

BUDGETING POLICY FOR DEVELOPING AGRICULTURAL SECTORS IN GORONTALO PROVINCE

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ABSTRACT

This research aims to (1) analyze the orientation of agricultural sector policy for developing agricultural sectors and GRDP of the sectors in districts/cities in Gorontalo Province and (2) analyze the impact of general allocation fund (DAU), special allocation fund (DAK), and co-administration fund from the Ministry of Agriculture on the GDRP of agricultural sectors in districts/cities in Gorontalo Province. This was quantitative research using secondary data from the official website of Statistics Indonesia (BPS), Directorate General of Regional Fiscal Balance, and Bappeda (Local Development Planning Agency) in districts/cities in Gorontalo Province. Findings indicate that (1) the Incremental Capital Output Ratio (ICOR) for Gorontalo Province was 0.016 and that for districts/cities in Gorontalo Province was 0.086. ICOR less than 1 implied that investments in agricultural sectors should be elevated to enhance gross regional domestic products (GDRP) in the sectors in districts/cities in Gorontalo Province. Investments should be focused on the effective and efficient use of agricultural technology in agricultural domains and (2) general allocation funds (DAU), special allocation funds (DAK), and co-administration funds (TP) from the Ministry of Agriculture simultaneously had a significant impact on gross regional domestic products (GDRP) of agricultural sectors in districts/cities in Gorontalo Province at a determinant value of 97.019%. Meanwhile, it was partially figured out that general allocation funds (DAU) and co-administration funds (TP) from the Ministry of Agriculture had a positive significant impact on gross regional domestic products (GRDP) of agricultural sectors in districts/cities in Gorontalo Province.

Keywords: *GRDP of The Agricultural Sector, DAU, DAK, Co-Administration Fund*

INTRODUCTION

Agricultural sectors have a crucial role in the national economy as most Indonesian people greatly depend on the sectors. Ironically, public appreciation of the sectors was relatively lower than that of other sectors, e.g., industrial, mining, and trading (Julia, 2016:3).

In general, agricultural sectors are the most preeminent in Gorontalo Province and have the largest contribution in gross regional domestic products. However, several districts, in which we can find the most agricultural

activities, such as Boalemo, Gorontalo District, and Pohuwato, contribute to the highest poverty level in Gorontalo Province.

This issue is due to ineffective programs or budgeting for agricultural sectors or other ground issues which lack evaluations of the provincial or central governments or the Ministry of Agriculture.

Accordingly, we were interested in carrying out research titled “**Budgeting Policy for Developing Agricultural Sectors in Gorontalo Province**”.

RESEARCH METHODS

This research was conducted in districts/cities in Gorontalo Province in March-September 2020. Data were analyzed using the ICOR and double regression analyses.

RESEARCH FINDINGS

A. The Orientation of Agricultural Sectors Policy for Developing Agricultural Sectors and GDRP of the Sectors

1. Incremental Capital Output Ratio (ICOR) Analysis

Table 1 indicates the results of the Incremental Capital Output Ratio (ICOR) analysis.

Table 1. The Results of ICOR Analysis

No.	Year	ICOR of Gorontalo Province						
		PROV	CITY	GTLO	BLMO	PHWT	BNBL	GORUT
1	2011	0.016	0.171	0.017	0.020	0.016	0.024	0.020
2	2012	0.018	0.494	0.012	0.016	0.015	0.017	0.013
3	2013	0.014	0.993	0.012	0.018	0.014	0.016	0.012
4	2014	0.016	0.735	0.013	0.020	0.014	0.014	0.019
5	2015	0.024	0.781	0.026	0.022	0.022	0.018	0.014
6	2016	0.016	0.161	0.017	0.018	0.015	0.014	0.011
7	2017	0.011	0.313	0.011	0.015	0.013	0.013	0.010
8	2018	0.013	0.131	0.012	0.014	0.014	0.017	0.012
9	2019	0.016	0.142	0.013	0.013	0.017	0.019	0.014
Average		0.016	0.436	0.015	0.017	0.015	0.017	0.014

Source: Data processed, 2020

The mean of ICOR of Gorontalo Province was 0.016, indicating that the province should invest 0.016 billion Rupiahs to earn a GRDP of 1 billion Rupiahs.

The results of ICOR analyses in districts/cities in Gorontalo Province are described in detail as follows:

a. Gorontalo City

The highest ICOR of Gorontalo City was identified in 2013 but consistently decreased in 2015-2019. ICOR less than 1 indicated that investments to agricultural sectors in Gorontalo City were productive and thus, with consistent improvements, especially in modern agriculture and agricultural capacity and downstream aspect development,

they were predicted to give a positive impact to GRDP of the sectors.

b. Gorontalo District

The mean of ICOR was 0.015. The ratio indicated inefficiency as the input was smaller than the output. However, it was still considered good because of small investments made to earn a large number of outputs.

c. Boalemo

The mean of ICOR of Boalemo was 0.017. The ratio implied that investments made by the government had a significant impact on the GRDP of agricultural sectors, which were one of the preeminent sectors in Boalemo, on which people largely relied to make living and fulfill their financial needs.

d. Pohuwato

Pohuwato made great success in making investments in agricultural sectors. With its investment growth by 0.015 billion Rupiahs, Pohuwato would likely earn the GRDP of agricultural sectors by 1 billion Rupiahs. Accordingly, more investments would better the development of output in the agricultural sectors.

e. Bone Bolango

Bone Bolango, in the last three years, should make a fixation of investments allocated for the agricultural agenda. The mean of ICOR of Bone Bolango was 0.017, indicating that an increase in investment/capital input by 0.017 billion Rupiahs would breed a good impact on the GRDP of agricultural sectors by 1 billion Rupiahs.

f. Gorontalo Utara

The mean of ICOR of Gorontalo Utara was the least, i.e., 0.014. As such, the district was the most capable of optimizing the GRDP of agricultural sectors by a means of investments in the sectors.

2. Incremental Capital Output Ratio (ICOR)

To accrue investment rates in agricultural sectors, the Gorontalo government should consistently consider both supporting and inhibiting factors. The supporting factors were, for instance, good output market prospects and business profits, availability of accessible capital, and supporting policies. Meanwhile, the inhibiting factors were considerably large capital needed for early investments, unstable

commodity prices, and increasingly limited land for business. Therefore, the Gorontalo government and the district/city government should make more credible data collection of farmers for assistances in agricultural sectors were considered ineffective although the output of investment in agricultural sectors was good. Some ground phenomena which should be decreased were agricultural assistance given to those without land and using too sophisticated agricultural tools and technology, generating reluctance and skepticism in farmers.

To make more credible ICOR quantification and hence more effective decisions, we should also take commodity into account. Nugroho and Hanani (2017:3) argued that considering the commodity level in the quantification of needs for investment could bring about accurate information regarding commodity development planning. NTP quantification was also pivotal here since NTP best described to what extent investments affected farmers' welfare. Arham (2018) addressed that farmers' welfare, identified using NTP, would likely deescalate poverty levels in rural areas.

Overall, our findings were aligned with Suandi and Delis (2020:116-119), who clarified that the amount of capital invested in a certain production process was determined by marginal productivity compared to the rate of output earned using one capital unit added in the production process. Investment should be persistently made if investment productivity was higher than the rate of interest received when

the capital was loaned instead of being invested.

B. Impacts of General Allocation Fund (DAU), Special Allocation Fund (DAK), and Co-administration Fund from the

Ministry of Agriculture on GRDP of Agricultural Sectors

1. Double Regression Equation

Table 2 presents the results of the data analysis.

Table 2. Double Regression

Dependent Variable: LN_PDRBP?				
Method: Pooled Least Squares				
Date: 09/25/20 Time: 06:35				
Sample: 1 10				
Included observations: 10				
Cross-sections included: 6				
Total pool (balanced) observations: 60				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	25.12118	0.824300	30.47577	0.0000
LN_DAU?	0.097002	0.018375	5.279095	0.0000
LN_DAK?	0.013443	0.032686	0.411287	0.6826
LN_TP?	0.006531	0.001982	3.295911	0.0018
Fixed Effects (Cross)				
_KOTA--C	-1.131958			
_KGTLO--C	0.851026			
_BLMO--C	0.251471			
_PHWT--C	0.504375			
_BNBL--C	-0.289846			
_GORUT—C	-0.185068			
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.974234	Mean dependent var	27.66050	
Adjusted R-squared	0.970192	S.D. dependent var	0.814243	
S.E. of regression	0.140579	Akaike info criterion	-0.948613	
Sum squared resid	1.007885	Schwarz criterion	-0.634462	
Log likelihood	37.45840	Hannan-Quinn criter.	-0.825731	
F-statistic	241.0420	Durbin-Watson stat	0.840011	
Prob(F-statistic)	0.000000			

Source: Eviews version 9, 2020

The double regression equation was thus as follows:

$$\hat{Y} = 25.121 + 0.097X_1 + 0.013X_2 + 0.006X_3 + e$$

a. Coefficient of Determination

The coefficient of determination or adjusted R-squared value was 0.970192. In other words,

97.019% of gross regional domestic product (GRDP) variability of agricultural sectors in districts/cities in Gorontalo Province could be explained by general allocation funds (DAU), special allocation funds (DAK), and co-administration funds (TP) from the Ministry of

Agriculture. Moreover, the rest, namely 2.981% was elucidated by other variables.

b. Simultaneous Test (F-test)

The significance value, which was 0.000, was smaller than 0.05 so general allocation funds (DAU), special allocation funds (DAK), and co-administration funds (TP) from the Ministry of Agriculture had a simultaneous significant impact on gross regional domestic products (GRDP) of agricultural sectors in districts/cities in Gorontalo Province.

2. Partial Test

a. Impacts of General Allocation Funds (DAU) on Gross Regional Domestic Products (GRDP) of Agricultural Sectors

The significance value of general allocation fund (DAU) was smaller than 0.05 ($0.000 < 0.05$). Accordingly, general allocation funds had a positive significant impact on gross regional domestic products of agricultural sectors in districts/cities in Gorontalo.

b. Impacts of Special Allocation Funds (DAK) on Gross Regional Domestic Products (GRDP) of Agricultural Sectors

The significance value of special allocation funds (DAK) was higher than 0.05 ($0.6826 > 0.05$) so the type of funds had an insignificant positive impact on gross regional domestic products (GRDP) of agricultural sectors in districts/cities in Gorontalo.

c. Impacts of Co-administration Funds (TP) from the Ministry of Agriculture on Gross Regional Domestic Products (GRDP) of Agricultural Sectors

The significance value of co-administration funds (TP) from the Ministry of Agriculture was smaller than 0.05 ($0.0018 < 0.05$), and hence the type of funds had a significant positive impact on gross regional domestic products (GRDP) of agricultural sectors in districts/cities in Gorontalo.

d. Impacts of General Allocation Funds (DAU), Special Allocation Funds (DAK), and Co-administration Funds from the Ministry of Agriculture

From the double regression analysis, it was simultaneously found that general allocation funds (DAU), special allocation funds (DAK), and co-administration funds (TP) from the Ministry of Agriculture had a simultaneous significant impact on gross regional domestic products (GRDP) of agricultural sectors in districts/cities in Gorontalo Province at a determinant value of 97.019%. Accordingly, it is crucial to make a policy regarding autonomy to better agricultural development in Gorontalo Province, as conveyed by Ardiyanti *et al.* (2019:73) that policies regarding autonomy were expected to elevate reformation at a local level and confer space to political domains, regional financial management, and the use of local resources for the local community,

breeding a new development pattern, including of agriculture, in the regions concerned. The government, especially its agricultural extension workers, would assist the Ministry of Agriculture to make effective strategies and give stimuli through deconcentration funds or co-administration tasks to districts/cities in Gorontalo Province.

Meanwhile, in partial, the general allocation fund (DAU) variable had a significant positive impact on gross regional domestic products (GRDP) of agricultural sectors in districts/cities in Gorontalo Province. The positive coefficient indicated that the higher the investment rate in agricultural sectors made by the government through general allocation funds (DAU), the better the effect on gross regional domestic products (GRDP) of agricultural sectors in districts/cities in Gorontalo Province. This significant result should be optimized as essentially, GRDP also rested on the roles of economic actors, one of which was the government, which had the authority in making public and fiscal policies. The government's intervention in the economy was important in retaining economic stability and equitable development. Each region had different abilities in allocating funding, bringing on the fiscal imbalance between regions.

Moreover, special allocation funds (DAK) had an insignificant positive impact on gross regional domestic products (GRDP) of

agricultural sectors in districts/cities in Gorontalo Province. The positive coefficient indicated that the higher the special allocation funds (DAK) allocated for agricultural sectors, the more the gross regional domestic products (GRDP) of agricultural sectors in districts/cities in Gorontalo Province despite fluctuated outputs. DAK received by the local governments to fund special agenda or regional affairs. The special agenda was made in accordance with the functions of the State Budget, e.g., funding public services, education, agricultural infrastructures, and others. Accordingly, this type of fund should be aligned with the national priority scale but sometimes, infrastructures funded by DAK were not well used.

Special allocation funds (DAK) did not have any significant impact on the GRDP of agricultural sectors due to varied attempts to develop other sectors through DAK in Gorontalo Province. Arham (2014:16) declared that the fiscal decentralization policy could cause an economic sector shift (structure alteration), engendering a decreasing trend to primary sectors, and thereby enhancing secondary and tertiary sectors during the implementation of local autonomy. In Gorontalo Province, the provincial and district/city governments admitted meeting reluctance in making investments in agricultural sectors due to farmers' monotonous condition, in regard to welfare. Consequently, they turned to MSME

sectors and agricultural tourism industrialization to earn more locally generated revenue (PAD) and achieve more economic growth.

The findings were aligned with Sumedi *et al.* (2013:97) that the government's allocated budget had low efficacy in boosting additional values of agricultural sectors. Relatively, in relation to elasticity or multiplier values of the government's expenditure, the effectiveness of deconcentration funds was higher than the local government budget (PDRB) for agricultural sectors. The positive relationship between PDRB and employment rates allowed autogrowth in agricultural sectors. An increase in budget effectivity constituted a key to successful agricultural development.

CONCLUSIONS

We drew the following conclusions based on the findings and discussion elucidated above.

1. The Incremental Capital Output Ratio (ICOR) of Gorontalo Province was 0.016 and the mean of ICOR of districts/cities in Gorontalo Province was 0.086.
2. General allocation funds (DAU), special allocation funds (DAK), and co-administration funds (TP) from the Ministry of Agriculture had a simultaneous significant impact on gross regional domestic products (GRDP) of agricultural sectors at a determinant value of 97.019%. Partially investigated, general allocation funds (DAU) and co-

administration funds (TP) from the Ministry of Agriculture had a positive significant impact on gross regional domestic products (GDRP) of agricultural sectors in districts/cities in Gorontalo Province.

SUGGESTIONS

1. The Gorontalo government and the district/city government need to make more credible data collection of farmers for assistances in agricultural sectors are considered ineffective although the output of investment in agricultural sectors is already good. Some ground phenomena which should be decreased are agricultural assistance given to those without land and using too sophisticated agricultural tools and technology, generating reluctance and skepticism in farmers.
2. Special allocation funds (DAK) allocated for building agricultural facilities and infrastructures should have on-target purposes, such as building more functional reservoirs and primary irrigation networks, and hence quality development can be achieved, specifically the development to mobilize agricultural products, and thereby suppressing various costs burdened to farmers and elevating GRDP of agricultural sectors. Also, several policies regarding agricultural industrialization in Gorontalo Province by establishing cooperation with private parties and encouraging them to make investments are required.

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