

Agriculture Development and Income in Indonesia

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Abstract

This study plans to look at the advancement of Indonesian farming by analyzing Worth included horticulture in Indonesia, Work in Agribusiness in Indonesia, and Local area Pay in Indonesia. In this study using secondary data from the world bank in the annual research period 2000 - 2019 using the Quantitative Threshold Autoregressive method. We observed that the rural area is an area that retains an extremely enormous labor force in Indonesia. The farming area had the option to develop well despite the fact that during the Coronavirus pandemic in 2020 when different areas encountered a downturn. Be that as it may, the interest of youth or the labor force in the rural area in Indonesia should be expanded on the grounds that there is a descending pattern in the review period. However, the performance of human resources in agriculture in Indonesia has actually increased, as indicated by the estimation results regarding agriculture value-added and employment in agriculture in the estimation results and forecasting results which demonstrate that consolation in the rural area can help individuals' pay as shown by Gross domestic product per capita.

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Introduction

Indonesia is a country that has an abundance of bountiful regular assets. The abundance of these assets comprises of water assets, land assets, woodland assets, marine assets, and biodiversity contained in that and generally appropriated on each island in Indonesia (Pelzl and Poelhekke,2021). This normal abundance has can turn into the capital for the execution of financial advancement for Indonesia. One of the wellsprings of normal abundance claimed by Indonesia can be advanced through the horticultural area. The horticultural area is as yet the pillar of occupation creation in huge numbers in Indonesia.

The horticultural advancement projects and arrangements did by the Indonesian government in 2020 can help and contribute essentially to public monetary development. In the midst of the improvement in Indonesia's monetary development in the second from last quarter of 2020 to - 3.49% from - 5.32% in the subsequent quarter, it is progressively persuading that the public economy is on a positive way. In the final quarter, the projected development is between - 1.6% to 0.6%. The agribusiness, ranger service, and fisheries areas are one of the areas (aside from the data and correspondence area) which generally develop emphatically in spite of the ongoing pandemic circumstances. In the subsequent quarter, this area became 2.19% (YoY), while in the second from last quarter it became 2.15% (YoY). The commitment worth of commodities to the horticultural area arrived at the US \$ 0.4 billion or 3.0% of Indonesia's complete products. Horticultural area trades encountered a critical increment during the Coronavirus pandemic;

should be visible in September 2020 expanded by 16.2% (YoY) and 20.8% (Organizing Service for Financial Undertakings of Indonesia, 2020).

The need for food and the market for food is very large and will continue to grow. However, the development of the food sector requires innovative methods based on modern technology, which will be able to increase the efficiency of the production process and the quality of affordable foodstuffs and be able to improve the carrying capacity of the environment, as well as make farmers and their supporting sectors prosper national economic growth. This is additionally reflected in controlled food expansion, the decrease in the quantity of destitute individuals in rustic regions, and the further developing government assistance of ranchers (Abdul-Rahaman et al,2020).

The outcome of horticultural advancement in Indonesia is reflected in the government assistance of ranchers. This government assistance should be visible straightforwardly through the sign of Horticultural Business Conversion scale and the decrease in the quantity of destitute individuals in country regions. Improved welfare of farmers can also be seen from the decline in the Gini Ratio index in rural areas. This is a reflection of the improving distribution of income in rural areas. The increase in agricultural production during the pandemic in Indonesia is also very satisfying because it is able to provide food availability so that by itself it significantly reduces inflation and has the potential to be the key to Indonesia's economic recovery (Payumo et al,2014).

This study expects to analyze the improvement of Indonesian agribusiness by looking at Worth included horticulture in Indonesia, Work in Farming in Indonesia, and Local area Pay in Indonesia.

Literature Review

Improvement is a course of progress that is arranged and is a movement that is economical and steady towards a superior level. To accomplish this, improvement should be done in stages in all areas and sub-areas in an arranged and modified way. Indonesia as a country that carries out national development has the goal of achieving welfare and creating a just and prosperous society. In realizing this, the development of the economy is very much needed to achieve prosperity. The large population and workforce as well as the high rate of population growth need not actually be a problem if the effective economic support capacity in the area is strong enough to meet various kinds of community needs, including the provision of job opportunities (Hopkins,2012).

Indonesia is known as a horticultural country, which depends on the farming area. The farming area incorporates a few sub-areas, to be specific the food crops sub-area, the cultivation sub-area, the fisheries sub-area, the animals sub-area, and the ranger service sub-area. As one of the prevailing areas, it truly requires a great deal of work. Since as a significant area, improvement The agrarian area is pointed toward expanding horticultural creation to meet homegrown food and modern necessities, increment products and increment rancher pay, extend work open doors and advance value and become the reason for development locally, particularly provincial networks (Mehraban and Ickowitz, 2021). The rural area can be an endlessly supporting area in the improvement of different areas. In this way, it is trusted that the job of the farming area isn't just seen from its commitment to Gross domestic product, yet the rural area can assume a part connected with its impact on different areas as a supplier of data sources (labor and products) among different areas which thus can influence public financial development.

The positive development of the rural area in 2020, particularly in the food crop subsector, isn't simply because of a change in the establishing season, however it ought to likewise be valued in

light of the fact that, amidst the Coronavirus pandemic, the public authority through the Indonesian Service of Horticulture keeps on working with ranchers. Amidst a pandemic, the Indonesian Service of Farming proceeds to forcefully give help and help with the goal that rural exercises keep on adding to the public economy since food creation isn't a problem (Cabinet Secretariat Of The Republic Of Indonesia, 2021). The horticultural area is one of the areas not really impacted by the Crown pandemic in Indonesia. This of course is also supported by the partisanship of the government which continues to distribute aid and assistance to farmers. The Ministry of Agriculture continues to make efforts to increase production, one of which is currently the people's business credit facility. Farmers are no longer spoiled with assistance but have led to something independent.

The high contribution of the agricultural sector to economic growth in the second quarter of 2020 is due to improved agricultural productivity, especially food crops, so that despite the fact that the presence of the Coronavirus pandemic didn't adversely affect the rural area. Moreover, the orientation is not only on production but also the government continues to encourage an increase in agricultural exports. The Indonesian government must pay attention to the welfare of Indonesian farmers so that food supplies are also fulfilled in the atmosphere of the Covid-19 pandemic. The positive development of the Indonesian farming area can't be isolated from the endeavors of the Indonesian Service of Horticulture through food forward leaps during the Coronavirus pandemic. According to him, the staple and local food development program which is a strategy for food supply is considered to be very appropriate to current conditions and the Ministry of Agriculture is now actively implementing the program (Gandasari & Dwidienawati, 2020).

The agricultural sector has a very important and decisive role, both in terms of food and economy. Therefore, if the government wants to increase the weight of economic growth and alleviate poverty, the agricultural sector is the key (LIN & ZHANG, 2020). Production increases are continuously carried out in addition to meeting domestic needs, also to reduce imports, or increase export volumes. Agribusiness is an action with an end goal to create (duplicate) plants and animals so they can develop better to address human issues, for instance, cultivating, raising animals, and fishing. Horticulture is likewise a kind of business or monetary action through establishing harvests or cultivating (food, agriculture, manor, and ranger service), creature farming (raising domesticated animals), and fisheries.

Research Method

This study plans to decide the advancement of the horticultural area in Indonesia as demonstrated by agribusiness esteem added and work in farming on the government assistance of the Indonesian public as shown by the total pay of the local area demonstrated by Gross domestic product per capita. To accomplish this objective, information on Gross domestic product per capita, work in farming, and horticulture esteem added. This study utilizes the Quantitative Limit Autoregressive strategy which is utilized to foresee the way of behaving of the information with the goal that the relationship conduct between the information should be visible. In breaking down the limit variable, the Gross domestic product per capita variation is utilized as a sign of development in individuals' pay, work in farming, and horticulture esteem added as a mark of the advancement of the rural area. Gross domestic product per capita and agribusiness esteem added as edge factors, while non-limit factors are employment in horticulture. In this study we involved the autoregressive condition as follows:

$$AR_{(p)} = Y_t = c + \Phi_1 Y_{t-1} + \Phi_2 Y_{t-2} + \dots + \Phi_p Y_{t-p} + e_t$$

Where AR is Y and Yt is Y every once in a while in a period series which is impacted by Yt-1 or Y occasionally in the past in period 1 and Yt-1 itself is likewise impacted by Yt-2 which is Y in the past in period 2 onwards which is impacted by et which is the blunder term for the time in the review period. This study centers around optional information obtained from world banks. With the econometric condition as follows:

$$Y_t = \beta_0 + \beta_1 AV_{t1} + \beta_2 EA_{t2} + e_t$$

Where Y is GDP per capita, t is a timeframe, β is steady, AV is farming worth added, EA is Work in horticulture and e is a mistake term. All information are auxiliary information from world manages an account with a yearly time of 2000 - 2019.

Results and Discussion

In breaking down the edge variable, the Gross domestic product per capita variation is utilized as a mark of development in individuals' pay, Farming Worth added, and Work in agribusiness as a sign of the advancement of the horticultural area. Gross domestic product per capita, and Horticulture esteem added as edge factors. While the non-limit variable is Work in horticulture. Coming up next are the assessment results that we have done:

$$GDP_PER_CAPITA = (-2633.70273161 + 1.03979673353e-07*AGRICULTURE_VALUE_ADDED) + (2469.02264622 - 7.3223624097e-08*AGRICULTURE_VALUE_ADDED)* @LOGIT(0.015914016368* (GDP_PER_CAPITA (-3)-1018.22552434)) - 1.44854232354e-07* EMPLOYMENT_IN_AGRICULTURE$$

The assessment results from the primary gauge should be visible in table 1 underneath:

Table 1. Estimation Result

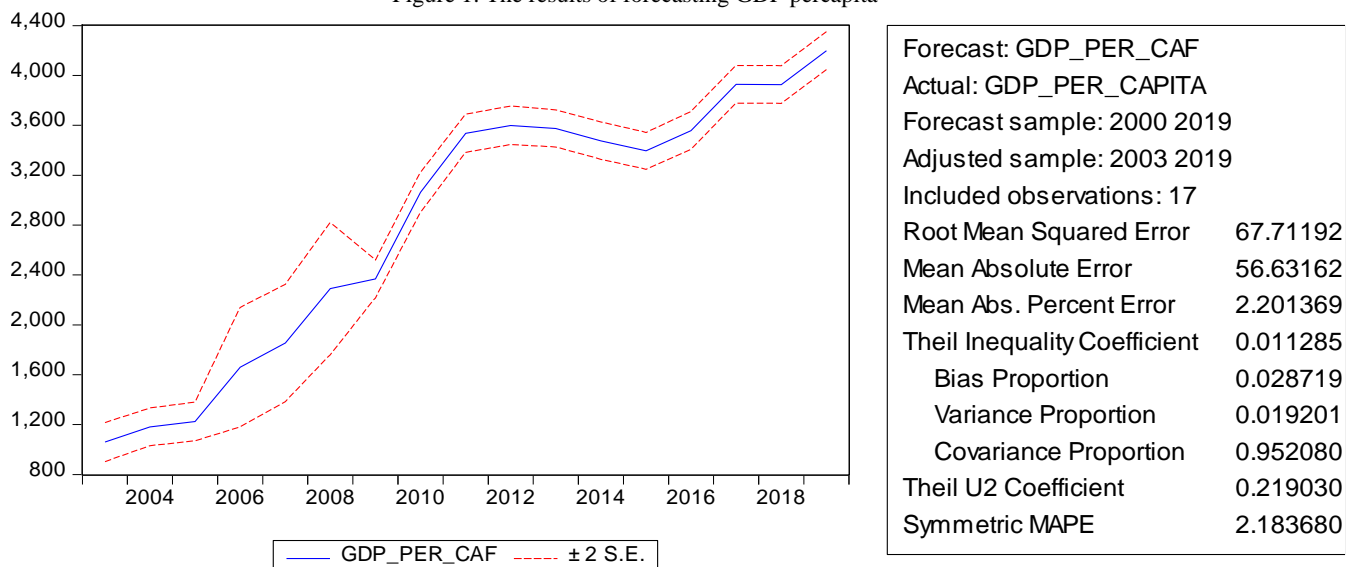
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Threshold Variables (linear part)				
C	-2633.703	3013.105	-0.874083	0.4026
AGRICULTURE_VALUE_ADDED	1.04E-07	8.30E-08	1.252556	0.2389
Threshold Variables (nonlinear part)				
C	2469.023	2997.336	0.823739	0.4293
AGRICULTURE_VALUE_ADDED	-7.32E-08	8.29E-08	-0.883733	0.3976
Non-Threshold Variables				
EMPLOYMENT_IN_AGRICULTURE	-1.45E-07	9.14E-08	-1.585191	0.144
Slopes				
SLOPE	0.015914	0.006302	2.525033	0.0301
Thresholds				
THRESHOLD	1018.226	99.89993	10.19246	0
R-squared	0.996915	Mean dependent var	2805.471	
Adjusted R-squared	0.995064	S.D. dependent var	1084.888	
S.E. of regression	76.22306	Akaike info criterion	11.79811	
Sum squared resid	58099.56	Schwarz criterion	12.14119	
Log likelihood	-93.2839	Hannan-Quinn criter.	11.83221	

F-statistic	538.5467	Durbin-Watson stat	1.368327
Prob(F-statistic)	0		

Source : Data world Bank Compiled

It tends to be seen that the per capita Gross domestic product relationship with agribusiness esteem added is positive at 1.04E-07 on the straight part and negative heading for the non-direct piece of - 7.32E-08 pursued by the negative course of work in farming at - 1.45E-07 at the non-limit. All estimation results on all variables are greater than T-statistic, which means that it is significant with a degree of confidence of R-squared 0.996915 or 99%, indicating that agricultural development indicated by agriculture value-added has a role in driving people's income where each increase is 1.04% added to encourage 1% of people's income who work in the agricultural sector. However, for the case in Indonesia, there is a tendency of decreasing labor force in the agricultural sector where every time there is a decrease in the number of the labor force working in the agricultural sector by 1.45%, it will have an impact on the decline in agricultural production by 7.32%. However, when there is an increase in the labor force in the agricultural sector by 1.45%, it will be followed by an increase in agricultural production by 7.32%. However, along with the development of human capital in the agricultural sector, there was a trend of increasing agricultural value-added which resulted in an increase in the income of people working in the agricultural sector by 1.04%. forecast results are presented in the following graph:

Figure 1. The results of forecasting GDP percapita



Source : Data world Bank Compiled

From the estimate results displayed in Figure 1, it tends to be seen that the per capita Gross domestic product diagram can be driven rapidly by the advancement of the horticultural area with a sign of farming worth added and work in agribusiness. This shows that human resources in Indonesia in the rural area, which is demonstrated in the expansion in adequacy and human execution showed in agribusiness esteem added and work in horticulture, which is portrayed in the appraisals in table 1 and portrayed in guaging in Figure 1, contributes significantly to pay. individuals, particularly the people who work in the agrarian area. This demonstrates that the horticultural area in Indonesia is an expected area in the turn of events and recuperation of the Indonesian economy as well as expanding individuals' pay.

Conclusion

The horticultural area is an area that retains an extremely enormous labor force in Indonesia. The farming area had the option to develop well despite the fact that during the Coronavirus pandemic in 2020 when different areas encountered a downturn. Be that as it may, the interest of youth or the labor force in the rural area in Indonesia should be expanded on the grounds that there is a descending pattern in the review period. However, the performance of human resources in agriculture in Indonesia has actually increased, as demonstrated by the assessment results with respect to farming worth added and work in horticulture in the assessment results and anticipating results which show that consolation in the agrarian area can help individuals' pay as demonstrated by Gross domestic product per capita.

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