

Financial Development, Human Capital, Economic Growth in Indonesia

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Abstract :

The purpose of this study is to investigate Financial Development, Human Capital, and Economic Growth in Indonesia. This study uses secondary data from the World Bank with a sample of 90 developing countries in an annual time period from 2000 to 2020 with the generalized method of moment (GMM) models. For the human capital development sector, we use two namely secondary school enrollment (SSE) and primary school pupil-teacher ratio (PPTR). We found that more schools are built and more teachers are working in the education sector, which is indicated by a decrease in the teacher-student ratio, which has an impact on increasing economic growth.

Keywords: Financial Development, Human Capital, Economic Growth, Indonesia

JEL Classification Code : C01, C11, E10, E12

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Introduction

The financial sector is a business sector related to financial services ranging from financial institutions to financial services that serve finance and is supported by applicable systems and laws. Ibrahim's research (2018) finds that financial institutions are vital institutions in economic development because they provide capital support which is a vital production factor in the economy, especially in the real sector.

Financial institutions develop following technological developments that encourage financial institutions to provide more efficient financial services (Levine, 1997). The role of the financial sector in economic growth is in the form of service support and capital facilitation in the real sector, including money collection services from the public in the form of savings and channeling in the form of credit that supports production in the real sector and increased consumption through consumption credit (Montiel, 2011).

In operating an increasingly efficient financial system, apart from requiring constantly evolving technology, the financial sector also requires skilled human resources. Human skills are influenced by human capital which is a key factor in human productivity (Barro and Sala-i-Martin, 1999). Human capital plays an important role in mastering technology, maximizing the use of technology increases efficiency, and improving human performance (Widarni & Bawono, 2021).

Blundel et al. (1999) explained that human capital in addition to improving human performance at work also increases human ability to make decisions that are efficient and better economically. This increases efficiency and improves economic performance. Many studies related to finance and economic growth have been carried out in previous studies such as the research of Events et al. (2009), Eita and Jordaan (2010), and Rousseau (2003). However, research related to human capital, the financial sector, and technology is still very rare even though there is research from Widarni and Bawono (2021). However, comprehensive research still needs to be done to strengthen previous research while providing complete literacy related to finance, human capital, technology, and economic growth.

Literature review

Economic growth is based on the financial sector as the development of capital resources and the education sector as a developer of human resources. Human capital and economic growth as well as the development of the financial sector continue to develop following the development of human civilization and technological developments (Fischer, 1991). Young's research (1995) found that the development of economic growth can develop with the development of human capital and equitable distribution of human capital.

A financial system that can be accessed by all levels of society is also a driving factor for economic growth (Diamond and Dybvig, 1983). The use of human resources with sufficient human capital and money capital can encourage national productivity as indicated by increased economic growth, increase production in the real sector, and increased sales so that increase prosperity for the country and society (DemirgüçKunt and Maksimovic,2005).

The development of human model theory develops in line with the thinking of Romer (1986). Romer (1986) argues that the education sector is an important sector to be developed and the development of education is a long-term investment in the quality of human resources that serve as production inputs. Research by Rosendo Silva et al. (2018) found that the increase in human capital was followed by an increase in economic growth and an increase in productivity in the real sector. Li and Liang (2010) found that health and education are important foundations of human capital where health and education have implications for increasing economic growth. Neeliah and Seetanaah (2016) found a mutually reinforcing two-way relationship between human capital developed through the education sector and economic growth.

Sehrawa and Giri (2017), Levine (2005),and Phiri (2015) found that the banking financial sector is the dominant factor in driving economic growth. The human capital is a source of innovation and mastery of technology which then increases technology development to encourage economic growth (Widarni & Bawono, 2021).

Methodology

This study uses secondary data from the World Bank with a sample of 90 developing countries in an annual time period from 2000 to 2020 with generalized method of moment (GMM) model. For the human capital development sector, we use two namely secondary school enrollment (SSE) and primary school pupil-teacher ratio (PPTR). The following is the model that we developed in this research:

$$\Delta \ln y_{it} = \mu + \ln y_{it-1} + \alpha_2 l_{it} + \alpha_3 pk_{it} + \alpha_4 hk_{it} + \alpha_5 fd_{it} + \alpha_6 (hk_{it} \times fd_{it}) + \alpha_7 q_{it} + \pi_i + \sigma_t + e_t$$

Where :

y_{it} = Economics growth indicated by Real GDP per capita

l_{it} = Labor force

pk_{it} = Stock of physical capital

hk_{it} = Stock of human capital

fd_{it} = Financial development indicators

q_{it} = Macro economic indicator (Government expenditure, inflation, trade openness)

π_i = Time effect

σ_t = Country fixed effect at time t

e_{it} = Error term

Results and Discussion

We estimate the four combinations of models in this study which are presented in Table. The estimation results indicate that the average per capita growth is stable in the four models, which means that the developing countries that we sampled achieve economic stability. Capital growth also shows stable financial developments. In the education sector, the average developing country in the sample shows the stability of its development.

Variable	Model 1	Model 2	Model 3	Model 4
GDP per capita	-1.0025 (0.0019)***	-0.8792 (0.0018)***	-1.0059 (0.0128)*	-1.0006 (0.0021)
Labor force	0.0014 (0.0022)	-0.0017 (0.0029)	0.0235 (0.0041)***	0.0102 (0.0019)***
Fixed capital formation	0.0198 (0.0017)***	0.0172 (0.0015)***	0.0091 (0.0012)***	0.0069 (0.0007)***
Trade openness	-0.0018 (0.0015)*	-0.0019 (0.0012)*	-0.0045 (0.0007)***	0.0029 (0.0008)***
Inflation	-0.0001 (0.0000)***	-0.0001 (0.0000)**	-0.0004 (0.0002)***	-0.0002 (0.0000)***
Government expenditure	-0.0243 (0.0013)***	-0.0289 (0.0013)***	-0.0269 (0.0129)***	0.0139 (0.0015)***
Secondary school enrolment	0.0204 (0.0019)***	0.0118 (0.0039)***	-	-
Primary pupil teacher ratio	-	-	-0.1025 (0.0457)***	-0.0256 (0.0688)***
Domestic credit	0.0384 (0.0038)***	-	0.1039 (0.0457)***	-
Private credit	-	0.0236 (0.0017)***	-	0.0395 (0.0245)***

Note: ***Shows significance level at 1%, **at 5% and * at 10%

The labor force has no significant effect on GDP per capita as economic growth indicator. Trade openness, inflation and government spending have a negative and significant effect on economic growth. The ratio between students and teachers, Inflation, and Government expenditure has a significant negative relationship with economic growth. This shows that the lower the ratio of students

and teachers, the better the economic growth in developing countries. Human capital, labor force, trade openness and fixed capital formation have a significant positive effect on economic growth.

Conclusion

This study focuses on developing countries by examining the financial and education systems in developing countries. We find that more schools are built and more teachers are working in the education sector, which is indicated by a decrease in the teacher-student ratio, which has an impact on increasing economic growth.

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