

The Influence of Village Fund on the Job Market and Economic Growth in Dairi Regency

Albert Gamot Malau^{1*}, Jah Hotman².

^{1,2}*Universitas Terbuka, Agribusiness Study Program, Faculty of Science and Technology of the Open University Indonesia; E-mail: albert@ecampus.ut.ac.id*

Abstracts: One of the problems in Indonesia is the imbalance in development between cities and villages. The government makes efforts to increase village development by providing village fund assistance. One of the Village Fund Recipients is Dairi Regency. Village fund receipts in 2015 had a positive influence, where the number of poor people decreased by 1.6%, but in 2016 people experiencing poverty increased by 0.16%. From these problems, this research aims to analyze the influence of village funds on unemployment rate, labour force, poor population, and gross regional domestic product of Dairi Regency last year, (2) to analyze the influence of village funds on the Human Development Index of Dairi Regency, Total Employed, undergraduate education level, and last year's village funds. Economic Development is one of the goals of a country/region to increase the availability or expand the distribution of goods' basic needs for life, clothing, housing, education, and health. The method used was quantitative with a model of Two Stage Least Square (2SLS) using the SAS program version 9.2 in 2010-2022. The results show that village funds, labour force, and gross regional domestic product of Dairi Regency last year had a real and significant effect of 95%. Variables of village funds are very responsive (elastic), affecting the gross regional domestic product of Dairi Regency in the long term. Variables of village funds are influenced by village income, education level, Human Development Index, and last year's Village Funds. Last year's village income and village fund variables had a real and significant effect of 95%. Village income variables are very responsive to influencing village funds in Dairi Regency in the short term and the long term.

Keywords: Village Funds, Job Market, Economic Growth.

1. INTRODUCTION

Economic development is one of the goals of a country/region to increase the availability or expand the distribution of basic necessities for life. According to Lincoln Arsyad (2020), rural economic development is a process in which the village government and the community manage existing resources and form a pattern of a partnership between the village government and the private sector, which aims to create new jobs and stimulate the development of the economic activity.

According to Simon Kuznets, economic growth is a condition in which a country can increase its production results based on technological advances accompanied by ideological adjustments. This follows the results of research by Karim (2021) which states that the Village Fund is considered to support the community's economic needs during the COVID-19 pandemic. The government believes that rural-based development can strengthen the foundations of the village economy. To support development in rural areas following Government Regulation number 60 of 2014, where the government allocates village fund expenditures to the State Budget (APBN). The use of village funds is government spending that was disbursed from 2015. North Sumatra Province also received a disbursement of village funds of 3.3 trillion in 2015. Village fund disbursement in North Sumatra Province continued to increase by 2.9% in 2016 and 19.0% in 2017, but in 2018 it decreased by 7.6%. In 2022, it will also reduce by 2.4%.

Dairi Regency is also one of the districts that received village funds. In 2015 and 2016, Dairi Regency received village funds of 98 billion Rupiah. In 2017, the disbursement of village funds increased by 22.2% (126 billion Rupiah), while in 2018, it decreased by 12%. In 2019, village funds in Dairi Regency increased by 11.1% (127 billion Rupiah) and in 2020, it decreased to 2.4% (130 billion Rupiah) (see Figure 1).

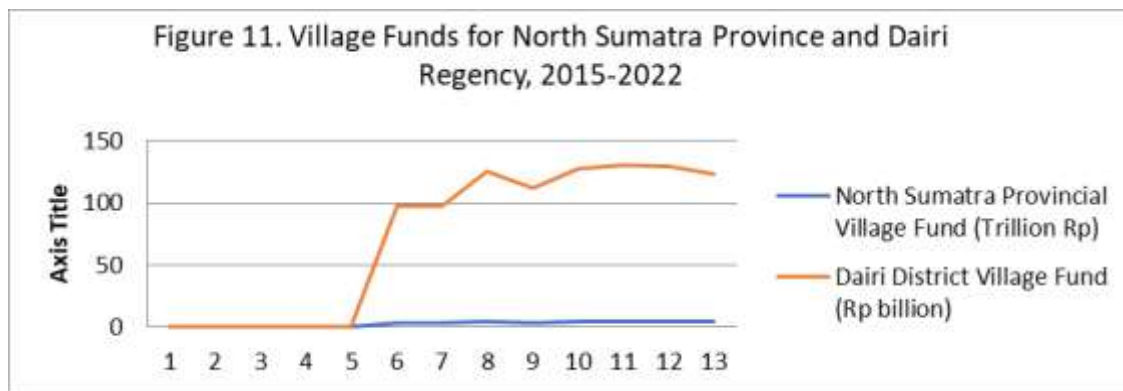


Figure 1. Village Funds in North Sumatra Province and Dairi Regency in 2015-2022

Receiving village funds in 2015 reduced people with low incomes by 1.5%, but receipt of these village funds also resulted in an increase in the poor population of 0.16% in 2017. In 2018 the poor population decreased by 7.7 % and 6.1 % in 2019. In 2020 and 2021, the poor population has increased by 4.6 % and 3.3%, respectively (Table 1).

Table 1. Anumber of Poor Population and Gross Regional Domestic Product of Dairi Regency in 2013-2022

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Poor Population (Thousand Rp)	24	23.35	25.33	24.94	25	23.2	21.9	22.9	23.7	23.45
Poor Population Rate (%)	6.2083	2.78373	- 7.81682	1.56375	-0.16	7.7188	6.0842	-4.666	-3.331	1.1514
GRDP (million Rp)	5E+06	5153826	5413749	5688451	6E+06	6E+06	7E+06	7E+06	7E+06	7E+06
GRDP Rate (%)	-4.807	-4.7919	- 4.80115	-4.8291	-4.697	-4.771	-4.597	0.949	-2.012	-0.19

Source: data processed in 2023

The disbursement of the Village Fund in North Sumatra Province has implications for increasing the Human Development Index by 69% in 2015 and increasing to 72 in 2022. The increase in the Human Development Index in 2015, which is divided into 33 districts and cities in North Sumatra Province, does not automatically reduce the level of the labour force in the Dairi Regency. According to the Central Bureau of Statistics (BPS) of North Sumatra (2022), the workforce has increased by 7.8%, where village funds were disbursed for the first time to Dairi Regency by 9.7 billion, which resulted in a decrease in the workforce by 1.9% in 2016. Meanwhile, in 2018 and 2019, the labour force decreased by 7.7% and 6.7%, while the unemployment rate increased by 21.8% in 2018 (Figure 2).

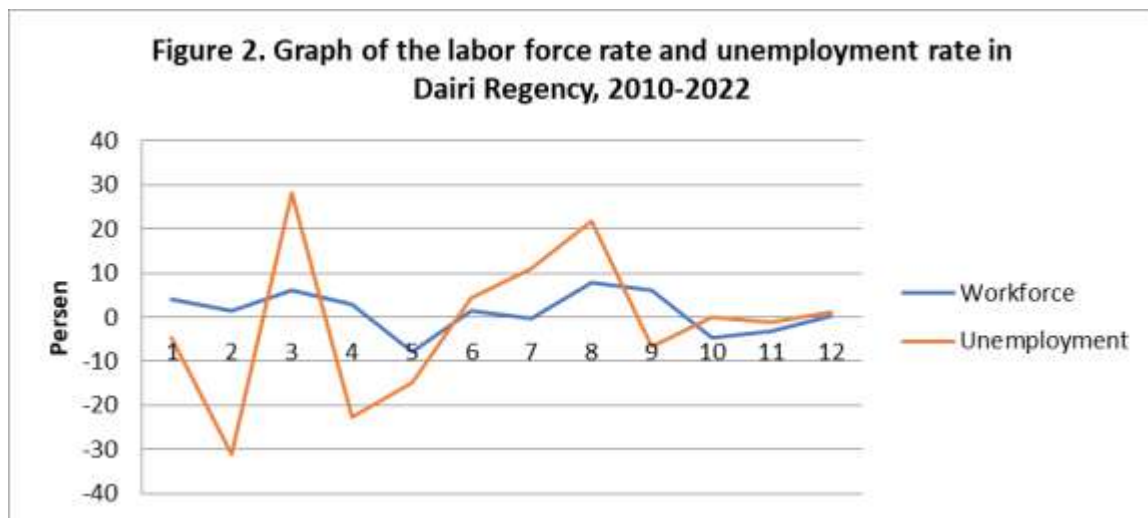


Figure 2. Graph of the labor force rate and unemployment rate in Dairi Regency, 2010-2022

This result follows the study by Octavia (2019), which explains that the village fund variable has a negative and insignificant effect on the labour force participation rate in West Kalimantan. The Regulation of the Minister of Villages, Development of Disadvantaged Regions and Transmigration prioritizes using Village Funds. The National Medium-Term Development Plan (RPJMN) 2015-2019 and the Government Work Plan (RKP) annually prioritize: (1) supporting food sovereignty, (2) supporting energy sovereignty, (3) supporting maritime development, and (4) supporting tourism and industry. Arifin (2020) explains that village funds are also the basis of the village's primary income. It can be seen that 50% of revenue is obtained from village funds that will increase employment.

Harahap (2018) finds that the factors that positively and significantly influence economic growth in ten districts in North Sumatra are the Village Fund allocation and workforce. Meanwhile, the human development index variable has a negative and insignificant relationship to economic growth. However, this research has a limited scope where data is only taken from ten districts. According to Sutiyono et al. (2018), the Village Fund is the village's main income base, where more than 50% of income is obtained from the Village Fund. The Village Fund aims, among other things, to improve people's welfare, alleviate poverty, and increase business productivity. An increase in Village Funds is prioritized for infrastructure expansion and community strengthening. The total Village Fund disbursed by the State Budget is IDR 20.67 trillion or an increase of 0.56 per cent in 2014, but in 2018 it decreased by 0.2234. From the results of previous research, the researcher finds several research gaps, including methodological research gaps. Conceptual gaps are found in research utilizing Village Funds that do not originate from the state budget. The aims of this study are (1) to analyze the effect of the regional domestic product of Dairi Regency on the village funds, unemployment rate, labour force, poor population, and last year's gross regional domestic product of Dairi Regency, (2) to analyze village funds on Human Development Index, total employment, undergraduate education level, and last year's village funds.

1.1. Village Fund

According to Law Number 6 of 2014 concerning Villages, the village is a legal community unit that has territorial boundaries that are authorized to regulate and manage government affairs and local community interests based on community initiatives, origin rights, and or traditional rights that are recognized and respected in the Indonesian government system. According to Soenarja in Nurcholis (2022), a village is a unit of the population occupying a place based on existence and customary law. Village Government is a government organization that carries out the community's interests.

Government policy by carrying out development starting from the periphery, which is a government program. Development begins in underdeveloped areas and rural areas; this is done to overcome disparities between regions, villages, and cities. With rural-based development, it aims to increase the income of people in rural areas.

All village government activities within the village autonomy framework are the village's authority, including village financial management (Prasetyo & Masdjojo, 2015).

1.2. Labor Force

As an essential component of a nation, the population is divided into two, namely, the working age and the non-working age. The working-age population consists of the labour force and non-labour force. The labour force is the working-age population who work. Meanwhile, those not in the labour force specifically carry out school activities, take care of the household or other things and are not working or looking for work at all (BPS, 2022).

1.3. Economic Growth Theory

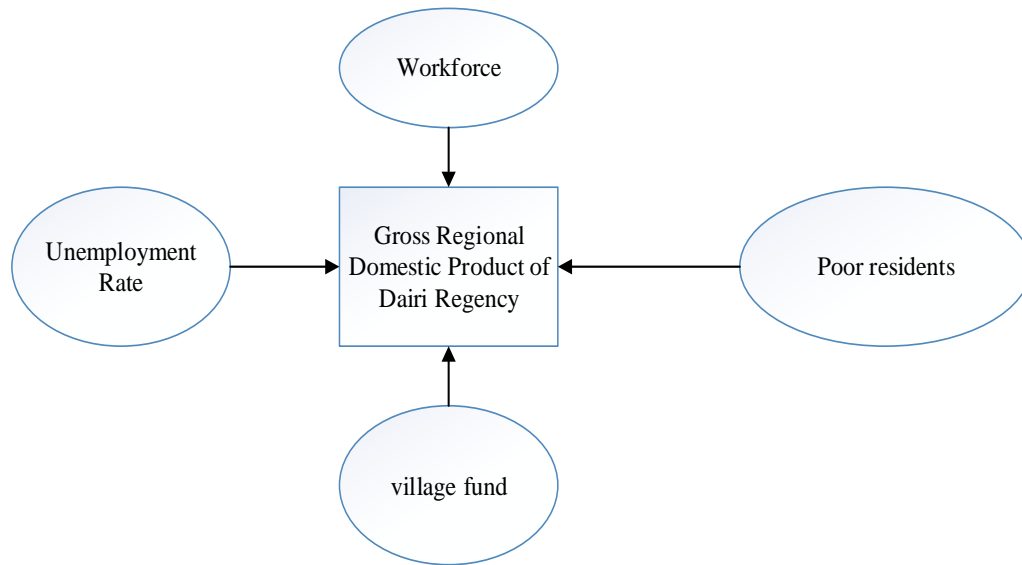
According to Sadono (2010), increased production of goods and services in a country is resulted from development in all respects, infrastructure, number of schools, capital goods, and other indications that a country is experiencing economic growth. Economic growth is the difference in economic activity from year to year. Economic growth is said to increase when there is an increase in goods and services. According to Endang M (2009), economic development is directed at realizing an independent and reliable national economy based on economic democracy to increase the prosperity of all people in a harmonious, fair, and equitable manner. The economy is seen as something changing over time or developing. The emphasis on the economy occurs on changes or developments (Boediono, 2018).

From the problems, background, and research framework, the following hypotheses are obtained: (1) regional domestic product of Dairi Regency has a positive effect on the Village Fund, unemployment rate, workforce, and last year's gross regional domestic product of Dairi Regency, and has a negative effect on people with low incomes; (2) village funds have a positive effect on the Human Development Index, number of employed, undergraduate education level,, and last year's village funds.

2. RESEARCH METHOD

2.1. Model Specifications

The model explains the actual phenomenon as a system or process (Koutsoyiannis, 1977). The econometric model is defined as a particular pattern from the algebraic model, an elemental with stochastic nature that includes one or more confounding variables (Intriligator 1996). Econometric model is the relationship between each exogenous variable (explanatory variables) and endogen variable (dependent variables), especially concerning the sign and magnitude of predicted parameters according to theoretical expectations (Sitompul, 2018). The method used was Two Stage Least Square (2SLS). Then the conceptual framework of the econometric model can be described as shown in (Figure 3).



= endogenous variable

= exogenous variable

Figure 3. Diagram of the Relationship of Variables Model of the Influence of Village Funds on the Labor Market and Economic Growth in Dairi Regency

2.2. Economic Growth (GRDP)

The variables that are expected to have a positive effect on the gross regional domestic product of Dairi Regency (PDRB) are village funds, the labour force, and last year's gross regional domestic product and have a negative effect on the unemployment rate and the poor population. The equation model of the gross regional domestic product of Dairi Regency with exogenous variables is as follows:

$$PDRB_t = a_0 + a_1 DD_t + a_2 TP_t + a_3 AK_t + a_4 PM + a_5 LPDRB_{t-1}$$

Predicted parameters (hypothesis) are: $a_0, a_1 > 0$; $a_2, a_3 < 0$; $a_4 < 0$, ; $0 < a_5 < 1$

description:

$PDRB_t$ = Gross regional domestic product of Dairi Regency (thousand rupiahs)

DD_t = t-year village funds (million Rupiah)

TP_t = t-year unemployment rate (person)

AK_t = t-year labour force (people)

PM_t = Poor population in year t (people)

$LPDRB_{t-1}$ = Regional Gross Domestic Product of Dairi Regency last year (thousand rupiahs)

Based on order condition, an equation can be identified if the number of variables included in the equation is greater than or equal to the number of all endogenous variables minus one. Structural equation identification formulas based on order condition, according to Koutsoyiannis (1977), are as follows:

$$G - g + (K - k) > (G - 1) \text{ or } (K - k) > (g - 1)$$

Following the procedures of order condition, it can be seen that the model identification results are over-identified in Table 3.

Table 2. Identification Test of the Influence of Village Funds on the Job Market and Economic Growth in Dairi Regency

Equation	M	M-K		G-1	Decision
$PDRB_t = a_0 + a_1 DD_t + a_2 TP_t + a_3 AK_t + a_4 PM_t + LPDRB_t$	6	5	>	1	over identified

Structural similarities in all models were over identified, then the equation was estimated by the method of Two Stage Square (2SLS), or Full information Maximum Likelihood (FML). Simultaneous estimation of parameters helped to simulate policies appropriately and efficiently. The method used in estimating structural parameters was 2SLS in this study. The Durbin-h statistic test (Pindyck & Rubinfeld, 1991) was used to test whether the simultaneous equation model has a serial correlation. The data used in this study was secondary data from Dairi Regency in 2015 – 2022, while the data source was obtained from the Central Bureau of Statistics (BPS) of Dairi Regency. Statistical Size (goodness-of-fit statistics) was available to assess the ability of a model to perform simulations.

3. RESULTS AND DISCUSSIONS

3.1. Overview of the Estimation Model

The model that has been formulated is a model of the influence of the Village Funds on the job market and Economic Growths in Dairi. Regency, which is a structural equation model and uses the method of 2SLS (Two Stage Least Squares). After re-specification, several variables were removed from the model because they did not follow the hypothesis and were not accepted statistically (insignificant). Overall, the value of the coefficient of determination (R^2) is relatively high and ranges from 0.6002 to 0.9607. The statistical probability value F in all equations is significant to very significant, namely the value ranges from 0.1141 to 0.0001. This means that the diversity of each endogenous variable can actually be explained by the variety of its explanatory variables, both individually and collectively.

3.2. Gross Regional Domestic Product (GRDP)

The regional domestic product of Dairi Regency is hypothesized by Village Fund, unemployment rate, labour force, poor population, and last year's gross regional domestic product. The results of the estimation of the gross regional domestic product equation can be seen in Table 3.

Table 3. Parameter Estimation Results of the Dairi District Gross Regional Domestic Product Equation in 2015-2022.

Explanatory Variables	Parameter Estimation	Prob. t	Taraf nyata	Elasticity of SR	Elasticity of LR
PDRB _t					
Intersep	13.43227				
DD _t	0.111874	0.0076	A	0.15	1.11
TP _t	- 0.732219	0.1608	-	0.67	0.72
AK _t	0.632074	0.0025	A	0.16	0.25
PM _t	- 0.038423	0.1999	-	0.07	0.10
LPDRB _{t-1}	0.625991	0.0222	A	0.33	-
$R^2 = 0.88071$; Adj R-Sq = 0.86270; Pr > F = 0.0001; F Value = 219.71					

description: A = significant effect on the level of a 95%

Table 3 explains that Dairi Regency's gross regional domestic product is positively related to its explanatory variables, namely Village Funds, undergraduate education level, labour force, poor population, and last year's gross regional domestic product. Meanwhile, it is negatively related to poor population variables and the unemployment rate.

The estimation results show that if ten units increase the Village Fund, it will increase Dairi Regency's Gross Regional Domestic Product by 1.1 units. This finding follows the findings of Aslan et al. (2019), who explain that the indirect effect proves that village funds have negative significant and village spending have positive and not substantial significant on the rate of poverty through economic growth in Mahakam Ulu Regency. A ten-unit unemployment rate decrease will increase the district's gross regional domestic product by 7.3 units per year. Expanding the labour force by ten units will increase the gross regional domestic product by 6.32 units per year. An increase in unemployment by ten units will reduce the gross regional domestic product of Dairi Regency by 0.3 units per year. The increase in Dairi Regency's gross regional domestic product last year by ten units will increase Dairi Regency's gross regional domestic product by 6.25 units per year.

The coefficient of determination R^2 is 0.88071, meaning that 88.07% of the variation in endogenous variables can be explained by the explanatory variables included in the equation. The F-Value is 219.71, meaning that the explanatory variables together can explain the variation in the gross regional domestic product of Dairi Regency. The village funds, labour force and gross regional domestic product variables of Dairi Regency last year had a significant effect of 95%. The village fund variable is very responsive (elastic), affecting the gross regional domestic product of Dairi Regency in the long run.

CONCLUSIONS

Based on the results and discussion, several conclusions can be drawn according to the research objectives as follows: (1) Gross regional domestic product of Dairi Regency is influenced by village funds, unemployment rate, labour force, poor population and last year's gross regional domestic product. Village funds, labour force, and gross regional domestic product of Dairi Regency last year had a real and significant effect of 95%. Variables of village funds are very responsive (elastic), affecting the gross regional domestic product of Dairi Regency in the long term; (2) Variables of village funds are influenced by village income, education level, Human Development Index and last year's Village Funds. Last year's village income and village fund variables had a real and significant effect of 95%. Village income variables are very responsive to influencing village funds in the Sidikalang sub-district.

REFERENCES

- [1] Aslan, Dio Caesar Dharma, Adi Wijaya, (2019)
- [2] Agus Hermawan, Istiqomah, Abdul Aziz Ahmad, (2019) The Effect of Village Funds on Rural Poverty: Empirical Evidence From Java Island. International Conference on Rural Development and Entrepreneurship Vol.5No.1 <http://www.jp.feb.unsoed.ac.id/index.php/lcore/article/viewFile/1516/1527>
- [3] Abdul Karim, Chalid Imran Musa, Romansyah Sahabuddin, Muhammad Azis, (2019) The Increase of Rural Economy at Baraka Sub-District through Village Funds, The Winner Vol. 22 No. 1 March 2021, 89-95. <https://doi.org/10.21512/tw.v22i1.7013>
- [4] Aladejare, S. A. (2013). Government Spending and Economic Growth: Evidence from Nigeria. In Munich Personal RePEc Archive (Vol. 4, Issue 43916).
- [5] Albert Gamot Malau, Sya'ad Afifuddin Sembiring, Rahmanta, Irsad (2022) The Impact of The Labor Market, Regional Minimum Wages, Investment on The Economic Growth of The Tertiary Sector in North Sumatra Province QUALITY Vol. 23, No. 191/ November 2022 290 Access to Succes DOI: 10.47750/QAS/23.191.33
- [6] Theresia Oktavia, (2019), Pengaruh Dana Desa terhadap tingkat kemiskinan, pengangguran dan tingkat Partipasi Angkatan kerja di Provinsi Kalimantan Barat, Jurna Pembangunan dan pemerataan Volume 8 Nomor 3. <https://jurnal.untan.ac.id/index.php/jcc/article/view/34046>
- [7] Bondi Arifin, Eko Wicaksono, Rita Helbra Tenrini, (2020) Village fund, village-owned-enterprises, and employment: Evidence from Indonesia. *Journal of Rural Studies* Volume 79 October 2020, Pages 382-394. <https://doi.org/10.1016/j.jrurstud.2020.08.052>
- [8] Harahap, N. (2018). Analisis Pengaruh Alokasi Dana Desa, Indeks Pembangunan Manusia dan Tenaga Kerja terhadap Pertumbuhan Ekonomi 10 Kabupaten di Sumatera Utara.

- [9] M.L.Jhingan (2018).*Ekonomi Pembangunan dan Perencanaan*, Penerbit Rajawali Pres Divisi Perguruan Tinggi PT. RajaGrafindo Persada Depok, 2018.
- [10] Sutyono, G., Rakhmadi, R., Muluk, S., & Mafira, T, (2018). Indonesia 's Village Fund: An Important Lever for Better Land Use and Economic Growth at the Local at the local level. <https://doi.org/Doi.10.1177/000992288302200202>
- [11] Eti Jumiat, (2020). 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*, Volume 1, Nomor 2, Desember 2020 ISSN 2722-7243 (c); 2722-8096 (e)
- [12] Prasetyo, Y., & Masdjojo, G.N. (2015). Implementasi kebijakan alokasi Dana Desa di 10 desa wilayah kecamatan rembang kabupaten rembang. *Prosiding Seminar Nasional Multi Disiplin Ilmu*.
- [13] Endang M, (2009), *Ekonomi Pembangunan*, Materi Pokok Ekonomi Pembangunan Penerbit Universitas Terbuka, 2009

DOI: <https://doi.org/10.15379/ijmst.v10i3.1536>

This is an open access article licensed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/3.0/>), which permits unrestricted, non-commercial use, distribution and reproduction in any medium, provided the work is properly cited.