Economic Analysis of Underdeveloped Regions in Indonesia

Moneyzar Usman[1], Arivina Ratih[2], Heru Wahyudi[3], Muhammad Atras[4]

moneyzarusman@gmail.com[1], arivinaratih@gmail.com[2], heru.abiyahya@gmail.com[3], atrasteralsyah@gmail.com[4].

Universitas Lampung[1234]

Abstract. Underdeveloped areas in Indonesia are less developed in six criteria, economy, human resources, facilities and infrastructure, financial capacity, accessibility, and regional characteristics. This condition can exacerbate inequality between regions in Indonesia, then worsen Indonesia's performance in achieving the SDGs goals. This study aims to provide an empirical contribution on things that can help underdeveloped areas to develop more with a focus on the discussion on the economic side, namely analyzing the relationship between investment, human resource conditions, and village funds on the regional economy. The tool used to achieve this goal is panel data with observation years from 2017 to 2021 for underdeveloped districts. The result are gross fixed capital formation, labor force participation rate, and village funds can help increase the GDRP of underdeveloped regions if their amount or use is increased.

Keywords: Economic, Underdeveloped, Indonesia

1 Introduction

Underdeveloped regions are districts with less developed communities, facilities, and infrastructure than other districts [1]. The phenomenon of underdeveloped regions is closely related to the conditions of inequality and poverty because there are regions that grow better than other regions. This is a common phenomenon in developing countries, including India [2]. This condition may be a problem because it can affect the lives and welfare of the population from several aspects of life such as health, resource availability, economic, social, political, and environmental aspects [3].

The purpose of this study is to determine the effect of investment, labor force participation rate, and village funds on the GDRP of underdeveloped regions in Indonesia. Many variables can be used to observe economic conditions in underdeveloped regions, but this study uses three variables: investment, labor force participation rate, and village funds. The selection of variables is related to the literature that observes regional economic growth with the main variables of capital and labor. Capital in this study is gross fixed capital formation or expenditure used by the government to purchase capital goods other than military expenditure. This variable is often used to analyze economic growth [4], [5] or to analyze regional income [6]. The village fund variable was chosen as a variable because it is considered to describe the role of the government in village development. Hur [7] used this variable as one of the components to analyze government policies.

ICEBE 2023, September 13-14, Bandar Lampung, Indonesia

DOI 10.4108/eai.13-9-2023.2341216

Empirical research on the role of village funds has been conducted with a variety of research areas. Handayani and Badrudin [8] observed all regions that received village funds, but the majority of studies focus on one region or province level only [9]–[13]. If it is associated with disadvantaged areas, Fazri et al. [14] have conducted research but by comparing the role of village funds for underdeveloped and not underdeveloped areas in the period 2015 to 2019. The difference between this research and Fazri et al. [14] is the number and research areas that are classified as underdeveloped.

2 Methodology

The underdeveloped regions used in the study were 62 districts in accordance with Presidential Regulation Number 63 on the Determination of Underdeveloped Regions for 2020-2024. The process of filling in the data and finding the best model reduced the number of research areas to 35. Details about the disadvantaged areas are as follows.

Table 1. Research Area

Province	Number of Disadvantage Region
North Sumatera	2
South Sumatera	1
East Nusa Tenggara	9
Maluku	6
West Papua	2
Papua	15

The data used as dependent variable is Gross Domestic Regional Product (GDRP) in Rupiah from the publication of Central Bureau of Statistics (BPS). Data for the independent variable is capital using gross fixed capital formation (GFCF) in units of Rupiah from BPS. Labour force participation rate (PR) in percent from BPS, and village funds in Rupiah from the Ministry of Finance website. These variables are then regressed using panel data analysis.

$$Log\ GDP_{it} = \beta_0 + \beta_1 LogGFCF_{it} + \beta_2 PR_{it} + \beta_3 LogDd_{it} + \varepsilon_{it}$$

GDRP is Gross Domestic Regional Product at constant 2010 prices, GFCF is investment denoted by gross fixed capital investment, PR is labor force participation rate and Dd is village fund. All variables were collected for lagging regions in Indonesia from 2017 to 2021.
The hypothesis proposed is that the Capital variable has a positive effect on GDRP, the labor force participation rate variable has a positive effect on GDRP, and the village fund variable has a positive effect on GDRP.

3 Result

The following are the results of panel data regression with the fixed effect model method.

Table 1. Regression Result

Variabel	Coefficient	Std.Error	t-statistic	Prob.
C	3.4447	0.3922	8.7825	0.0000
GFCF	0.4530	0.0728	6.2229	0.0000
PR	0.0008	0.0003	2.1763	0.0318
Dd	0.1599	0.0289	5.5319	0.0000
R-squared	0.9932			

The data used is normally distributed and free from classical assumptions. The Chow and Hausmann test results tell us that the best model is the fixed-effect model.

The error rate used is five percent and the variables of GFCF, labor force participation rate, and village funds are statistically proven to have a positive effect on the GDP of lagging regions. This result is in line with the research expectation stated in the hypothesis. In other words, underdeveloped regions can increase their GDP by increasing the value of gross fixed capital formation, labor force participation in the labor market, and the use of village funds.

Gross fixed capital formation is taken from GDRP data on expenditure on the investment component. The definition of this variable is expenditure on capital goods that are not consumer goods and have a useful life of more than one year. Military capital expenditure is not included in this breakdown because it is government consumption [15]. Gross fixed capital formation can not only increase GDRP but can also help the economic growth of a region [4], [16], [17], but there are also studies that find the opposite result [5].

The labor force participation rate measures the labor force relative to the working-age population [15]. The higher the proportion of the labor force, the lower the dependency rate, but it must be accompanied by quality so that it can become a reliable human resource for economic growth [18]. All workers will try to stay as long as possible in the labor market to earn a decent living in terms of finance food and shelter [19].

Village funds come from the state revenue and expenditure budget, which is provided through the transfer mechanism of the district or city regional revenue and expenditure budget. Several empirical studies have found different things about the impact of village funds on the economy. Village funds were found to increase unemployment in Ulee Kareng Sub-district, Banda Aceh City because village funds have only succeeded in reducing unemployment in the short term through ongoing development programs [20]. Different things were found in research in Purwakarta Regency, where village funds statistically had a positive effect on economic growth and the expansion of employment and business opportunities [21].

4 Conclusion

The results of the panel data regression with the fixed effect model method provide information that gross fixed capital formation, labor force participation rate, and village funds can help increase the GDRP of underdeveloped regions if their amount or use is increased.

Acknowledgements. Thanks are expressed to the research team who have collaborated in completing the research and contributing to the conference. In addition, thanks are also expressed to the Institute for Research and Community Service of the University of Lampung, the academic community of FEB Unila, and those who cannot be mentioned one by one.

References

[1] *Peraturan Presiden Republik Indonesia Nomor 63 Tahun 2020 Tentang Penetapan Daerah Tertinggal Tahun 2O2O-2O24*. Indonesia, 2020, pp. 1–8.

[2] O. Hidenori, “Transformation of India’s Underdeveloped Regions during Economic Growth Period Focusing on Uttarakhand,” *J. Urban Reg. Stud. Contemp. India*, vol. 1, no. 1, pp. 13–23, 2014.

[3] International Peace Institute, “Underdevelopment, Resource Scarcity, and Environmental Degradation Task Forces on Strengthening Multilateral Security Capacity,” 2009.

[4] J. Boamah, F. A. Adongo, R. Essieku, J. A. J. Lewis, and W. Yanan, “Financial depth, gross fixed capital formation and economic growth: Empirical analysis of 18 Asian economies,” *Int. J. Sci. Educ. Res.*, vol. 2, no. 04, pp. 120–130, 2018, [Online]. Available: http://ijsernet.org/www.ijsernet.org.

[5] D. F. Meyer and K. A. Sanusi, “A Causality Analysis of the Relationships Between Gross Fixed Capital Formation, Economic Growth and Employment in South Africa,” *Stud. Univ. Babes-Bolyai Oeconomica*, vol. 64, no. 1, pp. 33–44, 2019, doi: 10.2478/subboec-2019-0003.

[6] M. N. Afiat, G. A. Nasser, and M. Hasan, “Analysis of the Effect of Domestic Gross Fixed Capital Formation (DGFCF) and Population on the Gross Regional Domestic Product (GRDP) in Southeast Sulawesi,” vol. 23, no. 1, pp. 35–39, 2021, doi: 10.9790/487X-2301043539.

[7] S. Hur, “Government Spending and Inclusive Growth In Developing ASIA,” 2014.

[8] A. P. Handayani and R. Badrudin, “Evaluation of Village Fund Allocation on Indonesia,” *J. Account. Invest.*, vol. 20, no. 3, 2019, doi: 10.18196/jai.2003129.

[9] C. Mamonto, T. O. Rotinsulu, and K. D. Tolosang, “Ekonomi Terhadap Tingkat Kemiskinan Di Kabupaten / Kota Bolaang Mongondow Raya Tahun 2015-2018,” *J. Berk. Ilm. Efisiensi*, vol. 20, no. 03, pp. 33–44, 2020.

[10] M. Rimawan and F. Aryani, “Pengaruh Alokasi Dana Desa terhadap Pertumbuhan Ekonomi , Indeks Pembangunan Manusia Serta Kemiskinan di Kabupaten Bima,” *J. Ilm. Akunt. dan Humanika*, vol. 9, no. 3, pp. 287–295, 2019.

[11] A. Ritonga, H. Handra, and F. Andrianus, “Pengaruh Dana Desa terhadap Pertumbuhan Ekonomi dan Kemiskinan di Sumatera Barat,” *Reg. J. Pembang. Wil. dan Perenc. Partisipatif*, vol. 16, no. 2, pp. 277–290, 2021, doi: 10.20961/region.v16i2.32968.

[12] A. Samsir, A. Hakim, and N. Fauziah, “Dampak Transfer Dana Desa Terhadap Pertumbuhan Ekonomi Di Sulawesi Selatan Indonesia,” in *Seminar Nasional Hasil Penelitian: Penguatan Riset, Inovasi, dan Kreativitas Peneliti di Era Pandemi Covid-19*, 2021, pp. 1136–1143, [Online]. Available: https://ojs.unm.ac.id/semnaslemlit/article/view/25276%0Ahttps://ojs.unm.ac.id/semnaslemlit/article/viewFile/25276/12654.

[13] C. I. Tanan and B. F. Fonataba, “Allocation of Village Funds To Improving the

Community," vol. 17, no. 1, pp. 135–150, 2022, doi: 10.47441/jkp.v17i1.254.

[14] M. Fazri, A. R. A. Paluseri, A. Oktarina, and D. K. Imron, "Does Village Fund Have an Impact Toward Economic Growth ?," *Econ. Dev. Anal. J.*, vol. 4, no. 4, pp. 394–404, 2022.

[15] BPS, "Istilah." https://www.bps.go.id/istilah/index.html?Istilah_page=28&Istilah_sort=deskripsi_ind.desc (accessed Aug. 20, 2023).

[16] G. Ali, "Gross Fixed Capital Formation and Economic Growth of Pakistan," *IMPACT J. Mod. Dev. Soc. Sci. Res. (IMPACT JMDSSR)*, vol. 1, no. 2, pp. 25–34, 2017.

[17] S. Iftikhar, Fakhar-un-Nisa, M. Ali, and S. Umar, "Gross Domestic Capital Formation, Exports and Economic Growth," *J. Econ. Sustain. Dev.*, vol. 7, no. 13, pp. 44–48, 2016.

[18] B. Kargi, "Labor Force Participation Rate and Economic Growth: Observations for Turkey," *J. Manag. Soc. Sci.*, vol. 4, no. 4, pp. 46–54, 2014, [Online]. Available: https://www.researchgate.net/publication/262336761_Labor_Force_Participation_Rate_and_Economic_Growth_Observations_for_Turkey.

[19] R. Duval, M. Eris, and D. Furceri, "Labour Force Participation Hysteresis in Industrial Countries: Evidence and Causes," *Oecd*, no. February 2015, pp. 1–29, 2010.

[20] Gusmeri *et al.*, "Dampak Pengelolaan Dana Desa terhadap Penurunan Angka Pengangguran di Kecamatan Ulee Kareng Kota Banda Aceh," Banda Aceh, 2019.

[21] E. Jumiati and D. Adam, "Pengaruh Program Dana Desa Terhadap Perekonomian Masyarakat, Perluasan Lapangan Kerja dan Peluang Usaha Masyarakat Desa (Studi Deskriptif Korelasi pada 10 Desa di Kabupaten Purwakarta)," *Lisyabab J. Stud. Islam dan Sos.*, vol. 1, no. 2, pp. 2722–8096, 2020, [Online]. Available: https://lisyabab-staimas.e-journal.id/lisyabab.