# The Impact of Combination of Human Capital and Financial Literacy in Encouraging Economic Growth in Indonesia

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## ABSTRACT

This research is complementary to previous research with a neutral position regarding the role of finance and human capital on economic growth, especially in developing countries such as Indonesia. The research objectives are set for the research period from 1995 to 2020. All data are sourced from the world bank. This research using the autoregressive vector model. We found that Financial literacy in Indonesia not only provides a direct impetus to economic growth but also provides impetus or strengthens the influence of human capital in providing impetus to economic growth. However, human capital cannot be said to strengthen the influence of financial literacy in encouraging economic growth because in estimating the influence of human capital in strengthening financial literacy in providing encouragement to economic growth, the positive effect is not significant. So that the combination of financial literacy and human capital can be a good combination in providing a boost to economic growth.

**Keywords** : : Labor, Employment, Human Capital, Financial Literacy, Economic Growth

## 1. INTRODUCTION

The financial sector is a vital sector in the economy (Sasongko & Bawono, 2021 ; Garcia & Puspaningtyas,2021). Ibrahim (2018), found that the financial sector has a significant effect on capital growth which has an impact on the real sector. When the financial sector develops well, capital growth will also grow well so that the capital needed by the business sector can be met and encourage the performance of the business sector which has an impact on the economy. According to Montiel (2011), the financial sector has an impact on economic growth which is supported by the development of human capital. Zhang & Wang (2021) investigated the development of human capital through educational pathways on the impact of economic growth.

Indonesia is one of the countries whose economic growth is mostly supported by MSMEs (Tejamaya et al,2021). Financial inclusion consists of the dimensions of access, use, and quality of financial products and services offered by the financial system to individuals and MSMEs. Specifically, access refers to the extent to which new or unserved consumers can obtain adequate financial products and services at affordable prices. In the case of MSMEs, they face usage barriers related to the lack of financial education from the owners and managers. The main obstacles faced by MSMEs related to quality are related to the absence of products designed with their needs in mind, as well as a lack of products for long-term planning and financing (Long et al,2020).

The above barriers lead to low levels of financial well-being for MSMEs, as it reduces their chances of prospering and growing, reducing crises and risks, investing in human capital and assets, reducing transaction costs and making payments. The nature of MSMEs and early-stage businesses demands support schemes to promote their business, logistical and financial capabilities. The latter, the financial ones, are key, as they represent the backbone of the nascent business's operational sustainability and commercial position. It is important to consider that MSMEs are more fragile in terms of productivity and finances, and face immediate liquidity problems when demand falls sharply, an increasing context with the COVID-19 crisis. However, there are also companies that rely on a more consolidated structure and have a support system for their development, such as those that are part of a shared value program with an anchor company, or in an acceleration program with an incubator (Shafi et al,2020).

The financial health or well-being of MSMEs, apart from the profitability of their business model, is also determined by the capacity they have at the managerial level. In this regard, financial education programs are needed to achieve greater stability in micro-entrepreneurs, as well as the scalability of their businesses. Another thing to note is the fact that financial education can be a determinant for MSMEs and entrepreneurs to get access to finance, and when they already have it, they can access it in better conditions. The foregoing is related to the fact that, if an MSME has practices that resemble business management with a formal structure, it can approach financial system institutions with greater security, giving credit analysts confidence when applying for financing (without ignoring the MSME's financial behavior). . On the other hand, when a company already has access to credit, greater financial knowledge and skills will make it possible to conduct market studies to compare between financial institutions that offer better conditions according to the nature of their business and are in better shape. the capacity to be able to negotiate and speak the same language as microfinance or commercial banks (Tejamaya et al,2021).

In the context of the COVID-19 pandemic, where many companies have had to temporarily stop operating, and even go bankrupt, financial management is a determining factor for those who are able to continue operating and even manage to adapt their goods and services to the context of changes resulting from the health crisis. In innovating and adapting to change, of course, non-financial factors are needed, namely human capital. Human capital provides humans with the ability to adapt to the environment and improve skills in adapting and innovating (Vedhathiri, 2020).

In economics, the tools, tools and machines needed to produce goods and services are referred to as “physical capital”. In the same way, "human capital" is the talent, skills, education and experience of people that enable them to be productive in the creation of products and services. Everyone has human capital, but the amount and type are different. Human capital is an asset that can be accumulated and increased by investing in it. Getting an education is a way of investing in human capital that, every other investment, yields financial returns. Of course, financial gain is not the only reward for investing in education. There is also the personal satisfaction and pleasure that is thought to come from the opportunities that education offers. Such as a greater ability to choose a field of work and participate in work that provides personal satisfaction (Usman et al,2021).

Human capital is not just education. All the attributes - skills, experience, talents, knowledge, even motivation and positive attitude - contained in an individual that make him a productive and valuable economic resource. Companies invest in their human capital whenever they provide training to their employees, and employees invest in themselves simply by going to work and upgrading their skills and experience. Society generally benefits when an individual invests in self-improvement because improving the general education of a nation's citizens reduces poverty and crime, and increases competitiveness in global markets. This positive side effect is an externality to the investment (Widarni & Bawono, 2021 a).

On the other hand, some previous studies are not in line with research by Montiel (2011), Zhang & Wang (2021). Research from Munir & Arshad (2018) explains that developing countries still find it difficult to achieve high economic growth even though improving education as an effort to increase human capital continues to be carried out and financial literacy is also continuously sought to reach the community. However, research by Kendall (2012) explains that human capital coexists with financial capital so that human capital has a significant relationship to financial capital and financial literacy.

This research is complementary to previous research with a neutral position from previous research especially in developing countries such as Indonesia. However, the results of previous massive studies are not clear and there are still many biases. Of course, this is a big question regarding the combination of financial literacy with human capital in driving economic growth. The following are research questions that form the basis of this research:

RQ. Does Financial literacy in the combined effect of financial literacy and human capital in driving economic growth in Indonesia?

## 2. LITERATURE REVIEW

Human capital is as capital in enabling humans to work productively in managing and empowering non-human capital in supporting economic development (WIDARNI & BAWONO, 2021 ; Handayani & Sasongko,2021). Human Capital is related to the old concept that defines human capital as the main part of the production factors and independently of their formation. The quality of the population's education and the knowledge acquired is crucial, because it is thanks to them that skills are developed. The current training process in most companies is designed to increase the competence and productivity of employees, as each company depends on their talents and capabilities. A company is only as good as its employees, which is why the human resources department pays special attention to the management (Metz et al,2021). The true importance of human capital lies in knowing the key role that workers play in the performance of these important tasks to achieve the success of the company. The human resources department is not only important for hiring the best teams, but it is also necessary for the training and adaptation of the members of the organization. The greater the understanding of workers with the values and objectives of the company, the better their performance (Yeh et al,2020).

The work of this department, contrary to what is thought, should not only be limited to administrative matters, but should also promote a pleasant work environment in which commitment and a sense of belonging is generated among employees. Abubakar et al (2021) explains that human capital and financial literacy influence each other in economic growth. Rahim et al.(2021) explain that financial systems and financial literacy that are accessible to the population are important for the development of human capital and affect economic growth. The development of the financial system and financial literacy increases the accumulation of human capital which has an impact on economic growth.

Hussain et al.(2021) argue that financial and human capital development allows business actors to develop their businesses better and more developed with the support of sufficient human capital from themselves and from the people who work for them. They were strengthened by the support of sufficient financial capital to develop their efforts. Liu et al. (2021) explain that money capital can be invested in human capital in the form of training and education and health services that can provide stable returns. Munir & Arshad (2018) in their research in Pakistan found that human capital is able to increase labor productivity and encourage economic growth.

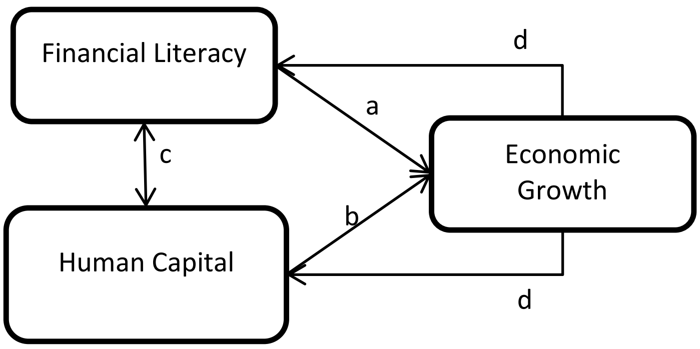
The results of research by Silva et al. (2018) Maintained human productivity increases human ability to work better and more productively so that productivity can increase which is accumulated nationally to increase economic performance. Research by Li & Liang (2010) in East Asia found that education is an important factor in increasing economic growth. And health is a factor that is no less important than education in the economy. Education and Health are two things that need attention in developing the economy. Neeliah & Seetanah (2016) concluded that human capital and economic growth have a two-way relationship that reinforces each other. Onkelinx et al. (2016) found that human capital is the main component in human performance so that the development of human capital has implications for human performance. Sehrawat & Giri's research (2017) supports the research of Onkelinx et al. (2016) related to human capital and productivity. Sehrawat & Giri (2017) found similar results with the research of Onkelinx et al. (2016). Irawan & Rahayu (2021) found that Education in Indonesia is important for Indonesia's economic growth. In Indonesia, education contributes to Indonesia's human development so that education in Indonesia makes a major contribution to economic growth in Indonesia.

Mishra & Narayan (2015) explains that the financial system has an impact on the performance of capital absorption which is called financial literacy. When financial literacy increases, the business sector gets more capital, thereby increasing the ability of the business sector to invest and finance business operations. As a result, the business sector can grow and encourage economic growth. According to Jalles (2016), obstacles or damage to the financial system such as corruption will hinder economic growth. Phiri (2015) explains that finance provides an impetus for economic growth in terms of capital in the real sector. Economic growth attracts investors to invest and encourages exports so that incoming money can be attracted and stimulates the financial sector. Shahid et al. (2015) concluded that financial literacy provides an impetus to the growth of capital which is used to increase productivity in the real sector which in the end is accumulated in total on a national scale within a certain period and has an impact on providing impetus to economic growth.

In Ibrahim's research (2018) in sub-Saharan, he found that Financial capital and human capital are two important components in the economy because human capital and financial capital complement each other in the business sector. Hakeem (2010) also supports Ibrahim's research (2018) explained that the financial system provides reliability in financial literacy in the community so that capital growth can be well absorbed in the community so that it can encourage the real sector. So that human capital and the financial system are interrelated in encouraging the real sector which in turn encourages economic growth.

## 3. METHODS

The research objectives are set for the research period from 1995 to 2020. All data are sourced from the world bank. In the research model, the research model is formulated as follows:




Description :
a : arrows based on research by Mishra & Narayan (2015),Shahid et al. (2015),Rahim et al.(2021)
b : arrows based on research by Li & Liang (2010), Montiel (2011),Kendall (2012), Onkelinx et al. (2016), Sehrawat & Giri (2017),Silva et al. (2018), Zhang & Wang (2021),WIDARNI & BAWONO, (2021),Hussain et al.(2021)
c : arrows based on research by Abubakar et al (2021),Liu et al. (2021)
d : arrows based on research by Neeliah & Seetanah (2016)

Based on previous research, a research model was developed. Based on the research model there is a hypothesis that all factors influence each other. So we need vector analysis to see the direction of influence and the significance of the influence between variables.

Based on the research model, it can be formulated mathematically that human capital (HC), Financial Literacy (LC), economic growth (GDP) influnce each other. And in the mathematical equation is as follows:

$FL_t = \beta_1 FL_{t1} + \beta_2 FL_{t2} + \beta_3 HC_{t3} + \beta_4 HC_{t4} + \beta_5 GDP_{t5} + \beta_6 GDP_{t6} + e_t$ (equation 1)

$HC_t = \beta_1 FL_{t1} + \beta_2 FL_{t2} + \beta_3 HC_{t3} + \beta_4 HC_{t4} + \beta_5 GDP_{t5} + \beta_6 GDP_{t6} + e_t$ (equation 2)

$GDP_t = \beta_1 FL_{t1} + \beta_2 FL_{t2} + \beta_3 HC_{t3} + \beta_4 HC_{t4} + \beta_5 GDP_{t5} + \beta_6 GDP_{t6} + e_t$ (equation 3)

All data are sourced from the world bank which is adapted to research needs with the following variable descriptions:

Table 1. Variable Description

| No | Variable | Variable Description | Unit Analysis |
|---|---|---|---|
| 1 | Human Capital (HC) | Investment in education as a form of investment in human capital nationally and in aggregate (total investment in education) is based on the total unit of calculation based on the current USD value (2021). | USD |
| 2 | Financial Literacy (LC) | Financial literacy is the amount of net capital distribution that is absorbed by the community | USD |
| 3 | Economic Growth (GDP) | GDP is the total of all goods and services produced nationally in one year measured using the USD value | USD |

## 4. RESULT AND DISCUSSION

Adirosa (2021), explains that autoregression requires stationarity of the data so it is necessary to test stationarity. Stationarity test results are presented in the table.

**Table 1.** Stationarity test results

| Method | | | Statistic | Prob.** |
|---|---|---|---|---|
| ADF - Fisher Chi-square | | | 14.7714 | 0.0221 |
| ADF - Choi Z-stat | | | -1.40141 | 0.0805 |
| Series | Prob. | Lag | Max Lag | Obs |
| D(FL,2) | 0.9284 | 1 | 4 | 23 |
| D(GDP,2) | 0.0265 | 0 | 4 | 24 |
| D(HC,2) | 0.0252 | 0 | 4 | 24 |

Based on the results of the data stationarity test, all data are stationary with the ADF - Fisher Chi-square statistical value indicator greater than alpha (0.05).

**Table 2.** The Results of The Vector Autoregressive Estimation

| | FL | GDP | HC |
|---|---|---|---|
| FL | 0.756912 | 1.01E-06 | 3.27E-06 |
| | -0.32383 | -0.0002 | -6.50E-06 |
| | [ 2.33734] | [ 0.00500] | [ 0.50190] |
| GDP | 1.010899 | 0.460366 | 0.017244 |
| | -570.748 | -0.35749 | -0.0115 |
| | [ 1.77118] | [ 1.28777] | [ 1.49971] |
| HC | 3.149053 | 2.906123 | 0.975568 |
| | -17660.9 | -11.062 | -0.35579 |
| | [ 0.01783] | [ 2.62712] | [ 2.74194] |
| | | | |
| R-squared | 0.898632 | 0.979497 | 0.985502 |
| Adj. R-squared | 0.898149 | 0.972261 | 0.980386 |

| | | | |
|---|---|---|---|
| Sum sq. resids | 1.58E+29 | 6.19E+22 | 6.40E+19 |
| S.E. equation | 9.63E+13 | 6.03E+10 | 1.94E+09 |
| F-statistic | 2067.681 | 135.3583 | 192.6015 |
| Log likelihood | -802.6826 | -625.6684 | -5.43E+02 |
| Akaike AIC | 67.47355 | 52.72237 | 45.84853 |
| Schwarz SC | 67.81715 | 53.06597 | 46.19213 |
| Mean dependent | 2.84E+15 | 5.83E+11 | 1.89E+10 |
| S.D. dependent | 2.24E+15 | 3.62E+11 | 1.39E+10 |

From the estimation results, it can be seen the direction of the relationship between financial literacy, GDP, and Human Capital. From the estimation results, it can be seen the significance of the relationship between variables by comparing the statistical value with the coefficient value. From the estimation results, it can be seen that financial literacy in the past had a significant positive effect with a statistical value of 2.33734 and a coefficient value of 0.756912. Financial literacy had a significant positive effect on economic growth with a statistical value of 0.005 and a coefficient value of 0.0000101.The results of this study are in line with the research of Mishra & Narayan (2015), Shahid et al. (2015), Rahim et al. (2021).

Financial literacy had a significant positive effect on human capital with a statistical value of 0.50190 and a coefficient value of 0.000327. The results of this study are in line with the research of Abubakar et al (2021), Liu et al. (2021). Where in previous studies, it was known that Financial Literacy had an effect on Human Capital and vice versa.

Economic growth (GDP) has a significant positive effect on financial literacy with a statistical value of 1.77118 and a coefficient value of 1.010899. Economic growth has a significant positive effect on economic growth with a statistical value of 1.28777 and a coefficient value of 0.460366. Economic growth has a significant positive effect on Human Capital with a coefficient value of 1.49971 and a statistical value of 0.017244. The results of this study are in line with the research of Neeliah & Seetanah (2016). Where in previous research it is known that economic growth has an effect on Human Capital and Financial literacy.

Human Capital has no significant positive effect on financial literacy with a coefficient value of 3.149053 and a statistical value of 0.01783. Where in previous research it is known that Financial Literacy has an effect on Human Capital and vice versa.

Human capital has a significant positive effect on GDP with a statistical value of 2.62712 and a coefficient value of 2.906123. The results of this study are in line with research by Sehrawat & Giri (2017), Silva et al. (2018), Zhang & Wang (2021), WIDARNI & BAWONO, (2021), Hussain et al. (2021). Human capital in the past has a significant positive effect on current human capital with a coefficient value of 0.975568 and a statistical value of 2.74194
Based on the R-squared adj with a value of 0.898149, it can be seen that the fit of the model in this study is quite good with a 90% degree of truth.

Based on the estimation results, an empirical question can be answered that financial literacy combined with human capital has an impact on boosting economic growth in Indonesia. Financial literacy in Indonesia not only provides a direct impetus to economic growth but also provides impetus or strengthens the influence of human capital in providing impetus to economic growth. However, human capital cannot be said to strengthen the influence of financial literacy in encouraging economic growth because in estimating the influence of human capital in strengthening financial literacy in providing encouragement to economic growth, the positive effect is not significant. So that the combination of financial literacy and human capital can be a good combination in providing a boost to economic growth because human capital and financial literacy have a significant positive effect and financial literacy can strengthen the influence of human capital on economic growth.

## 5. CONCLUSION

Financial literacy in Indonesia not only provides a direct impetus to economic growth but also provides impetus or strengthens the influence of human capital in providing impetus to economic growth. However, human capital cannot be said to strengthen the influence of financial literacy in encouraging economic growth because in estimating the influence of human capital in strengthening financial literacy in providing encouragement to economic growth, the positive effect is not significant. So that the combination of financial literacy and human capital can be a good combination in providing a boost to economic growth.

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