a job that requires certain height and weight requirements. For example, the nursing study program requires a minimum height of 1.60 M. Potential pilots, flight attendants/ flight attendants need a minimum height of 1.75 M. Candidates for the Indonesian National Army and members of the Indonesian National Police must be healthy and a minimum height of 1.70 M Higher education and/or certain types of work require certain minimum height and weight conditions.

Various obstacles to tackling stunting in Indonesia so far, including; (1) not yet effective stunting prevention programs; (2) not optimal coordination in the implementation of specific and sensitive nutrition interventions at all levels-related to planning and budgeting, administration, and monitoring and evaluation; (3) the ineffective and efficient allocation and utilization of resources and sources of funds; (4) limited capacity and quality of program implementation; and (5) the lack of advocacy, campaigning and dissemination regarding stunting, and various prevention efforts.

Survival to adulthood

The fourth variable that makes up the Human Capital Index is the proportion of 18 year olds who survive to the age of 60. This indicator reflects the degree of public health as a result of various health development interventions from birth and the opportunity to live a healthy life into adulthood until the age of 60. Health condition is expressed by Quality-Adjusted Life-Year (QALY) or the number of healthy days lived during the year at the age of 18 to 60 years. In Table 1, the probability of survival for Indonesians to adulthood is 0.86 (ranked 7th among ASEAN countries), compared to Singapore 0.96, Malaysia 0.92, Thailand 0.91, Vietnam 0.88, Timor Leste 0.88, Philippines 0.87, Myanmar 0.84, Camboja 0.83, and Laos 0.83.

With a reliable degree of health from the age of 18 to 60 years, a person can participate in a quality learning process, be creative, innovate, and work in types of jobs that promise high wages accumulate in the aggregate increasing GDP/per capita. As Collin, et.al reported in a 2018 cohort study in the UK over a person's life span by observing an increase in investment in human capital formation from an early age to becoming a worker, the results show that there is a positive correlation between increased investment in human capital from an early age and increased labor productivity. Accumulates in an increase in GDP and a reduction in poverty [18-26]. An increase in human capital is the result of a combination of improving the degree of public health and improving the quality of learning.

Harmonized Test Score (HTS)

Harmonized score is a composite score of three international Mathematics and Science mastery testing programs (TIMSS=The Trends in International Mathematics and Science Study), progress in International Literacy Studies (PIRLS=Progress in International

Reading Literacy Study), and the International Student Assessment Program (PISA)=Program for International Student Assessment). The test scores range from 300 to 600. The country's performance is considered good if the harmonization test scores up to 600, and vice versa [27].

RESULTS

The PISA assessment consists of basic literacy tests in the fields of reading, mathematics and science regardless of the national curriculum. The target is only tested on students aged 15 years through random sampling. The aim of testing the subject and object is believed to have scientific legitimacy by the whole world in describing the quality of education in a country. PISA explicitly does not test students' knowledge of the curriculum in their country but only tests the numbers agreed upon by international PISA and analyzes the competition of each country that has the implementation of the curriculum to achieve educational quality in order to prepare competitive human resources to meet global market needs. PISA results in 2015 show that reading skills are ranked 61, mathematics ranked 63, and science ranked 62 out of 69 countries studied. This indicates that Indonesia still has a lot of homework to do to improve its education system. The skills of students who have completed compulsory education but lack competence [28].

PISA study benefits; (a) Comparing the literacy level of students in one country with other countries to determine the position of each country and improve the students' achievement; (b) Establishing comparison limits or quality references to improve efforts to improve in the field of education, for example by comparing the average scores obtained by students in each participating country and measuring the capacity of the country in achieving high levels of literacy by taking advantage of opportunities exists to improve the quality of education; and (c) Understand the strengths and weaknesses of each country's education system [29].

The Harmonization results from the TIMSS, PIRLS, and PISA tests in Table 1, Indonesia scored 408 above Timor Leste 378, and Laos 374. The highest score was obtained by Singapore 585, Vietnam 519, Malaysia 473, Camboja 452, Thailand 444, Myanmar 431, and the Philippines 418. These numbers illustrate the quality of learning in ASEAN countries, and remind Indonesia to continue to strive to improve the quality of learning at every level of education so that it can compete in the global science and technology space in the future. It's our job to make this dream come true.

Increasing HCI is the development goal of every country. In accordance with the SDGs target, every country must ensure a healthy life and improve the welfare of its population of all ages. Various efforts have been made by each country to achieve this target. Efforts to prevent under-five mortality are carried out through complete pregnancy examinations (K-1 to K-4), delivery assisted by health personnel, weighing to monitor body weight, oral rehydration to treat diarrhea, breastfeeding to increase infant endurance, and immunization for protection. against various infectious diseases, improvement of environmental sanitation, provision of clean water, and a culture of clean and healthy living are part of the behavior of family members. Intake of perfectly nutritious food during pregnancy until the baby is five years old maximizes the role of 86 billion neurons in the child's brain to concentrate, critical logical reasoning, decision making, mood, and emotional balance of a child in the future.

Stunting can only be overcome, if all parties have a collective awareness that creating a golden generation is a shared responsibility. Family, with its role in improving children's health status and fulfilling balanced nutritional intake from the first 1000 days of life to 18 years of age. The government and related stakeholders through programs to improve the quality of human resources give priority attention to the fulfillment of community nutrition, prevention of infectious diseases, and environmental sanitation.

DISCUSSION

Efforts to improve nutrition for infants, toddlers and adolescents are strategic steps to prepare quality and competitive humans in the future. Improvements in health status and improvement in the quality of education are inputs for the formation and improvement of human capital, having a proportionate impact on increasing the output of the workforce. Both are like two sides of a coin that cannot be separated from one another.

Improving the quality of learning starts with increasing family awareness of the importance of education as an essential need of life. Improving the quality of teachers and lecturers must be a serious concern of the government at this time. Without quality teachers and lecturers, quality students will undoubtedly get. The quality of learning is reconstructed by familiarizing the teaching and learning process and learning evaluation using a pattern of high order thinking skills to form critical, synthetic, creative, and innovative continuing thinking. Learning improves cognitive and attitude and is balanced with psycomotor by improving competency building laboratory practices. The formation of the scientific syllogism mindset starts from the level of Primary and Secondary Education to Higher Education. Logic teaching becomes important in forming scientific thinking constructions to lead someone to become the researcher. Mastery of literacy and numerics as a catalyst for mastery of information and technology that is rapidly developing today and in the future. Improvement of educational infrastructure and facilities is an integral part of improving the quality of education in Indonesia.

CONCLUSION

As a conclusion, this research shows that Indonesia's HCI is ranked 6th in ASEAN. Various indicators of measuring the quality of Indonesia's human resources are currently far from expectations compared to ASEAN countries and the global world. Collective awareness needs to be raised that the position of the quality of Indonesian people has not been able to compete in the national and international job market, which implies mastery of science and technology. Preparing the quality of the current generation of children and adolescents, a deposit that will be benefited in the competition for labor competencies in the millennial era.

Compilation of improvements in public health status in the form of a reduction in under-five mortality, a reduction in the prevalence of stunting, an increase in the quality of life as a contributing parameter to the Human Capital Index. On the other hand, improving the quality of learning and building competence in the fields of science, mathematics, and literacy, reducing poverty, building infrastructure and supporting facilities for social and economic life have accumulated in increasing Indonesia's Human Capital Index from year to year. It is the collective responsibility of families, community and religious institutions, government, and the business world to create a Human Capital Index that is able to compete in the four point zero era.

Weaknesses of research. Interpretation of data in this study is based on data from World Bank publications and various research related to HCI. The author assumes that the scientific narrative presentation in this article can be a reference for other authors who are interested in developing their studies on HCI from an economic, social, and public policy perspective to complement this article.

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REFERENCES

1. Indonesian Wikipedia. Human Development Index. 2021.

2. Central Bureau of Statistics. In 2018, Indonesia's Human Development Index (HDI) reached 71.39. 2019.

3. Central Bureau of Statistics for Province. NTT's Human Development Index (HDI) has reached 64.39. 2019.

4. Kementerian Kesehatan RI. Problems in Planning for Health Human Resource Needs in Districts / Cities. Journal of Health Service Research and Development. 2015:182(9); 2301-2320.

5. Frans Salesman,Jeffrey Jap. Analysis of Professional Health Provider Need in East Nusa Until 2019. Health Syst Policy Res. 2018:5(3):5-10.

6. Faisal Basri. Indonesia's Position in the World Bank's Latest Version of Human Capital Index. 2019:4(6); 430-456.

7. Gaol, L.J.C. Human Capital; Human Resource Management Concepts, and Development in an Organizational Context. 2014.

8. Human Capital Index and Components 2018. The World Bank. 2018.

9. Denny Alex. 2010. Human Capital Index for the Knowledge Age. 2019.

10. Itno AA. Explanation of Indonesia's ranking of 87 in the Human Capital Index 2018. 2019.

11. Kraay A. Methodology for a world bank human capital index. World Development Report. 2019.

12. Bappenas RI. Sectoral development evaluation studies. Factors Affecting Child Survival. 2019.

13. Profile of Indonesian Children. In 2018, Ministry of women's empowerment and child protection. 2019.

14. Jayani HD, Widowati H. Top ten causes of infant mortality in the world. 2018.

15. Badan pusat statistik. In 2014, Study of Indicator Sustainable Development Goals (SDGs). 2019.

16. Kesehatan RIK.In 2018, Basic Health Research Report. 2019.

17. National Strategy for the Acceleration of Stunting Prevention. In 2018, The National Poverty Reduction Acceleration Team (TP2NK).2018.

18. Bappenas RI. Joint Commitment to Reduce Stunting Prevalence in Indonesia. 2018.

19. Salesman F. Stunting and human catastrophe in the future (analysis of case stunting in indonesia). J Qual Healthcare Eco. 2019;2(2):000114.

20. Scholastica gerintya. Low quality of education and research in indonesia, stagnating innovation. 2019.

21. Kemenristekdikti RI, 2019. Menristekdikti emphasizes the transformation of human resources for higher education graduates. 2019.

22. Bloom BS, Airasian P, Cruikshank K, Mayer R, Pintrich P, Raths J, et al. In: Lorin WA, David RK, Bloom BS (eds) In: A taxonomy for learning, teaching, and assessing: a revision of bloom's taxonomy of educational objectives. 2001.

23. Reilly C. There is a 4th industrial revolution and it is affecting well-being. 2019.

24. Edward M, Nathan D. In 2018, The effect of increasing human capital investment on economic growth and poverty: a simulation exercise. 2019.

25. Galasso, Wagstaff E, Adam. The aggregate income losses from childhood stunting and the returns to a nutrition intervention aimed at reducing stunting. 2016.

26. Safitri AM. What is the ideal height for adults? (plus how to exactly measure it). 2019.

27. Nadir A, Noam A. Patrinos Harry Anthony. In 2018, Global data set on education quality. 2019.

28. Pertiwi I. The Effect of the PISA Program on the Curriculum in Indonesia. Ministry Educ Cultur J 2019.

29. Faadil IM. PISA and Indonesian education solutions. 2019.