

Analysis Role and Contribution of The Agricultural Sector in Sukoharjo District

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Abstract

Sukoharjo Regency is one of the buffer districts in Central Java apart from Klaten Regency. Sukoharjo Regency has a potential agricultural sector, so this sector is the region's mainstay. This study aims to identify the role of the agricultural sector in economic development by analyzing the agricultural sector's performance (basis/not) and knowing the agricultural sector's contribution to the Gross Regional domestic product. The data used in this research is time series data from 2013-2017, sourced from the Central Statistics Agency of Sukoharjo Regency. The data analysis method used in this research is Location Quotient and contribution. Based on the results of the study, it was found that the agricultural sector in Sukoharjo district was a basic sector, while the agricultural sector's contribution to the total Gross Regional Domestic Product was the highest in 2013, with a contribution of 9.86%.

Keywords: Sukoharjo, LQ, Contribution, GDP

JEL Classification: O40, R10, Q00

A. INTRODUCTION

Indonesia is one of the countries with abundant wealth in resources. The natural resources referred to include water, land, forest, sea and their contents. This can be shown by the shape of the state of Indonesia, which consists of many islands. Natural resources are an important capital for the economic development sector. This sector is also closely related to the agricultural sector, where this sector in which Indonesia is able to create large employment opportunities for the community. Until 2015, the workforce working in the agricultural sector reached around 40%, while the rest worked in the non-agricultural sector, which was spread into 8 other sectors. This figure shows a large enough percentage so that the role of the agricultural sector is still

quite high when compared to other sectors (Widyawati, 2017).

The current era cannot be separated from the era of economic development. This development also did not escape the revitalization of several sectors, especially the agricultural sector. Astrini (2013) states that each province has sector advantages with forward and backward linkages as well as being a leading sector. The leading sectors in question include agriculture, electricity, gas, clean water to corporate services. The roles of these sectors are able to encourage development from the regional to the national scope.

The formation of PDRB at the regional or district level shows that the agricultural sector

has an important role in regional economic growth (Syahroni, 2016). This is indicated by the existence of solutions to overcome the crisis in Indonesia by the agricultural sector. Such conditions also cause the agricultural sector to have great potential and play an important role in economic recovery, especially in the crisis that hit the economy because the agricultural sector remains stable and shows good growth (Junaidi & Zulgani, 2011).

Indonesia is known as an agricultural country because this country relies on the agricultural sector. This is also supported by the large number of people who work as farmers and in the agricultural sector (Kremen, Iles, & Bacon, 2012). Activities that can be carried out in an effort to strengthen the agricultural sector are carried out by international trade. Trade can be interpreted as the exchange of goods and services by individuals (countries) to other groups without coercion and based on mutual need (Jusuf & Setyari, 2020). Food availability in Indonesia is supported by several sectors, namely agriculture, forestry and fisheries. Most of the available employment opportunities also come from these sectors. The industrial sector is growing rapidly in Indonesia, and the availability of raw materials also comes from the agricultural sector, so its contribution to the growth of GRDP is quite high. The success of development can be identified by analyzing the structure and development of a region's GRDP (Gross Regional Domestic Product) from year to year by time series. This analysis can map the basic sectors of the economy used in future development planning considerations (Oktavia, Hadi Darwanto, & Hartono, 2017). Further analysis is an analysis to look for agricultural subsectors that have fast or slow growth and agricultural subsectors that have high or low competitiveness, so that calculations are used for the proportional growth component and

the differential growth component (Jones, 2016).

Sukoharjo Regency has an agricultural sector that can be said to be independent due to its large area, so it has a production surplus that can even be exported outside the Sukoharjo Regency area. The agricultural sector in this area is included in the basic sector, so the performance of the agricultural sector in this region is categorized as good in supporting the regional economy. Agricultural products in Sukoharjo Regency can be exported to several areas, such as processed products from rice, corn, sweet potatoes and horticultural commodities in agro-industries such as mushrooms, tofu, organic fertilizers and others. The scope of recipients of commodities sent is greatest to Surakarta City as a container/market of Sukoharjo Regency products. With this base position, the agricultural sector is able to become a mainstay or superior in the Sukoharjo Regency area (Setyowati, 2012).

The contribution of the agricultural sector often fluctuates from year to year. This condition is important to know in order to choose the right policy to maximize development potential in the future. One of the regencies in Central Java Province is Sukoharjo Regency. The region has enormous potential, especially in the agricultural and food fields. This is supported by data that the land area owned is designated for 20,617 hectares or about 44.16% of rice fields, while the remaining 26,049 are non-rice fields. The sub-district with the largest rice field area in Sukoharjo Regency is Bendsari District, while the sub-district with the smallest rice field area is Kartosura District. Kartosuro District only has the smallest rice field area because it is the center of development in the Sukoharjo Regency, so it is

often said to be a satellite city. Land conversion is quite high, but for the purpose of economic and regional development. There are 7 (seven) food crop commodities, namely Paddy and Upland Rice, Corn, Cassava, Sweet Potatoes, Peanuts, Soybeans, and Green Beans. Production of food crops in Sukoharjo Regency during these 3 (three) years from 2012 to 2014 fluctuated. Production of food crops in Sukoharjo Regency in 2012 was 278,119 tons. In 2013 food crop production increased to 423,289 tons and then decreased again in 2014 with a production of 390,937 tons (Sadali, 2018).

Based on the ratio of proportion and growth, three areas in the Sukoharjo district have proven to be potential areas, namely the Kartasura, Grogol and Sukoharjo cities. The shift in the economic status of each sub-district in Sukoharjo Regency has its own shift. Kartosuro District has developed and growing status. Gatak Subdistrict and Baki Subdistrict are in fast-growing status. Grogol sub-district is in a developed and growing status, and there are many other locations that have their own shifting status.

One of the districts included in the buffer district in Central Java apart from Klaten Regency is Sukoharjo Regency. This regency is an ex-residency area of Surakarta with quite a large agricultural potential. This is supported by the highest GDP contribution from the agricultural sector after the industrial and trade sectors. However, this fluctuates and tends to increase yearly (Setyowati, 2012). This condition shows that the agricultural sector has the potential to continue to be developed in the future. The regional development process must have three objectives such as increasing availability, increasing living standards and expanding economic options (Todaro, 2006).

The concept of regional development must also be based on elements of distance, location, shape and size (Budiarto, 2015). Based on the description above, this study aims to identify the role of the agricultural sector in economic development by analyzing the performance (basis/not) of the agricultural sector and knowing the agricultural sector's contribution to the GDP of the Sukoharjo Regency.

B. LITERATURE REVIEW

Economic development in the long term follows growth per capita income, which will bring about a fundamental change in the economic structure, from a traditional economy with agriculture as the primary sector to a modern economy that is dominated by the secondary and tertiary sectors, especially the processing industry with a large scale increased yields (positive relationship between output growth and growth productivity), trade and services as the main drivers of the growth economy. The research that has been done by previous researchers mostly only analyzes the basic and non-base sectors/comparative advantage without knowing the contribution of each base sector. This research is complemented by the contribution of the agricultural sector, which in macro implies that the sector has made a large contribution in supporting the development of Sukoharjo Regency.

Agriculture is one of the economic sectors that can potentially contribute to the growth and development of the national economy. The agricultural sector will always run as long as humans still need food to sustain life and raw materials in the industry (Hayati et al., 2017). Economic development is an effort to

increase the per capita income of the community or GDP where the increase is offset by reform of modernization and attention to the aspect of equity, while economic growth is defined as an increase in GDP (Gross Domestic Product) regardless of whether there is a change in the economic structure or not. Economic development is always accompanied by economic growth, while economic growth is not necessarily accompanied by development therein.

Regional economic development is a work process between local governments and their communities in managing existing resources and forming a partnership pattern between local governments and the private sector to create new jobs to develop economic activities in the region. Therefore, with this cooperation, it is hoped that the resources in the region can be managed optimally and create new business fields to reduce unemployment and develop economic activity in an area. The main objective of development is to achieve a better quality of life in accordance with the achievement of the goals and objectives of development. The definition of gross regional domestic product (GRDP) according to the Central Statistics Agency (BPS) is the amount of added value generated for all business units in a region or is the entire value of final goods and services produced by all economic units in an area. The GRDP calculation can be done using direct and allocation methods.

Regional economic growth is an increase in people's income that occurs in an area, namely an increase in all added value that occurs in that area. The increase in income is measured by real value, meaning that it is stated at a constant price. It also describes remuneration for the production factors

operating in the area, which means that it can roughly describe the area's prosperity. The prosperity of a region is determined not only by the amount of added value created in the area but also by how much transfer payment occurs, namely the share of income that flows out of the region or receives funds from outside the region. The central government has seen that each region has different competitive and comparative advantages. With the difference in the comparative advantage of each region, it must be able to be utilized and set priorities for each region. In their journal, Herath et al. (2011) argue that the Shift Share method analyzes regional growth originating from the 1940s. They are generally used to describe historical growth trends, estimate regional growth, analyze the effects of a policy, or develop strategic planning for society. However, this analysis is generally widely used to describe regional and industrial growth and to examine the competitiveness of regional and industrial growth in a certain period.

Sukoharjo Regency as one of the potential areas in Central Java, has a number of competitive advantage values, including one of the superior products of IKM (Mabrurh et al., 2011). There are three important points regarding the results of the location quation analysis in Sukoharjo Regency. Several sectors in the region fall into the basic sector, such as the wholesale and retail trade sector, the manufacturing sector, the accommodation and services sector and several other sectors. Economic sectors with competitive advantages or competitiveness such as transportation and storage, information and communication, real estate, manufacturing and wholesale and retail trade. The sector with the highest positive performance is the Manufacturing sector; Wholesale and Retail Trade; Repair of Motor

Vehicles and Motorcycles; and Information and Communication (Raqib & Rofiuddin, 2018).

The contribution of the agricultural sector to the GRDP of Kulon Progo Regency. In 2014, the agricultural sector's contribution to GRDP was 20.16% and increased in 2015 to 20.42. This increase was due to the increase in the agricultural sector, which was still greater than the increase in the GRDP value of Kulon Progo Regency that year. However, there was a decrease in the value of the agricultural sector's contribution from 2016 to 2019 to the GRDP of Kulon Progo Regency. The agricultural sector has decreased in line with the high conversion of agricultural land due to many reasons, due to the loss of land being replaced by airport land, which is possible to weaken the agricultural sector but strengthen other sectors (Amalia & Saputro, 2021).

C. RESEARCH METHODS

This research is research using a descriptive analytic method. The descriptive analytical method is a combination of descriptive methods and analytical methods. The analytical method aims to test the truth of the hypothesis, and the descriptive method aims to obtain a reliable and useful description. The data used in this research is secondary data from the Central Bureau of Statistics. The location was chosen purposively, namely Sukoharjo Regency, because this regency is a buffer district with good agricultural potential. The data used in this study are time series data from 2013-2017. Answering the first hypothesis can be done by measuring the agricultural sector's contribution to the total GRDP in Sukoharjo Regency. Mathematically, the contribution of the agricultural sector to GRDP can be written in the following formula (Saputro & Sariningsih, 2020):

$$Z = A/B \times 100\%$$

Information:

Z = Agriculture Sector Contribution (%)

A = Total Agriculture Sector

B = Total Gross Regional Domestic Product

Answering the second hypothesis can use the LQ (Location Quotient) method. The identification of this method uses the comparison of the relative share of sector i revenue at the regional level to the total regional income with the relative share of sector i revenue at the national level to the total national income. If the value of $LQ > 1$, an economic sector is the base sector. Meanwhile, if the value of $LQ < 1$, the sector is a non-basis sector (Budiharsono, 2005). Mathematically the LQ formula can be written mathematically as follows:

$$LQ = (v_i/v_t)/(V_i/V_t)$$

Information:

LQ = Indeks Location Quotient

v_i = GDP of the agricultural sector and the agricultural sub-sector in Sukoharjo Regency

v_t = Total GDP / agricultural sector and sub-sector of Sukoharjo Regency

V_i = GDP of the agricultural sector and the sub-sector of Central Java Province

V_t = Total GDP / agricultural sector and sub-sector of Central Java Province

D. RESULTS AND DISCUSSION

Gross Regional Domestic Product Sukoharjo Regency

The gross domestic product of each region is different depending on the contribution of each sector in the region. Based on this, the GDP revenue of Sukoharjo Regency can be seen in table 1.

Table 1. GRDP of the Economic Sector of Sukoharjo Regency 2013-2017 ADHK

Business Field	Year				
	2013	2014	2015	2016	2017
Agriculture	1.913,14	1.844,19	1.976,39	2.025,49	2.075,27
Mining And Excavation	86,06	90,15	91,86	93,65	90,95
Processing Industry	7.551,72	8.045,94	8.285,66	8.733,13	9.254,98
Electricity and Gas	29,59	29,76	28,67	30,28	31,56
Water Supply	7,82	8,00	8,16	8,78	9,16
Building Wholesale And Retail Trade	1.255,43	1.266,62	1.366,48	1.467,91	1.563,98
Wholesale And Retail Trade	3.661,15	3.837,60	4.057,04	4.247,99	4.460,85
Transportation And Warehousing	637,99	694,75	759,02	820,59	882,06
Provision of Accommodation	704,41	750,31	802,61	855,38	908,30
Information And Communication	841,64	993,92	1.137,81	1.244,40	1.366,17
Financial Services And Insurance	695,64	700,84	757,34	823,23	855,36
Real Estate	456,60	485,44	523,66	563,00	606,12
Company Services	67,56	72,76	79,25	86,27	92,94
Government Administration	464,35	462,22	485,83	505,64	519,08
Education Services	633,95	696,70	755,47	811,74	870,00
Health Services	153,31	174,46	191,63	206,44	222,58
Other Services	271,52	295,32	305,18	322,06	343,59
GDRB	19.401,89	20.499,01	21.612,08	22.845,98	24.152,94

Source: BPS Sukoharjo Regency (2018)

Based on table 1 regarding the acceptance of several business fields that support regional revenue in Sukoharjo Regency. PDRB Sukoharjo Regency has increased from year to year. The highest increase occurred in 2017, with a growth rate of 5.72%. Several sectors have also increased from year to year, for example, the agricultural sector. The agricultural sector has increased in the last three years. The growth rate of the

agricultural sector from 2015 to 2017 reached 2.46%. Other sectors that have experienced an increase from year to year are also experienced by the electricity, gas and water supply sectors, although these increases are not so significant.

The increase that occurred in the agricultural sector occurred from 2014 to 2017. The increase from 2014 to 2015 was 7.16%, while in 2015 to 2016, there was an increase of 2.45%, and in 2016 to 2017, an increase in the

agricultural sector moved as much as 2.46%. This seems to have happened thanks to an increase in the production of several agricultural commodities, especially food crops. BPS data states that there was an increase in rice production from 2014 to 2017. Data on the development of rice commodities states that in 2014 the rice production of Sukoharjo Regency reached 310,753 tons, while in 2017, rice production reached 392,587 tons. Increased production of food commodities such as corn and cassava also experienced an increase, especially from 2014 to 2015. Soybean production also increased from 2014 to 2016. Soybean production in 2014 reached 3,005 tons, while in 2015 and 2016, production reached 3,950 tons and 4,644 tons. In addition to the increase in the agricultural sector, it also decreased from 2013 to 2014 by around 3.59%. It seems that this is also due to the impact of declining food crop production as well. Rice production in Sukoharjo Regency in 2013 reached 327,182

tons but decreased in the following year to 310,753 tons. Corn crops also experienced a decline in the same year. In 2013 corn production reached 21,424 tons, while in the following year, it decreased to the production of only 18,555 tons.

Contribution of The Agricultural Sector

The contribution of the agricultural sector in Sukoharjo Regency needs to be known as a consideration for local governments in boosting regional income. The greater regional income will make it easier for local governments to carry out development. According to BPS data, Sukoharjo Regency's regional income has increased from 2015 to 2017. If seen from table 1, the agricultural sector still has a fairly large number compared to other sectors. One of the great hopes is that the agricultural sector has a high value on GDP in Sukoharjo Regency. Based on this, the contribution of the agricultural sector can be seen in table 2.

Table 2. Contribution of the Agriculture Sector to PDRB Sukoharjo Regency

Years	Agriculture Sector (A) (Billion Rupiah)	Total PDRB Sukoharjo Regency (B) (Billion Rupiah)	Contribution (A/B) (%)
2013	1.913,14	19.401,89	9,86
2014	1.844,19	20.499,01	8,99
2015	1.976,39	21.612,08	9,14
2016	2.025,49	22.845,98	8,86
2017	2.075,27	24.152,94	8,59

Source: BPS Sukoharjo Regency (2018) analyzed

Based on table 2 show the agricultural sector's contribution to the total GRDP of Sukoharjo Regency. From the perspective of the agricultural sector, from 2013 to 2017, the

revenue from the agricultural sector decreased in 2014, but in the following years, it increased even though the increase was not significant. The total GDP of Sukoharjo Regency from year

to year has increased. The highest increase occurred in 2014. This is, of course, because there are several sectors that experienced an increase in revenue that year. The agricultural sector's contribution to the total GDP of Sukoharjo Regency also fluctuated from 2013 to 2017. In 2013 the agricultural sector's contribution reached 9.86%, but in the following year, it decreased by 0.87%. In 2015 the contribution had increased and was recorded as having a contribution of 9.14%, but it was also followed by a decline in the two years after that, it reached a range of decreases of 0.15-0.27%. It is hoped that this will not happen in the following years, considering that the agricultural sector is the mainstay sector in

Sukoharjo Regency. This contribution can be found by dividing the agricultural sector by the total GRDP received by Sukoharjo Regency that year. The agricultural sector's contribution from 2013 to 2017 was less than 10%. The highest contribution was in 2013, which reached 9.86%, followed by 2015, which reached 9.14%. The lowest contribution from the agricultural sector occurred in 2017. This is because the increase in PDRB in Sukoharjo Regency in 2017 was higher than in previous years, which reached 1,306.96 billion rupiahs.

Agricultural sector performance analysis in Sukoharjo Regency

Business Field	Year				
	2013	2014	2015	2016	2017
Agriculture	0,98	0,96	1,05	1,07	1,06
Mining And Excavation	0,48	0,61	0,67	0,68	0,62
Processing Industry	0,76	0,86	0,89	0,91	0,93
Electricity and Gas	1,13	1,13	1,09	1,14	1,15
Water Supply	0,96	0,97	0,97	0,98	0,98
Building Wholesale And Retail Trade	0,72	0,72	0,73	0,76	0,79
Wholesale And Retail Trade	1,41	1,43	1,45	1,45	1,47
Transportation And Warehousing	0,72	0,74	0,76	0,79	0,79
Provision of Accommodation	0,69	0,69	0,72	0,77	0,79
Information And Communication	0,78	0,81	0,86	0,87	0,90
Financial Services And Insurance	1,09	1,03	1,08	1,05	1,02
Real Estate	1,05	1,02	1,03	1,03	1,04
Company Services					
Government Administration	0,84	0,85	0,85	0,86	0,86
Education Services	0,72	0,75	0,76	0,77	0,76
Health Services	0,52	0,52	0,54	0,57	0,64
Other Services	0,64	0,62	0,66	0,67	0,67

Table 3. Results of the Location Quotient Analysis for the Economic Sector in Sukoharjo Regency

Source: Secondary Data Analysis (2020)

Based on table 3, we can see the results of the Location Quotient analysis regarding the identification of the performance of the agricultural sector in Sukoharjo Regency. These results show that the agricultural sector from 2015 to 2017 is a basic sector in Sukoharjo Regency besides electricity and gas, wholesale and retail trade, financial services, and real estate. The agricultural sector in Sukoharjo Regency is a basic sector with an average LQ value of 1.02. These results mean that the agricultural sector is an independent sector and is able to meet local food needs and overproduction. The results from the excess agricultural sector can be exported outside the Sukoharjo regency.

The position of the agricultural sector base also shows that agricultural performance is working well and supports the optimal economy of the Sukoharjo Regency. The agricultural sector in Sukoharjo Regency is able to fulfill the domestic area and its surroundings from commodities of rice, corn, and sweet potatoes as well as vegetables and other products, which are processed products. The availability of a good market will encourage the agricultural sector to develop further, seeing the potential of agricultural bases to become superior in the Sukoharjo Regency.

This effort does not escape the participation of human resources in the region, but it must be remembered that the current conditions allow for a very rapid economic shift followed by developing industrialization. If this is not considered properly, it is possible that agricultural resources will decline, followed by the agricultural sector, whose image is also decreasing.

E. CONCLUSION

Based on the research results above, it can be seen that the contribution of the agricultural sector in Sukoharjo Regency has fluctuated from year to year. The fluctuations that occurred were due to an increase in the total GRDP of Sukoharjo Regency's Total GRDP which was not followed by a significant increase in the value of the Agriculture Sector. The best contribution to the agricultural sector was in 2013 with a contribution of 9.86.

Based on the results of the Location Quotient method, it is found that the agricultural sector is a basic sector in Sukoharjo Regency. If you look more closely, the LQ number is still fluctuating even though the figure is more than 1. It is better if the local government of Sukoharjo Regency has synergy between workers in the agricultural sector and regional offices and is assisted by the private sector so that the cooperation that occurs to improve the performance of the agricultural sector can run well. The private sector does have an excess budget that can be used to meet the needs of the farming community, for example, the CSR program. This can help improve the infrastructure needed for farming so that productivity can be optimized. The agricultural sector which has become the base must be maintained by all parties in the Sukoharjo Regency area.

Suggestions for further researchers need to be studied more deeply about what factors are determinants in the agricultural sector such as land area, commodity prices and other factors so that they can complement the arguments in this study.

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