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Impacts of Village Funds Share on Village Development Index in Bogor Regency, Indonesia

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ABSTRACT

Law Number 6 of 2014 concerning villages has positioned them as spearhead of development and improvement of community welfare. Village funds are allocated in the APBN to improve welfare and villages are given adequate authority and funding sources so that they can manage their potentials to reach such welfare whose indicators are described by *Indeks Desa Membangun* (IDM) or Village Development Index. This research aims to identify the impacts of village fund portion on such index in Bogor Regency. Using data panel approach, data series from 2017-2020, and cross-section, 416 villages are identified in the district. The estimation method used a fixed effect model and the estimation results show that village fund and village fund allocation have a significant positive effect on the development of village index; however, village fund allocations have greater impacts than village fund. Meanwhile, in regards to financial assistance, although it has a positive impact on the IDM in the district, it is not statistically significant. Currently, there are four villages with underdeveloped status, implying that the village development that has been carried out so far has not met expectation, therefore a development acceleration is needed by increasing village fund allocation. In parallel, provincial and district financial assistance are still needed to accelerate the status of the underdeveloped villages to become developed ones.

Keywords: IDM, village fund, village fund allocation, financial assistance

INTRODUCTION

A village could mean a village and a customary village or what is referred to by another name, hereinafter referred to as a village; it is a legal community unit that has territorial boundaries that are authorized to regulate and manage government affairs, local community interests based on community initiatives, origin rights, and/or traditional rights recognized and respected in the system of government of the Unitary State of the Republic of Indonesia. With the ratification of Law no. 6 of 2014 concerning villages, all interests and needs of village communities can be better accommodated. Providing greater opportunities for villages to manage their own governance as well as equitable implementation of development is expected to improve the welfare and quality of life of rural communities, so that problems such as regional disparities, poverty, and other socio-cultural problems can be minimized.

One of the measuring tools for assessing village performance is to use the *Indeks Desa Membangun* (IDM) or village development index measures. The regulation that underlies the use of the IDM is the Regulation of the Minister of Villages for Development of Disadvantaged Regions and Transmigration Number 2 of 2016 concerning the IDM. Index calculations for each dimension are carried out using a scoring method which is then transformed into an index.

$$I_x = \frac{\sum_i^n Skor\ x}{n_x \text{ x } 5}$$

Where Ix is the index, and n is the number of indicators. The IDM calculation is generated from the average Social Resilience Index, Economic Resilience Index, and Environmental Resilience Index which is calculated by the formula:

$$IDM = \frac{IKS + IKE + IKL}{3}$$

where IDM refers to *Indeks Desa Membangun* (or Village Development Index), IKS to *Indeks Ketahanan Sosial* (or Social Resilience Index), IKE to *Indeks Ketahanan Ekonomi* (or Economic Resilience Index), and IKL to *Indeks Ketahanan Lingkungan* (or Environmental Resilience Index). The status of success in IDM is seen from five categories, namely, underdeveloped village with an IDM value of ≤ 0.4907, underdeveloped villages with an IDM value of 0.4907 < IDM < 0.5989, developing village with an IDM value of 0.5989 < IDM < 0.7072, developed village with an IDM value of 0.7072 < IDM < 0.8155, and independent village with an IDM value of IDM > 0.8155.

The classification of village status aims to determine developmental status and recommendations for policy interventions that need to be carried out. Approaches and interventions that can be applied to the *very underdeveloped village* status differs in the level of policy affirmation compared to the *underdeveloped village* status and so on. Of the three dimensions (economic, social, and environmental dimensions), the low IDM in Bogor district is dominated by the slow economic development in rural areas. As an implication, rural economic empowerment has strategic value in the context of overall economic development.

Since the issuance of Law No. 6 of 2014 concerning villages, the village government is mandated to be more independent in managing government with its natural resources, including the management of village-owned finances and assets. In addition to village funds, according to Law No. 6 of 2014 concerning Villages Article 72, villages have Village Original Income and Transfer Income in the forms of Village Fund Allocations, Share of Regency/ Municipal Taxes, and Levies, and Financial Assistance from Provincial/District/City APBD. The big role received by the village is accompanied by great responsibility as well, and it is hoped that it will improve the welfare of the community which can be described through the IDM indicator.

The biggest source of village income in general comes from Village Fund Allocations, Village Funds, and Financial Assistance from provinces/districts, all of which are included in the Village Fund Section category. Referring to this description, this study aims to determine the impact of the Village Fund Section on village development performance. Village development performance is represented by the IDM in all villages in Bogor district.

MATERIALS & METHODS

Wooldridge divides data into four groups starting with a cross-section, time series, pooled cross-section, and panel or longitudinal data.[1] Generally, the available data is in the form of a series, because it can show the results obtained/achieved from the policies that were decided and implemented some time ago. In this study, cross-sectional data are combined with time series data known as pooled cross-section. The villages represented from the cross-section and series are taken from 2017 to 2019. The two data are combined so that the research sample becomes larger.

Batalgi proposes seven advantages of using panel data are (1) to control individual heterogeneity, (2) to provide greater information about data, more variety, (3) relate between variables, greater degrees of freedom and more efficiency, (4) to learn more capable dynamic adjustments, (5) to better identify and measure, which simply cannot be detected in pure cross-section or time series data, (6) to allow model for

researchers to build and test models more complex behavior than pure cross-section and time series data, and (7) to collect general data at the micro level.[2] The general mathematical model of panel data is generally written as:

$$Y_{it} = \alpha + \beta\, X'_{it,k} + u_{it} \quad (1)$$

where subscripts *i*, and *t* refer to cross-section and time-series dimensions, and *k* is an explanatory variable. The α is the scalar matrix, β is the dimension of K × 1, and the *Xit* is the *ith* observation of the explanatory variables in K explanatory variables. The unit term is referred to as the composite error term, which can be broken down into two components, namely cross-sectional unit-specific error, μ, and remainder disturbance or idiosyncratic error, and v_{it} (Baltagi)[2] as written in the following:

$$u_{it} = \mu_i + v_{it} \quad (2)$$

The cross-sectional unit-specific error, μ_i, does not change with time and the idiosyncratic error or remainder disturbance, v_{it}, varies with cross-sectional units and time (Gujarati[3], Wooldridge[1]). By combining equation (1) and (2) we can rewrite equation (3) as follows:

$$Y_{it} = \alpha + \beta\, X'_{it,k} + \mu_i + v_{it} \quad (3)$$

Equation (3) is referred to as the error component model. Time-constant and unit-specific error, μ_i, are unobserved factors. The μi is time-invariant and it can be calculated for any individual-specific effect that is not included in the regression. The error component model estimation method is grouped on how to treat the error term, the pooled OLS model does not distinguish this from other types of errors, while the fixed effect model considers it a coefficient to be estimated, and the random effect model treats it as a random variable.[2]

Model Selection

To choose the appropriate model about whether individuals have the "same intercept" or some have different intercepts, the F-test is used. The hypothesis compiled is displayed in (3):

H_0 : *pooled model* (all intercepts are restricted the same), as in the following:

$$Y_{it} = \alpha + \beta\, X'_{it,k} + u_{it}$$

H_1 : *fixed effect model* (*intecept* may be different and unrestricted)

$$Y_{it} = \alpha_i + \beta\, X'_{it,k} + u_{it}$$

If the test is applied to all coefficients (including constants/intercepts), then the model restriction is pooled model (OLS). If the test is applied to all coefficients other than constants/intercepts then the restriction model is a fixed one-way model with cross-sectional fixed effects. If *k* is the number of regressors except constants, the degree of freedom of the unrestricted model is df_u = M – N (*k* + 1). If the restricted constants are the same, the degrees of freedom model restricted is *df*r = M – *k* – 1 and the number of restrictions is *q* = (N – 1) (*k* + 1). If the restriction model is the fixed one-way model, the degrees of freedom are *df*r = M – k – N and the number of restrictions is *q* = (N – 1) *k*. So, the F statistical test is shown in (4):

$$F = \frac{SSE_r - SSE_u/q}{SSE_u/df_u} \sim F(q, df_u) \quad (4)$$

Where SSE_r is the sum of squares errors from the restricted model (pooled regression) and SSE_u is the sum of squares errors from the unrestricted fixed-effects model. For large *N* and *T*, the chi-squares distribution can be used to estimate the limitations of the distribution, and can be written in (5):

$$qF \rightarrow \chi^2(q) \quad (5)$$

This test is the same as Chow's test[4] which is extended for capital *N* in linear regression. To determine the suitability of the model, whether the model estimation uses a random effect or a fixed effect, the Hausman test is used. Hausman's hypothesis is shown below:

H_0: *random effect model*, including

$$Y_{it} = \beta_0 + \beta\, X'_{it,k} + \alpha_i + u_{it}$$

H_1: *fixed effect model*, covering

$$Y_{it} = \alpha_i + \beta\, X'_{it,k} + u_{it}$$

According to Hausman & Taylor [5], Hausman H_0 test mentions that x_{it} and α_i are uncorrelated. So, it is necessary to compare the two estimator results; suppose $\hat{\beta}_e$ and $\hat{\beta}_c$ and where H_0 are both consistent, but only efficient. H_1 is just consistent $\hat{\beta}_c$. The m statistics is shown in (6):

$$m = \left(\hat{\beta}_c - \hat{\beta}_e\right)' \left(\hat{\Sigma}_c - \hat{\Sigma}_e\right)^{-1} \left(\hat{\beta}_c - \hat{\beta}_e\right) \quad (6)$$

Where $\hat{\Sigma}_c$ and $\hat{\Sigma}_e$ the matrix covariance estimation of $\hat{\beta}_c$ and $\hat{\beta}_e$. The m statistics follows a χ^2 distribution with k degrees of freedom, where k is the rank of $\left(\hat{\Sigma}_c - \hat{\Sigma}_e\right)^{-1}$.. This rank normally equals the $\hat{\beta}_c - \hat{\beta}_e$ dimension, but decreases when the regressor constant in cross-sections is removed from the fixed effect model. The null hypothesis is that the effect is independent of the regressor. The null hypothesis, the fixed-effect estimate is consistent but inefficient, while the random-effect estimate is both consistent and efficient. Failing to reject the null hypothesis means supporting the random-effect model specification.

Data and Data Sources

The type of data used in this study is secondary one with a time series from 2017 to 2020 and the cross-sections represent 416 villages in Bogor district. Sources of data in this study were obtained from several related agencies, namely the Community and Village Empowerment Service and the Bogor District Central Bureau of Statistics (BPS) and the Ministry of Villages.

RESULT AND DISCUSSION

Village income

Sources of village income that must be included in the APBDes covers all money received through the village account which is the right of the village in one fiscal year and which does not need to be repaid by the village. Village income from village original income (PADes) consists of business results (BUMDesa results, village treasury land), of asset returns (boat moorings, village markets, public baths, irrigation networks), of self-help, participation and mutual cooperation (building with their own strength involving community participation in the form of labor, goods valued in money), and of other village original income (results of village levies).

Apart from PADes, other village income is part of village funds coming from transfers, such as, village funds, share of district/city as regional tax results and regional levies, allocation of village funds (ADD), financial assistance from provincial APBD, and district/city APBD financial assistance. Since the enactment of Law No. 6 of 2014 concerning villages, followed by its derivative regulations, including regulations governing village revenue sources, villages are encouraged to be able to carry out governance and village development in a participatory, deliberative-based manner, from the planning process, implementation to reporting. In practice, related to village revenue sources, district/city governments according to the mechanism in PP No. 60 of 2014, receive village funds which are then forwarded to villages. Receipt of village funds from the state general cash account (RKUN or *rekening kas umum negara*) to the regional general cash account (RKUD or *rekening kas umum daerah*) are recorded as transfer income-other transfer income, while distribution to villages is recorded as transfers to villages.

The next source of village revenue is the district/city government allocating village fund allocations (ADD) in the APBD each fiscal year, the minimum amount of which is 10 percent of the balancing funds received by the district/city in the APBD after deducting the special allocation funds. The procedure for allocating ADD is regulated in a regent/mayor regulation. Furthermore, the district/city government also allocates a share of the district/city regional tax and

levies revenue to the village in the APBD each fiscal year, the minimum amount of which is 10 percent of the actual district/city regional tax and levies revenue. The procedure for allocating a portion of the proceeds from district/municipality regional taxes and levies to villages is regulated in a regent/mayor regulation. In addition, district/city governments can provide financial assistance to villages, sourced from the district/city APBD. The district head/mayor shall inform the village about the ADD plan, the sharing of district/city taxes and levies for the village, as well as financial assistance sourced from the district/city APBD within 10 days after the KUA and PPAS have been agreed upon by the regional head and DPRD. For the village government, this information is used as one of the ingredients for drafting the village APB.

The distribution of ADD and a share of the proceeds from regional taxes and district/city regional levies from districts/cities to villages is carried out in stages, and is regulated in regent/mayor regulations based on ministerial regulations. The distribution of financial assistance sourced from the district/city APBD to villages is carried out in accordance with the provisions of laws and regulations. Concerning the development of receiving village share funds in Bogor Regency over a period of 5 years, the average total village income has increased. In 2015, the share of villages amounted to IDR 574.10 billion to IDR 1,087.50 trillion in 2019 or an increase of approximately 50 percent spread across 416 villages in Bogor Regency (more details can be seen in Table 1).

Table 1. Village revenue sources in Bogor Regency for 2015-2019 (in Rp Billion)

Sources of Village Income	2015	2016	2017	2018	2019
Allocation of village funds (ADD)	236,42	213,91	215,99	219,37	263,29
Local tax	77,05	103,66	127,52	150,03	162,90
Regional retribution	5,61	5,67	7,97	8,03	4,99
Regional tax and retribution sharing	82,66	109,33	132,96	158,06	167,89
Village facilities and infrastructure	1,68	0,75	0,10	0,00	0,00
Village alert vehicle	19,05	0,00	8,48	0,00	0,00
Village infrastructure	21,70	8,55	12,34	0,00	0,00
Village fund (DD)	129,94	291,82	376,70	402,07	488,43
Total	574,10	733,69	882,07	937,55	1.087,50

Source: DPMD Bogor Regency, 2020 (processed)

Next, we can see the distribution accumulation of the village share of fund receipts by sub-district. The development of receiving village funds is based on the sub-district needs to be considered, considering that the sub-district is an area that is an extension of the regional government that is given the task and authority in fostering and supervising the village; in this regard, the greater the receipt of village funds in the sub-district area is, the greater the responsibility for coaching and supervision is. Figure 1 shows that the average share of village funds received by sub-district averages of IDR 12.52 billion.

The lowest share of village funds is received by three sub-districts, such as, Tajur Halang, Bojong Gede, and Tenjolaya, while the highest three sub-district village shares were Cigudeg, Jasinga and Rumpin sub-districts. This description shows that the orientation of rural development in Bogor Regency regionally at that time was oriented towards the western part of Bogor; this was possibly considering that the western part of Bogor compared to the central and eastern parts was somewhat behind in terms of development progress.

In addition, when viewed in terms of acquisition value, each sub-district has a very varied value even though the trend continues to increase every year; from the existing data, the conditions that affect this variation in value are influenced by the amount of financial assistance received by villages in the region. the sub-district, and this is in line with the annual policies and priorities set by the local government listed in the regional government work plans in those years. Thus, it would be natural if the annual priority

would affect the amount of village funds in the sub-district, in other words, regional development priorities greatly affect the amount of village funds received, because the village area in Bogor Regency is the locus of development.

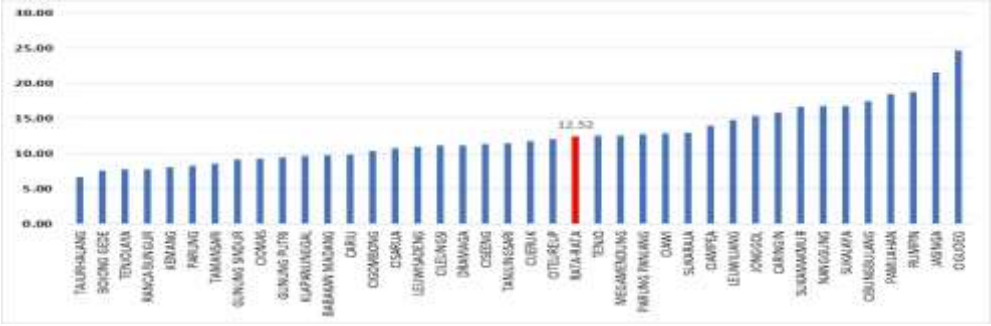

Figure 1. Accumulation of village fund receipts from sub-district in Bogor Regency in 2019 (in Rp Billion)
Source: DPMD Bogor Regency, 2020 (processed)

Thriving the village development index

The IDM is a measure of the success of village development in Bogor Regency as described in Table 2. Three indexes that make up the IDM are the IKS, IKE, the resilience index, and environment/ecology. The component making the lowest contribution to the formation of IDM refers to IKE, but from 2019-2020 there has been an increase. The developing status (still in the threshold range of 0.5990-0.7072) only takes a value of 0.0073 to reach advanced status, with just a touch of programs/interventions in the economic sector and the IDM status of Bogor Regency increases.

Table 2. Development of indicators forming the IDM in Bogor Regency, 2016-2020

Year	Endurance Index			IDM
	Social	Economy	Environment	
2016	0,7025	0,5692	0,6154	0,6332
2017	0,7171	0,5747	0,6201	0,6385
2018	0,7172	0,5745	0,6205	0,6374
2019	0,8120	0,6393	0,6240	0,6752
2020	0,8183	0,6518	0,6303	0,7001

Source: DPMD Bogor Regency, 2020 (processed).

The IDM achievements in Bogor Regency are certainly inseparable from IDM achievements based on sub-districts in the region, but, in general, the description of the status of sub-district IDM is the same as the status of district IDM, namely, the average is in developing status, and to see the average IDM achievements by sub-district can be seen in Fig. 2. In case of their distribution, the Cileungsi, Citeureup, and Gunungputri sub-districts get the highest IDM scores in which they have several villages obtaining the status of independent villages; while, the Sukajaya, Jasinga, Tanjungsari, and Tenjo sub-districts posit in the lowest IDM score.

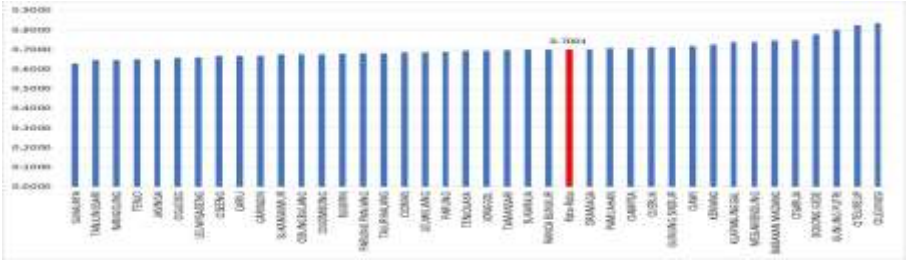

Figure 2. Average of village development index of sub-districts in Bogor Regency in 2020
Source: DPMD Bogor Regency, 2020 (processed).

IDM development

Village funds tend to increase from 2015-2019 and the same applies to the IDM indicator and the relationship between the village fund and IDM in Bogor Regency is shown in Fig. 3. The trend to increase village funds is marked by higher IDM indicators, hence, village funds have a positive relationship with IDM. This is very reasonable because an increase in village funds tends to be followed by an increase in IDM. The estimation results prove that village funds, village fund allocations, and financial assistance have a positive impact on IDM (Table 6). The estimation method uses the fixed effect model with the help of the SAS 9.4 software application. The stages of estimation and some statistical indicators in selecting the fixed effect model method in shown in Table 3.

The R^2 and degrees of freedom are shown in Table 3 and the R^2 statistic value is 0.7128 indicating the model is appropriate and fits for the existing model and data. Thus, the explanatory variables of village funds, village fund allocations, and financial assistance are able to explain changes in village IDM in Bogor Regency by 71.28 percent, and around 28.12 percent are explained outside the model. Error degrees of freedom are obtained from 1664 observations minus 1248 cross sections and minus 3 regressors (df = 1664-1248-3 = 1245).

The F test values for the fixed effects model are shown in Table 4 and this test indicates significant at the 99 percent confidence level. So, we can reject the null poolability hypothesis; in other words, we accept H_1, namely the fixed effect model since both IDM variables have different variants between villages. The occurrence of heterogeneity between villages in the IDM data indicates that each village has its own invisible effect and influences the regression model, so, modeling by pooled OLS regression or common effect models which assumes no specific effect from each village is not appropriate because these assumptions have been violated. This is in accordance with the results of the Chow test that the fixed effect model is a better model than the common effect model. In addition to the F test, the results of the Breusch-Pagan's test[6] (see Table 5) also confirm that the fixed effect model is the most appropriate.

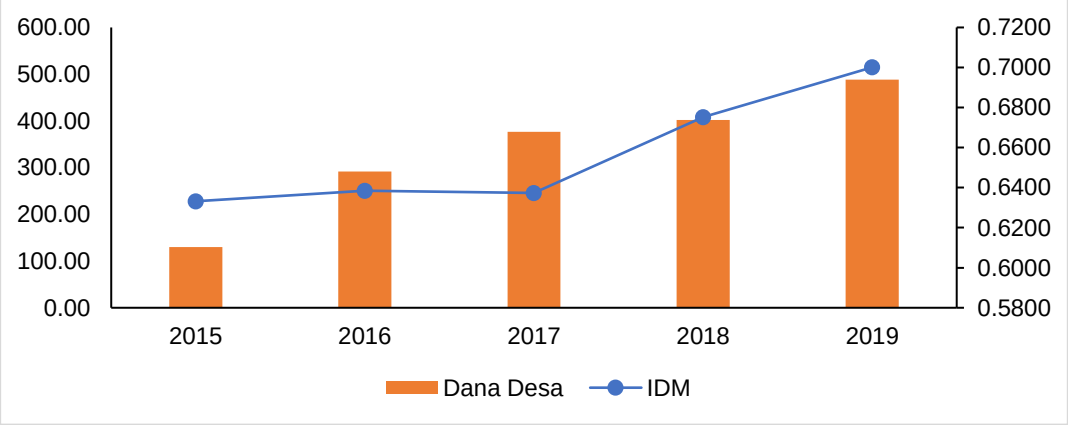

Figure 3. Relationship between village funds and IDM in Bogor Regency in 2015-2019
Source: DPMD Bogor Regency, 2020 (processed)

Table 3. R^2 value and degree of freedom of estimation results from fixed effect model

Fit Statistics			
SSE	2,5554	DFE	1245
MSE	0,0021	Root MSE	0,0453
R^2	0,7128		

Source: Primary data (processed).

Table 4. F test value for testing the fixed effect model

F *Test for No Fixed Effects*			
Num DF	**Den DF**	**F *Value***	**Pr > F**
415	1245	5,4900	<,0001

Source: Primary data (processed).

Table 5. Breusch Pagan test results

Breusch Pagan *Test for Random Effects* (*One Way*)		
DF	**m *Value***	**Pr > m**
1	446,1300	<,0001

Source: Primary data (processed).

Because the selected estimation model is the fixed effect model, further testing is required to test the Hausman test which is useful to determine the most appropriate model to use, whether it is a fixed effect or a random effect. The results of the Hausman test [5] (see Table 6) show that the value of the probability statistics *m* has a significant value at the 99 percent level indicating that the appropriate estimation method for the existing data is the fixed effect model.

Table 6. Hausman test results

Hausman *Test for Random Effects*			
Coefficients	**DF**	**m *Value***	**Pr > m**
3	3	199,9000	<,0001

Source: Primary data (processed).

In principle, the Hausman test is required in order to determine whether the error component is correlated or treated as a random variable. These significant results indicate that there is a correlation between the residuals and the IDM variable. So, the assumptions for the random effect model have been violated by the correlation, and the fixed effect model is more appropriate to use. The estimation results with the fixed effect model are shown in Table 7.

When using SAS 9.4 software, the Printfixed option in the model statement provides an estimation of effects (by default the panel procedure in SAS 9.4 is all displayed, but in this study not all are shown in Table 7). The intercept parameters of the fixed effect model between villages are different and statistically significant. The estimation results show that village funds significantly affect village IDM in Bogor Regency at the 99 percent confidence level. A 10 percent increase in village funds will increase IDM by 0.5 percent. From findings of Sitepu et al.[7], where their research aims at the impact of village funds on poverty and regional economic growth, and where the fixed effect model with pooled data series for 2015-2019 is used, the results show that village funds have a positive impact on regional economic growth and are statistically significant and can reduce poverty rates. Although not statistically significant, village funds are further recommended to have a better impact on economic performance in village areas; village funds should be directed to economic activities and community empowerment.

Sofianto's findings [8] show that village funds contribute in increasing village community accessibility and community participation in development. Meanwhile, Aghnia,[9] whose research aims to determine the effect of village funds on poverty alleviation in Indonesia using the panel data analysis method, found that village funds have a significant positive effect on poverty alleviation in Indonesia. Artino,[10] in his research using the Moran Index to look at spatial patterns of poverty, found that there is a relationship between the percentage values of the poor among villages in North Lombok Regency, and the pattern of poverty that is formed is clustered. Bili and Ra'is[11] also found that village funds had a positive impact on the people of Mulyoagung village.

Firmansyah et al. looked at the influence of village funds on village development and empowering village communities using mixed methods, qualitative and simple linear regression; the results of which show that the management and distribution of village funds that are right on target can have an impact on progress.[12] Village development and village community empowerment are able to encourage the development of community independence and to increase the welfare of village communities. Sunu and Utama [13] argues that village funds have a negative and significant effect on the poverty rate. This means that the higher the village fund is, the lower the poverty rate is and village funds have a positive and significant effect on community welfare. The higher the village funds is, the higher the welfare of the people in the area is, but this is different from the findings of Wibowo et al.[14] where the allocation of village funds has an impact on improving the output of infrastructure, education, and health services, as well as

improving economic outcomes, but it can improve welfare indicators.

Table 7. Parametric estimation of IDM in Bogor Regency

Parametric Estimation						
Variable	**DF**	**Estimate**	**Standard Error**	**t Value**	**Pr > |t|**	**Label**
CS1	1	0,0399	0,0323	1,2300	0,2173	Cross Sectional Effect 1
CS2	1	0,2396	0,0325	7,3700	<,0001	Cross Sectional Effect 2
CS3	1	0,2287	0,0323	7,0800	<,0001	Cross Sectional Effect 3
CS12	1	0,1897	0,0321	5,9100	<,0001	Cross Sectional Effect 12
CS22	1	0,1381	0,0321	4,3100	<,0001	Cross Sectional Effect 22
CS75	1	0,1670	0,0320	5,2100	<,0001	Cross Sectional Effect 75
CS103	1	0,1425	0,0321	4,4400	<,0001	Cross Sectional Effect 103
CS104	1	0,1324	0,0321	4,1200	<,0001	Cross Sectional Effect 104
CS122	1	0,1403	0,0323	4,3400	<,0001	Cross Sectional Effect 122
CS123	1	0,1302	0,0321	4,0500	<,0001	Cross Sectional Effect 123
CS125	1	0,2235	0,0324	6,9000	<,0001	Cross Sectional Effect 125
CS126	1	0,0426	0,0321	1,3300	0,1850	Cross Sectional Effect 126
CS221	1	-0,0962	0,0322	-2,9800	0,0029	Cross Sectional Effect 221
CS237	1	-0,0559	0,0322	-1,7400	0,0824	Cross Sectional Effect 237
CS246	1	-0,1581	0,0321	-4,9200	<,0001	Cross Sectional Effect 246
CS248	1	-0,0694	0,0321	-2,1600	0,0309	Cross Sectional Effect 248
CS264	1	0,1049	0,0321	3,2700	0,0011	Cross Sectional Effect 264
CS267	1	0,1304	0,0321	4,0600	<,0001	Cross Sectional Effect 267
CS268	1	0,0668	0,0321	2,0800	0,0376	Cross Sectional Effect 268
CS284	1	0,1665	0,0321	5,1900	<,0001	Cross Sectional Effect 284
CS286	1	0,1680	0,0322	5,2200	<,0001	Cross Sectional Effect 286
CS287	1	0,1252	0,0321	3,9100	<,0001	Cross Sectional Effect 287
CS339	1	0,1164	0,0322	3,6100	0,0003	Cross Sectional Effect 339
CS393	1	0,1180	0,0321	3,6800	0,0002	Cross Sectional Effect 393
Int	1	-3,8984	0,2233	-17,4600	<,0001	Intercept
DDes	1	0,0501	0,0098	5,1900	<,0001	Village funds
ADes	1	0,1733	0,0134	12,9000	<,0001	Village funds allocation
BKeu	1	0,0007	0,0005	1,5900	0,1122	Financial assistance

Source: Primary data (processed).

In essence, the same findings have been produced by several other researchers such as Arifiani,[15] Tangkumahat et al. [16] which generally explain that village funds have a positive impact on rural economic development. This is different from the research findings of Ernita and Sari.[17] Their research aims to determine the effect of the use of village physical development funds on reducing the poverty rate in Jangka District of Bireuen Regency and uses the multiple linear regression analysis method. The results show that the amount of budget and the number of physical development facilities in the village does not affect the poverty rate; the same thing is done by Triyono[18] stating that the value of the village fund budget has no effect on poverty. In general, researchers have previously conducted research on village funds, on impact on village performance which is described by changes in poverty, on economic growth, and on infrastructure development, the results are relatively the same and support the findings in this study, like Lalira et al.[19], Sari and Abdullah[20], Arfiansyah[21], Dewi and Irama[22], Sunu and Utama[13], Muslihah et al.[23], and Gani et al.[24]. However, several researchers (Azwardi & Sukanto[25], Rimawan & Aryani[26]) found different things, where the results are still unidirectional and make economic sense but not statistically significant.

The ADD, which is part of the village funds allocated by the Bogor Regency Government, significantly influences the development of IDM at the 99 percent confidence level. Village fund allocation by 10 percent increases the IDM value by 1.73 percent. The same results are found by Afrilianto[27] in his research aimed to analyze the impact of ADD on economic growth in Bogor Regency using a panel data econometric model covering 39 sub-districts; he found that variables that had a significant positive effect on economic growth are ADD and the number of labor force. The same

findings are also carried out by Muslihah et al. [23] who explained that there were significant differences in physical development and community welfare before and after village funds are available and given.

These results indicate that the provision of village funds by the government has an impact on physical development and community welfare in Bantul Regency (a special region in Yogyakarta). Financial assistance has had a positive impact on the development of IDM in Bogor regency, although it is not statistically significant at the 95 percent confidence level. Financial assistance from both the province and Bogor regency is generally intended for programs for developing village facilities and infrastructure and overall infrastructure improvement.

CONCLUSION

The IDM achievements of villages in Bogor regency in 2020 show a significant increase compared to 2019. Of 416 villages, 29 are included in the category of independent status, and 131 are in the category of advanced village status, 252 are under developing village status, four villages, like, Wirajaya in Jasinga district, Cilaku in Tenjo district and two villages, such as, Sukarasa and Buanajaya in Tanjungsari district are under underdeveloped village status. These results imply that the village development that has been carried out so far has not met expectations, so, it is necessary to accelerate the increase in IDM through an increase in the allocation of village funds. Financial assistance from province/district is also still needed to accelerate the status from underdeveloped villages into developing ones.

Declaration by Authors

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REFERENCES

1. Wooldridge, J. M. Introductory Econometrics: A Modern Approach. *5th ed.*, United States of America: Mason South-Western; 2012: p.1-19.
2. Baltagi, B. H. Econometric analysis of panel data, *2nd ed.*, New York: John Wiley & Sons; 2001: p.1-9.
3. Gujarati, D. N. Basic econometrics, *4th ed.*, New York: McGraw Hill; 2004: p. 636-655.
4. Chow, G. Tests of equality between sets of coefficients in two linear regressions. Econometrica. 1960; 28: 531–534.
5. Hausman, J. A. & Taylor, W. E. A generalized specification tests. Economics Letters. 1982; 8: 239–245.
6. Breusch, T. S. & Pagan, A. R. The lagrange multiplier test and its applications to model specification in econometrics. Review of Econometric Studies. 1980; 47: 239–253.
7. Sitepu, R. K. K., Pongsitanan, M., Ariyani, N, & Rosyari, F. R. Dampak dana desa terhadap kemiskinan dan pertumbuhan ekonomi daerah. Sosial dan Ekonomi Pertanian. 2019; 13(2): 87–101.
8. Sofianto, A. Kontribusi dana desa terhadap pembangunan dan pemberdayaan masyarakat di Kebumen dan Pekalongan. Matra Pembaruan. 2017; 1(1): 23-32
9. Aghnia, N. L. Pengaruh Dana Desa dalam Pengentasan Kemiskinan di Indonesia. [Skripsi]. Bogor: Fakultas Ekonomi dan Manajemen Institut Pertanian Bogor; 2018.
10. Artino, A. Keterkaitan Dana Desa Terhadap Kemiskinan di Kabupaten Lombok Utara. [Thesis]. Bogor: Sekolah Pascasarjana Institut Pertanian Bogor; 2017.
11. Bili, S. R & Ra'is, D. U. Dampak dana desa terhadap pemberdayaan masyarakat. JISIP: Jurnal Ilmu Sosial dan Ilmu Politik. 2017: 6(3): 38-45.

12. Firmansyah, D., Susetyo, D. P. & Sumira, M. Dampak dana desa terhadap pembangunan desa dan pemberdayaan masyarakat desa pada Desa Cibitung Kecamatan Sagaranten Kabupaten Sukabumi. Jurnal Akuntansi Berkelanjutan Indonesia. 2020; 3(2): 168-181.
13. Sunu, M. K. K. & Utama, M. S. Pengaruh dana desa terhadap tingkat kemiskinan dan kesejahteraan masyarakat di kabupaten/kota Provinsi Bali. E-Jurnal Ekonomi dan Bisnis Universitas Udayana. 2019; 8(8):843-872.
14. Wibowo, H., Mulya., I. T. & Mujiwardhani, A. Dampak alokasi dana desa bagi pembangunan daerah dan kesejahteraan masyarakat. Jurnal Anggaran dan Keuangan Negara Indonesia (AKURASI). 2019; 1(2): 164-178.
15. Arifiani, T. A. Analisis Respon Masyarakat Terhadap Pengelolaan Dana Desa untuk Pembangunan Pedesaan (Desa Pesantren, Kecamatan Ulujami, Kabupaten Pemalang). [Skripsi], Bogor: Fakultas Ekologi Manusia Institut Pertanian Bogor; 2017.
16. Tangkumahat, F. V., Panelewen, V. V. J., & Mirah, A. D. P. Dampak program dana desa terhadap peningkatan pembangunan dan ekonomi di Kecamatan Pineleng Kabupaten Minahasa. Agri-Sosio Ekonomi Unsrat. 2017; 13(2A): 335 – 342.
17. Ernita & Sari C. P. M. Pengaruh penggunaan dana pembangunan fisik desa terhadap pengurangan tingkat kemiskinan di Kecamatan Jangka Kabupaten Bireuen. Jurnal Ekonomika Indonesia. 2019; 8(1): 29-39.
18. Triyono, A. Pengaruh lokasi dana desa dan program pembangunan desa terhadap kesejahteraan masyarakat di Desa Bukit Lipai Kecamatan Batang Cenaku. Jurnal Manajemen dan Bisnis. 2018; 7(01): 42–55.
19. Lalira, D., Nakoko, A. T. & Rorong I. P. F. Pengaruh dana desa dan alokasi dana desa terhadap tingkat kemiskinan di Kecamatan Gemeh Kabupaten Kepulauan Talaud. Jurnal Berkala Ilmiah Efisiensi. 2018; 04(8): 62-72.
20. Sari, I. M. & Abdullah M. F. Analisis ekonomi kebijakan dana desa terhadap kemiskinan desa di Kabupaten Tulungagung. Jurnal Ekonomi Pembangunan. 2017; 1(12): 34-49.
21. Arfiansyah, M. A. Dampak dana desa dalam penanggulangan kemiskinan di Jawa Tengah. Jurnal Studi Islam dan Sosial. 2020; 1(1): 91-106.
22. Dewi, R. S & Irama, O.N. Pengaruh alokasi dana desa terhadap kemiskinan: studi kasus di Provinsi Sumatera Utara. Jurnal Akuntansi dan Bisnis. 2014; 4(2): 11-18.
23. Muslihah, S., Siregar, H. O. & Sriniyati. Dampak alokasi dana desa terhadap pembangunan dan kesejahteraan masyarakat desa di Kabupaten Bantul Daerah Istimewa Yogyakarta. Jurnal Akuntansi, Ekonomi dan Manajemen Bisnis. 2019; 1(7): 85-93.
24. Gani, A. O. A., Gani. A., Arief, M. Dampak penggunaan dana desa terhadap indikator ketahanan sosial, ekonomi dan ekologi desa tertinggal Kecamatan Bulukumpa Kabupaten Bulukumba. Paradoks. 2020; 1(3): 78-88.
25. Azwardi & Sukanto. Efektifitas alokasi dana desa (ADD) dan kemiskinan di Provinsi Sumatera Selatan. Jurnal Ekonomi Pembangunan. 2014; 1(12): 29-41.
26. Rimawan, M & Aryani, F. Pengaruh alokasi dana desa terhadap pertumbuhan ekonomi, indeks pembangunan manusia serta kemiskinan di Kabupaten Bima. Jurnal Ilmiah Akuntansi dan Humanika. 2019; 3(9): 287-295.
27. Afrilianto, A. G. Analisis dampak alokasi dana desa terhadap pertumbuhan ekonomi di Kabupaten Bogor. [Skripsi] Bogor: Fakultas Ekonomi dan Manajemen Institut Pertanian Bogor; 2017.

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