

# Why is Human Capital Investment Not Immediate Impact? Investigating the Impact of Human Capital, Financial Capital, and Technological Capital on Economic Growth in Malaysia

Dashen Allen<sup>1</sup>, Benjamin Drean<sup>2</sup>

<sup>1</sup> University of Birmingham, United Kingdom

<sup>2</sup>Lycée George Sand, EPL du Velay, France

## Abstract

This study's objective for look at short-term and long-term effects of production parameters (money, people, technology) on national production (GDP). In this study, the money factor is indicated by total investment nationally, the human factor is indicated by work participation (workers), and human capital (total investment in education and health nationally). Our technology factor uses the indicator of total technology investment nationally (Total investment in science and technology research and development plus technology imports). This study uses secondary data obtained from the World Bank for the period 1985 to 2020. The Distributed's Autoregressive Lag Method was used in this research. Some investigation found something about investment to the human resources cannot be directly felt in the short term because the impact given in investment in human resources requires a process before it has an impact on national production. However, financial capital, work participation, and technology can be felt immediately in the short term. Human Capital are very important. This requires good attention in supporting the improvement of human capital. Human capital investment is beneficial in the long term and having a significant effect to the long term.

**Keywords:** Human Capital, Financial Capital, Technological Capital, Economic Growth

**JEL Classification Code:** C01,E44, E51

Received: January 16,2022 Accepted: April 1,2021

DOI : 10.54204/TMJ/Vol412022009

## Introduction

In order to advance equity and economic progress, Human Resources Program are worldwide initiative that aims could expedite qualitative also quantitative gains in people investing (Fei, Opoku, Agyekum, Oppon, Ahmed, Chen, & Lok, 2021). An international development strategy's fundamental component is human capital. (Sulisnaningrum, Widarni, & Bawono, 2022). One of the most important approaches to lessen unemployment and achieve wealth for all nations is to protect and invest in people. This is directly linked to initiatives that create inclusive and sustainable growth also strengthen developing nations' perseverance (Bawono & Wilantari, 2021).

Human capital is the sound things people put work into also acquire during peoples existence, giving people for reach whose full ability to contributing societal citizens. Planning to invest to human capital by nutrient, hospital, high-quality learning, careers, also Human capital

development is aided by professional development, This is necessary by lowering economic hardship also developing increasingly welcoming cultures (Widarni, & Bawono, 2022).

Skill limits shift swiftly in the Changing Nature of Jobs, generating both possibilities and challenges. There is mounting evidence that nations will be unable to sustain and inclusive economic development, will lack a skilled workforce to fill future high-skill occupations, and would be unable to compete successfully in the global economy unless human capital is enhanced (Rusmingsih, Widarni, & Bawono, 2021).

The worldwide COVID-19 epidemic are possibility for growth number to the stunted children. Many countries are experiencing a learning crisis, which is impeding their growth (Ntambara & Chu, 2021). Children in certain nations have much less years of schooling than children in others, although continuing to study for the same amount of time. The COVID-19 epidemic has compounded the problem, with many youngsters dropping out of school and forgetting their courses (Faust & Munro, 2021).

The COVID-19 pandemic too has impacted fundamental health services, such as regular immunizations and child health care (Sharma, Singh, Sharma, Dwiwedi, Agarwal, Gupta, & Dhiman, 2021). Given the fast worldwide changes in technology, population, susceptibility, and environment, the human resource gap is projected to worsen. Conflicts, epidemics, as well as epidemics having some severe impact to the human resources because of a fatality, loss of wellbeing, starvation, also disruptions by fundamental wellness and learning (Jetha, Shamaee, Bonaccio, Gignac, Tucker, Tompa, Bültmann, Norman, Banks, & Smith, 2021). This influence has a tendency to reverberate in the lives of many people, restricting functional efficiency. However, human development are sometimes disregarded (Tisdell, 2020).

Basic health services are severely disrupted in low- and middle-income nations. This pandemic raises the risk by gender discrimination against women, young wedding, also childbirth, diminish educational chances and empower women and girls (Peterman, Potts, O'Donnell, Thompson, Shah, Oertelt-Prigione, & Van Gelder, 2020). Countries should strive to link their efforts to combat the COVID-19 epidemic with long-term human resource priorities in the future. Governments, public citizen, banking markets from throughout the world, as well as financial enterprise should be collaborate and work together to generalize ambitious investments based on solid facts and to equip each individual in a way that allows him or her to realize his or her full potential (Collings, Nyberg, Wright, & McMackin, 2021)

Ambitious, proof policy initiatives full of life, knowledge, with income assistance may gain back gained territory also open the way to the child nowadays for outperform prior eras in human resources also standard for living (Priyanto, Widarni, & Bawono, 2022). To enhance Human Capital, state leaders should prioritize expenditures that will result in substantial reforms in the domains of wellness, knowledge, also welfare benefits. Aiming for achievin quick moving up the society where every youngster is fed properly as well as willing for learning new at the school, this is will engage to the meaningful school learning, also join a strong labor market, skillful, also successful individuals (Djankov & Saliola, 2018). The study's objective are for seeing at short-term with also there is long-term effects of production variables (money, people, and technology) on national output (GDP).

## **Literature Review**

The Human Capital Index assesses how much strong with knowledge at school contribute for some level by productivity expected of labor's future. Nations use this measure for determine the

amount money is lost due to human resource shortages and how quickly those losses may be converted into gains if action is taken immediately (Kraay, 2019).

To supplement the indicators and assist governments in taking effective action, strong measurement and research activities are ongoing. Credible assessments of education and health outcomes within countries reveal which efforts have been successful and where resources should be directed (Zwetsloot, Leka, Kines, & Jain, 2020). Measurement also enhances policymakers' understanding some need of invest to the human capital, providing incentive supports govt intervention. A global effort to monitor and gather fresh primary data is required for recognizing some place for to make more stronger with also possibilities for improving people's resource results (Boeren, 2019).

The Human Resource department Project will contribute to research and analysis on the factors that influence human resource growth (De Mauro, Greco, Grimaldi, & Ritala, 2018). State engagement according to the "thought the entire" strategy assists nations in overcoming to most significant barriers to human capital development. This strategy develops long-term high-level leadership, connects sectoral initiatives and strengthens the evidence base (Zucconi & Wachsmuth, 2020).

Government investments in human resources, such as increasing human resources in the fields of wellbeing with school, increasing the access with also certainty by considering public firm's monetary means, also there is providing official protection to the girls with also boys, all have an impact on increasing economic growth (Yaya, Otu, & Labonté, 2020). The Human Resources Project supports increasing this sort of assistance to achieve targeted policy and institutional reforms, and it is also developing a set of tools and solutions to assist nations in meeting economic growth targets (Campos & Reich, 2019).

The Human Resource Score is indeed a concise assessment of how much human capital a kid born today at the age of 18 is predicted to have, giving some risk for small wellness with school circumstances for people's home nations. One of the major elements of innovation that distinguishes this indicator is that it assesses the impact of health and education to individual and national production using rigorous microeconomic econometric analyses (Lim, Updike, Kaldjian, Barber, Cowling, York, Friedman, Xu, Whisnant, Taylor, Leever, Roman, Bryant, Dieleman, Gakidou, & Murray, 2018).

The index, which ranges from 0 to 1, earns a "1" only if a kid born today is predicted to be completely fit (not stunted and survive to at least the age of 60) and finish education (get to the age of 14 and complete high-quality education by the age of eighteen). This measure is closely related to future revenue situations for both governments and people. This metric is provided being a nation medium level with gender abnormal of the nations to the available's data (Kraay, 2019).

This Human Resource Controlled research some big major phases from young into the maturity for kid birthed at the particular years, as well as the implications for the productivity of the following generation of employees. Unfortunately, it's not like every kid born nowadays could live to exact time that the procedure began for accumulating human capital via normal schooling started (Attanasio, Cattan, & Meghir, 2022). The future employment are reflected in the level of schooling. Total education is assessed in the human capital index as the amount of years for learning kid are predicted for receive by some time he reaches the age of eighteen owing to the prevalent pattern in enrollment rates (Smits & Permanyer, 2019).

The Human Capital Index does not include nation rankings, but instead focuses on key indicators of the future worker productivity to enable cross-country analyses. Because HCI is calculated by

comparing the labor's quality in the future for reference levels by completing school with also healthy, basic term of a indicator having some logical meaning (Tripathi, 2021).

The Human Capital Index combines indicators of many elements by human capital, such as wellness (Preservation of children, impeding, also there is Elderly mortality rating) also there is education number as well as excellence (years of learning and predicted learning outcomes). According nations' involvement is restricted at the worldwide also local areas programs to assess learners' accomplishment, learning outcomes are the most challenging statistics to acquire. Participation for big worldwide or local student evaluations are required also, for certain nations, a substantial impediment by computing the rate of huma capital (Campbell & Üngör, 2020).

Many nations have made strides toward closing the gender gap in human capital results. In most nations, the magnitude of divergence from the human capital criterion for children is substantially greater than the difference that still exists between them (Deming, 2022). In the education sector, females have mostly overtaken or exceeded boys in enrolment and learning in medium and high-income nations. In another facet of the health-related score, most nations reveal that girls have minimal advantage over boys (Tate & Warschauer, 2022).

Girls continuing to confront larger hurdles in characteristics not addressed according to the Human Resource Factor like young marriage, family duties, adolescent pregnancy, also there is gender discrimination at learning space all pose barriers to woman's school retention, particularly poor household communities. Despite rising attendance rates for girls, school attendance and completion remain a concern for both girls and boys, particularly at the secondary level (Jones, Presler-Marshall, Kassahun, & Kebede Hateu, 2020). As girls mature and join the worker's community, They encounter obstacles for achieving a return on their human capital, such as gender-based job discrimination, a scarcity of care for children, inappropriate rules on vacation, sex trafficking, also transport that is dangerous, as well as discriminatory restrictions on capital availability also access to businesses, as well as legitimate obstacles who have some limit women having capacity could begin also for develop businesses. That limitations should in order to everyone for receive the benefits of their human capital investment (Marek, Patrik, Veronika, & Marina, 2020).The newly developed Employment-adjusted Human Capital Index proposes a human capital adjustment that reflects the different levels of worker's business involvement boys and girls, indicating whose greater women's percentage human capital are not used in many countries according by lower levels of labor force involvement as well as occupation (Delaney, 2019). The coronavirus epidemic puts hard-won human resources at risk. One of the lessons to be drawn from prior epidemics and crises is that their consequences are typically felt across many communities and, in many cases, generations (Ssenyonga, 2021).

The Human Capital Score approach may be used to assess some of the probable future impact caused by COVID-19 epidemic to the also it for young human resources. There will be disruption to the health care system, limited availability of medical treatment, also loss of household for their children conceived even during epidemic, as well as growing child mortality, malnutrition, and stunting. Pandemics can permanently harm children's learning results since stunting and educational outcomes are so strongly linked (He, Mao, Morrison, & Coca-Stefaniak, 2020). For most school-age youngsters, the epidemic has rendered face-to-face instruction and learning obsolete. Given that countries' ability to offer and access remote learning choices vary, as well as beyond a country, significant damage in teaching also we can predicted (Dewi & Wajdi, 2021).

Many youngsters would depart from education as a result for financial shockwave caused with

the COVID-19 outbreak. According to a compilation of these consequences, the pandemic might diminish the world's learning-adjusted average years of schooling (Azevedo, Hasan, Goldemberg, Geven, & Iqbal, 2021). Without a significant governmental reaction today, epidemic's impact on human capital is similar like linger for decades, lowering the country's productivity and economic potential (Indrawati & Kuncoro, 2021). In many nations, when a kid of today becomes a worker of tomorrow, the child could be hard to getting employment, or when he or she got the employment, the job may couldn't be the one for the child could utilize his or her cognitive talents and capacities to boost production. Human resources are underused in this instance (Hjálmsdóttir & Bjarnadóttir, 2021). acknowledging the significance associated with this particular design by individuals as well as politics (Hickel, 2020).

There are two techniques to calculate the adjusted index. Use is quantified in the Employment Adjusted Core Human Capital Index like proportion among individuals who are currently employed who is employed. When the statistic are clear also straightforward, that fails for account for some reality who the majority's worker possibilities when developing nations are at occupations whos individuals couldn't for utilize people's human resources for boost workers quality (Hashem, 2021). Some proportion's nations people of workforce on the "better occupations" determines the full employment rate. Because they have more untapped human resources, countries with higher HCI ratings risk harsher job penalties if they display lower levels of improved employment. The usage-adjusted score shows a significant difference in gender gaps when compared to rate's human capital. HCI is nearly same for boys and girls on average, with a modest gain for females, the HCI is lower for girls in virtually all nations due to lower rates of usage (Rani & Furrer, 2021).

When plotted by income levels in nations, women's employment rates follow a U-shaped curve, but men's workers numbers have decreasing also lower spread out among nations. Gender disparity are apparent at maximum employment rates as well, but to a lower level. These findings recommendation, when the gender gap by terms of human capital during puberty with childcare has narrowed (particularly in school), significant There are still difficulties for be overcome in order to convert these advantages into opportunities for women (Brixiová, Kangoye, & Said, 2020).

The rates of Human Capital assessment of average accomplishment in a major facet of human development: lifespan for wellness people with knowledge and an acceptable level of living (Zeng, Chen, Xiao, & Chen, 2020). Index of human capital adds to economic justification to putting money into individuals. Certain human capital outcomes are linked to levels of productivity and income in the Human Capital Index. That for about present state of both wellness and school impact to quality workers levels (Angrist, Djankov, Goldberg, & Patrinos, 2021).

The Human Capital Index indicator components (survival, education, and health) are closely tied to the objective of sustainable development, meaning ensuring equal and excellent basic and quality of school. Nations could track the progress up these educational (Tomislav, 2018).

Mature success rate also with frequency congenital retardation in children are two health care indicators. The first level is the likelihood so a fifteen-year-old youngster could live until 60. (Titei, 2020). For improving indication, governments should minimize the reasons causes early death, that could aid in the achievement of sustainable development goals (Roa, Jumbam, Makasa, & Meara, 2019). The incidence of stunting in children under the age of five is one of the primary indicators used to assess progress toward the aim of eliminating all types of malnutrition. This indicator seeks to attract attention to efforts in a variety of sectors that can

help to enhance human capital and accelerate progress toward the Sustainable Development Goals (Aiga, Abe, Andrianome, Randriamampionona, Razafinombana, Murai, & Hara, 2019). In the field of human resource development, as in all areas of development, building capacity and improving data quality are very important in measuring human development outcomes (Davidescu, Apostu, Paul, & Casuneanu, 2020).

**Research Methods**

In this study, the money factor is indicated by the total investment nationally, the human factor is indicated by work participation (workers), and human capital (the total investment in education and health nationally which is measured using the human capital index). Our technology factor uses the indicator of total technology investment nationally (Total investment in research and development of science and technology plus technology imports). This study uses secondary data obtained from the World Bank for the period 1985 to 2020. The Distributed’s Autoregressive Lag Method was used in this research with something formula like :

$$GDP_t = \beta_0 + \beta_1 Fc_t + \beta_2 Lc_t + \beta_3 Hc_t + \beta_4 Tc_t + e_t$$

GDP is the nationally calculated production output in Malaysia, Fc is the total investment nationally in Malaysia, Lc is the total national working population in Malaysia, Hc is the total Malaysian government investment in education and health nationally which, The human capital indicator is used to assess this. and Tc is the total investment in research and development of science and technology plus import technology nationally. Where t is the time series time period.

**Results and Discussion**

Based on the estimation results in table 1. In long term, human capital indicators having a greatly positive signifiant impact to Malaysia. Technological indicators having some significant greatly connection among the growth of economy. Employment participation and investment are also significantly great impact to the growth of economic at Malaysia.

**Table 1.** Long Run and Short Run Coefficients Estimated

Long-term outcomes		
Variable	Coefficient	T ratio (p value)
Fct	1.621	3.921*** (0.000)
Lct	2.943	3.872*** (0.000)
Tct	1.421	5.011*** (0.000)
Hct	0.921	2.992*** (0.002)
Constant	-1.111	-2.311*** (0.000)
Short-term outcomes		
Fct	1.401	2.922*** (0.001)
Lct	3.811	4.991*** (0.000)
Tct	1.712	5.112*** (0.000)

Hct	-0.711	-2.932*** (0.001)
Constant	-2.632	-4.012*** (0.000)
Adjusted R	0.781	
Durbin-Watson statistic	1.211	

Information: 5% probability

Based on the estimation results in table 1. Human indicators in the short term have a significant negative relationship to the growth of economic. However, at the long run, the human capital indicator have some greatly positive effect to the growth of economic. That was quite interesting to see that all variables have a significant good connection to the growth of economic at the short and long run. Human capital are not like labor capital which is indicated by labor participation. Job participation can directly work and have an impact on national production. Likewise financial and technological capital. However, human capital requires a process before contributing to the increase in national production indicated by GDP.

### Conclusions

Human capital investment cannot be directly felt in the short term because the impact given in human capital investment requires a process before it has an impact on national production. However, financial capital, work participation and technology can be felt immediately in the short term. When developing economic growth in Malaysia, Human Capital are very important. This requires good attention in supporting the improvement of human capital. Human capital investment is beneficial in the long term and having a significant effect to the long term.

### References

- Aiga, H., Abe, K., Andrianome, V. N., Randriamampionona, E., Razafinombana, A. R., Murai, T., & Hara, M. (2019). Risk factors for malnutrition among school-aged children: a cross-sectional study in rural Madagascar. *BMC public health*, 19(1), 1-13.
- Angrist, N., Djankov, S., Goldberg, P. K., & Patrinos, H. A. (2021). Measuring human capital using global learning data. *Nature*, 592(7854), 403-408.
- Attanasio, O., Cattan, S., & Meghir, C. (2022). Early Childhood Development, Human Capital, and Poverty. *Annual Review of Economics*, 14(1), 853-892.
- Azevedo, J. P., Hasan, A., Goldemberg, D., Geven, K., & Iqbal, S. A. (2021). Simulating the potential impacts of COVID-19 school closures on schooling and learning outcomes: A set of global estimates. *The World Bank Research Observer*, 36(1), 1-40.
- Bawono, S., & Wilantari, R. N. (2021). Inklusi Keuangan dan Teknologi, P2p Lending, Kemiskinan dan Pengembangan Sumber Daya Manusia Agregat. *BISMA: Jurnal Bisnis dan Manajemen*, 15(1), 25-35.
- Boeren, E. (2019). Understanding Sustainable Development Goal (SDG) 4 on “quality education” from micro, meso and macro perspectives. *International review of education*, 65(2), 277-294.
- Brixiová, Z., Kangoye, T., & Said, M. (2020). Training, human capital, and gender gaps in entrepreneurial performance. *Economic modelling*, 85(1), 367-380.
- Campbell, S. G., & Üngör, M. (2020). Revisiting human capital and aggregate income

- differences. *Economic Modelling*, 91(1), 43-64.
- Campos, P. A., & Reich, M. R. (2019). Political analysis for health policy implementation. *Health Systems & Reform*, 5(3), 224-235.
- Collings, D. G., Nyberg, A. J., Wright, P. M., & McMackin, J. (2021). Leading through paradox in a COVID-19 world: Human resources comes of age. *Human Resource Management Journal*, 31(4), 819-833.
- Davidescu, A. A., Apostu, S. A., Paul, A., & Casuneanu, I. (2020). Work flexibility, job satisfaction, and job performance among Romanian employees—Implications for sustainable human resource management. *Sustainability*, 12(15), 6086-6096.
- Delaney, J. M. (2019). Risk-adjusted returns to education. *Education Economics*, 27(5), 472-487.
- De Mauro, A., Greco, M., Grimaldi, M., & Ritala, P. (2018). Human resources for Big Data professions: A systematic classification of job roles and required skill sets. *Information Processing & Management*, 54(5), 807-817.
- Deming, D. J. (2022). Four Facts about Human Capital. *Journal of Economic Perspectives*, 36(3), 75-102.
- Dewi, M. P., & Wajdi, M. B. N. (2021). Distance learning policy during pandemic COVID-19. *EDUTECH: Journal of Education and Technology*, 4(3), 325-333.
- Djankov, S., & Saliola, F. (2018). The changing nature of work. *Journal of International Affairs*, 72(1), 57-74.
- Faust, S. N., & Munro, A. P. (2021). It's time to put children and young people first during the global COVID-19 pandemic. *JAMA pediatrics*, 175(2), 127-128.
- Fei, W., Opoku, A., Agyekum, K., Oppon, J. A., Ahmed, V., Chen, C., & Lok, K. L. (2021). The critical role of the construction industry in achieving the sustainable development goals (SDGs): delivering projects for the common good. *Sustainability*, 13(16), 9112-9122.
- Hashem, E. A. (2021). The Impact of Human Capital Underutilization on Productivity and Economic Growth in Egypt. *Economics and Business Quarterly Reviews*, 4(2), 231-244
- He, J., Mao, Y., Morrison, A. M., & Coca-Stefaniak, J. A. (2020). On being warm and friendly: the effect of socially responsible human resource management on employee fears of the threats of COVID-19. *International Journal of Contemporary Hospitality Management*, 33(1), 346-366
- Hickel, J. (2020). The sustainable development index: Measuring the ecological efficiency of human development in the anthropocene. *Ecological Economics*, 167(1), 1-10.
- Hjálmsdóttir, A., & Bjarnadóttir, V. S. (2021). "I have turned into a foreman here at home": Families and work-life balance in times of COVID-19 in a gender equality paradise. *Gender, Work & Organization*, 28(1), 268-283.
- Indrawati, S. M., & Kuncoro, A. (2021). Improving competitiveness through vocational and higher education: Indonesia's vision for human capital development in 2019–2024. *Bulletin of Indonesian Economic Studies*, 57(1), 29-59.
- Jetha, A., Shamaee, A., Bonaccio, S., Gignac, M. A., Tucker, L. B., Tompa, E., Bültmann, U., Norman, C. D., Banks, C. G., & Smith, P. M. (2021). Fragmentation in the future of work: A horizon scan examining the impact of the changing nature of work on workers experiencing vulnerability. *American journal of industrial medicine*, 64(8), 649-666.
- Jones, N., Presler-Marshall, E., Kassahun, G., & Kebede Hateu, M. (2020). Constrained choices: Exploring the complexities of adolescent girls' voice and agency in child marriage decisions in Ethiopia. *Progress in Development Studies*, 20(4), 296-311.



- Kraay, A. (2019). The World Bank human capital index: a guide. *The World Bank Research Observer*, 34(1), 1-33.
- Lim, S. S., Updike, R. L., Kaldjian, A. S., Barber, R. M., Cowling, K., York, H., Friedman, J., Xu, R., Whisnant, J. L., Taylor, H. J., Leever, A. T., Roman, Y., Bryant, M. F., Dieleman, J., Gakidou, E., & Murray, C. J. (2018). Measuring human capital: a systematic analysis of 195 countries and territories, 1990–2016. *The Lancet*, 392(10154), 1217-1234.
- Marek, D., Patrik, R., Veronika, G., & Marina, F. (2020). Economic impacts of Covid-19 on the labor market and human capital. *Terra Economicus*, 18(4), 78-96.
- Ntambara, J., & Chu, M. (2021). The risk to child nutrition during and after COVID-19 pandemic: what to expect and how to respond. *Public Health Nutrition*, 24(11), 3530-3536.
- Peterman, A., Potts, A., O'Donnell, M., Thompson, K., Shah, N., Oertelt-Prigione, S., & Van Gelder, N. (2020). *Pandemics and violence against women and children (Vol. 528)*. Washington, DC: Center for Global Development.
- Priyanto, E., Widarni, E. L., & Bawono, S. (2022). The Effect of Internet Inclusion on Financial Inclusion in P2P Lending in Indonesia Based on Human Capital Point of View. In *Modeling Economic Growth in Contemporary Indonesia* (pp. 107-121). Emerald Publishing Limited.
- Rani, U., & Furrer, M. (2021). Digital labour platforms and new forms of flexible work in developing countries: Algorithmic management of work and workers. *Competition & Change*, 25(2), 212-236.
- Roa, L., Jumbam, D. T., Makasa, E., & Meara, J. G. (2019). Global surgery and the sustainable development goals. *Journal of British Surgery*, 106(2), 44-52.
- Rusmingsih, D., Widarni, E. L., & Bawono, S. (2021). Human psychological factors in the success of human capital investment in driving financial performance, case study of the hotel industry in Indonesia and Malaysia. *HOLISTICA—Journal of Business and Public Administration*, 12(1), 69-75.
- Sharma, M., Singh, S. K., Sharma, L., Dwiwedi, M. K., Agarwal, D., Gupta, G. K., & Dhiman, R. (2021). Magnitude and causes of routine immunization disruptions during COVID-19 pandemic in developing countries. *Journal of Family Medicine and Primary Care*, 10(11), 3991-3997.
- Smits, J., & Permanyer, I. (2019). The subnational human development database. *Scientific data*, 6(1), 1-15.
- Ssenyonga, M. (2021). Imperatives for post COVID-19 recovery of Indonesia's education, labor, and SME sectors. *Cogent Economics & Finance*, 9(1), 1-51.
- Sulisnaningrum, E., Widarni, E. L., & Bawono, S. (2022). Causality Relationship Between Human Capital, Technological Development and Economic Growth. *Organization*, 6(2), 1-12.
- Tate, T., & Warschauer, M. (2022). Equity in online learning. *Educational Psychologist*, 57(3), 192-206.
- Tisdell, C. A. (2020). Economic, social and political issues raised by the COVID-19 pandemic. *Economic analysis and policy*, 68(1), 17-28.
- Titei, A. (2020). Measuring the Future Potential of a Country in Terms of Human Capital. *Ovidius University Annals, Economic Sciences Series*, 20(2), 551-554.
- Tomislav, K. (2018). The concept of sustainable development: From its beginning to the contemporary issues. *Zagreb International Review of Economics & Business*, 21(1), 67-

94.

- Tripathi, S. (2021). How does urbanization affect the human development index? A cross-country analysis. *Asia-Pacific Journal of Regional Science*, 5(3), 1053-1080.
- Widarni, E. L., & Bawono, S. (2022). The Impact of Combination of Human Capital and Financial Literacy in Encouraging Economic Growth in Indonesia. In 6th INTERNATIONAL CONFERENCE OF GRADUATE SCHOOL ON SUSTAINABILITY (ICGSS) 2021.114-121
- Yaya, S., Otu, A., & Labonté, R. (2020). Globalisation in the time of COVID-19: repositioning Africa to meet the immediate and remote challenges. *Globalization and Health*, 16(1), 1-7.
- Zeng, Z., Chen, J., Xiao, C., & Chen, W. (2020). A global view on prevalence of hypertension and human develop index. *Annals of Global Health*, 86(1),1-6.
- Zucconi, A., & Wachsmuth, I. (2020). Protecting and Promoting Individual, Social and Planetary Health with People-centered and Sustainable Leadership Styles. *Cadmus*, 4(2), 105-117.
- Zwetsloot, G., Leka, S., Kines, P., & Jain, A. (2020). Vision zero: Developing proactive leading indicators for safety, health and wellbeing at work. *Safety Science*, 130(1),1-10.