

## ANALYSIS OF LEADING FOOD CROP COMMODITIES IN CENTRAL SULAWESI REGENCIES/CITIES IN 2017-2021

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### Abstract

Abstracts This research analyzes the superior and competitive food crop commodities in Central Sulawesi from 2017 to 2021. Methods used include Static Symmetric Location Quotient and Dynamic Symmetric Location Quotient. The data used are secondary data on food crop production obtained from the BPS website and agricultural offices in all districts and cities in Central Sulawesi. The analysis reveals the following leading commodities: rice in Toli Toli Regency, corn in Banggai Islands Regency, soybeans in Morowali, Poso, Donggala, Tojo Una - Una, and North Morowali Regencies, mung beans in various regions, cassava in Donggala, Tolitoli, Buol, and Parigi Moutong Regencies, and sweet potatoes in various regions. The competitive commodities include corn, soybeans, peanuts, and sweet potatoes in several districts. The leading and competitive commodities are corn in Banggai Islands and Poso Regencies, soybeans in Morowali, Poso, and Donggala Regencies, peanuts in Donggala and Tolitoli Regencies, and sweet potatoes in Morowali and Poso Regencies..

**Keywords:** Crop, Superior, Competitive, Commodity

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### INTRODUCTION

Agricultural sector is the value of agricultural products from the sub-sectors of food crops, plantations, Animalstock, forestry, fishery and agricultural services and accumulated in total agricultural production <sup>1</sup>. The agricultural sector is a sector that still supply a relatively high contribution to national economy, even though there has been a transformation in the economic structure marked by lower contribution in agricultural

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<sup>1</sup> Zaini Amin, Andry Andry, dan Edy Humaidi, “Pemetaan Sektor Agribisnis Pangan Unggulan di Kabupaten Musi Rawas,” *Jurnal Penelitian Pertanian Terapan*, 21.1 (2021), 1–8 <<https://doi.org/10.25181/jppt.v21i1.1942>>.

sector<sup>2</sup>. In the 1970s the contribution of the agricultural sector to the national economy still dominated, reaching 53.92 percent. However, until 2021 (quarter II) the contribution of the agricultural sector will only be 13.57 percent<sup>3</sup>. Conditions are in tune with the economy in Central Sulawesi. Contribution of the agricultural sector towards Gross Regional Domestic Product (GRDP) reached 29.62 percent in 2016 and has continued to decline for 5 years until in 2020 the contribution of the agricultural sector will be 22.06 percent<sup>4</sup>. Nonetheless, the contribution of the agricultural sector to Central Sulawesi's GRDP is still quite high<sup>5</sup>.

Special consideration is needed for agricultural sector growth from both central and regional governments because in addition to contributing to the country's and regional economies, the agricultural sector is also a producer of strategic commodities<sup>6</sup> because Indonesia's population is quite large and constitutes a basic need as staple food for the Indonesian population<sup>7</sup>, besides that the agricultural sector also fundamental for economy in rural areas and could become a policy instrument in regional income distribution<sup>8</sup>.

Strategic issues related to agricultural development include production adequacy, increasing and strengthening the competitiveness of agricultural products both at home and abroad, food diversification and improving the standard of living of farmers<sup>9</sup>. To achieve this strategic issue, several policies could be pursued to escalate potential of output base and scale of agricultural businesses, qualified agricultural human resources, fulfillment of agricultural infrastructure, innovation, financing systems, strong institutions, protection of farmers and areas for the development of superior commodities

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<sup>2</sup> M. P Todaro, *Economic Development (Eleventy E)* (Pearson Education Limited, 2009).

<sup>3</sup> X. L Chen, "Analysis of Maize Yield and Factors Affecting Production in Major Corn-Producing Countries," *Journal of Agricultural Science*, 157.3 (2019), 232–45.

<sup>4</sup> K. T Tirtayani, I. G., & Kustina, "DETERMINAN ONLINEREPURCHASE INTENTION PRODUK EMAS ANTAM MELALUI WEBSITEWWW.LOGAMMULIA.COM(STUDI PADA GENERASI MILLENIAL DI BALI)," *E-Jurnal Ekonomi dan Bisnis Universitas Udayana*, 12.4 (2023), 605–19.

<sup>5</sup> Deliarnov, *Perkembangan Pemikiran Ekonomi. Edisi Revisi (Edisi Revi)* (PT Raja Grafindo Persad, 2003).

<sup>6</sup> Muhammad Rofiqul Farchan, Siti Nur Qomariah, dan Rohmat Hidayat, "Analisis Identifikasi Produk Unggulan Subsektor Tanaman Pangan Di Kabupaten Jombang," *Sigmagri*, 1.01 (2021), 21–27 <<https://doi.org/10.32764/sigmagri.v1i01.467>>.

<sup>7</sup> Sjafrizal, *Ekonomi Wilayah dan Perkotaan* (Rajawali Press PT Raja Grafindo Persada, 2012).

<sup>8</sup> Farchan, Qomariah, dan Hidayat.

<sup>9</sup> Kiki Kusyaeri Hamdani dan Bambang Susanto, "Identifikasi Komoditas Tanaman Pangan Unggulan di Kabupaten Indramayu Melalui Analisis LQ (Location Quotient)," *J-Plantasimbiosa*, 3.1 (2021), 11–25 <<https://doi.org/10.25181/jplantasimbiosa.v3i1.1955>>.

(DAS-BIN, 2017) Two important points of concern in this research are the potential production base and regional development of superior commodities<sup>10</sup>.

Food crops sub-sector is one of several sub-sectors which produce a fairly high contribution to the economy after plantation sub-sector. The food crops sub-sector's contribution to GRDP reached 3.21 percent in the second quarter of 2021<sup>11</sup>. For the Central Sulawesi region, the contribution was 2.15 percent in 2020, lower than plantation crops (9.68 percent). However, it needs to be a concern considering that the food crops sub-sector is a sub-sector that produces strategic commodities which concern basic human needs<sup>12</sup>. Availability of food in sufficient quantities for all domestic people is an important point in the concept of sustainable agricultural growth, thus government, especially local governments, should identify food crop commodities as superior commodities so that they can carry out policies for sustainable agricultural development in the long term. which will come. "Sustainable agricultural development is a perspective for maintaining sustainability and achieving food sovereignty and increasing the standard of living of farmers<sup>13</sup>. "Sustainable agriculture is defined as an integrated system of production practices of fauna and flora on site and has the long-term capability of meeting human food and fiber needs"<sup>14</sup>.

Regional development including spatial dimensions onto the analysis, so that it has a more specific character when compared to general economic development. Classical economists argue that capital is the key to progress<sup>15</sup>. The same thing was stated in Keynesian theory that there is an indirect relationship between income and employment through investment<sup>16</sup>. Several other neoclassical economic growth models, including the Harrod-Domar and Solow growth model, assume that economic growth is largely determined by capital factors<sup>17,18</sup>. However, some of these theories ignore the location factor of a development. Von Tunen and Weber are pioneers of area-based development

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<sup>10</sup> M Jhingan, *Ekonomi Pembangunan dan Perencanaan* (PT RAja Grafindo Persada, 1999).

<sup>11</sup> M Kuncoro, *Ekonomika Regional: Teori dan Praktek (Edisi 1 Ce)* (PT Rahagrafindo Persada, 2019).

<sup>12</sup> M Kuncoro.

<sup>13</sup> Lagiman, "Pertanian Berkelanjutan: Untuk Kedaulatan Pangan Dan Kesejahteraan Petani," *Program Studi Agroteknologi Fakultas Pertanian UPN "Veteran" Yogyakarta*, 2020, 368–69.

<sup>14</sup> Joko Mulyono dan Khursatul Munibah, "Pendekatan Location Quotient Dan Shift Share Analysis Dalam Penentuan Komoditas Unggulan Tanaman Pangan Di Kabupaten Bantul," *Informatika Pertanian*, 25.2 (2016), 221 <<https://doi.org/10.21082/ip.v25n2.2016.p221-230>>.

<sup>15</sup> Ai Siti Qodariyah, Karyana K.S, dan Lilis Amaliah Rosdiana, "Analisis Potensi Wilayah Berbasis Komoditas Tanaman Pangan Serta Kontribusinya Terhadap Ekonomi Regional Kabupaten Sumedang," *OrchidAgri*, 1.2 (2021), 25 <<https://doi.org/10.35138/orchidagri.v1i2.303>>.

<sup>16</sup> Jhingan.

<sup>17</sup> Todaro.

<sup>18</sup> J Smith, "An overview of global rice production," *Journal of Agricultural Economics*, 69.2 (2016), 321–35.

through a theory developed, namely "location theory". Von Tunen argued that the formation of an area caused by the existence of agricultural areas<sup>19</sup>. This theory was further developed by Weber which emphasizes the selection of industrial locations by companies<sup>20</sup>. Subsequent developments emphasize local-based development or what is commonly referred to as "local economic development". Cansanelli (2001) defines local economic growth as a participatory process that encourages and facilitates partnerships between local stakeholders<sup>21</sup>, enabling the design and implementation of joint strategies, primarily based on competitive use of local resources, with the aim of creating equal employment opportunities and sustainable economic activities<sup>22</sup>.

Economic Base Theory is a regional development framework which assumes that the demand towards inputs can only increase through the expansion of demand for output produced by primary sector (export) and non-primary sector (local or service)<sup>23</sup>. Demand for local sector production can only increase if local income increases so that according to economic basis theory that regional exports are a determining factor in economic development<sup>24</sup>.

Several researches in Indonesia have conducted an analysis to specify a superior food crop commodities. Identification of food crop commodities in Tasikmalaya Regency uses the Location Quotient approach by comparing the contribution of food crop production in sub-district area to contribution of food crop production in the district area<sup>25</sup>.<sup>26</sup> also conducted the same research using Location Quotient analysis but used GRDP as a variable to calculate LQ. Analysis of Leading Food Crop Commodities in Pematang Rejang Regency using the Location Quotient approach to identify the comparative advantage of a region in terms of food crop agricultural commodities and the CSD (Custom Standard Deviation) approach to identify regional competitiveness<sup>27</sup>. Determining a leading

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<sup>19</sup> Yayu Setiani, Unang Unang, dan Betty Rofatin, "Penentuan Komoditas Unggulan Sub Sektor Tanaman Pangan dan Hortikultura di Setiap Kecamatan Kabupaten Tasikmalaya," *Jurnal Agristan*, 3.2 (2021), 149–71 <<https://doi.org/10.37058/agristan.v3i2.3693>>.

<sup>20</sup> E. S Rustiadi, *Perencanaan dan Pengembangan Wilayah* (Yayasan Pustaka Obor Indonesia, 2011).

<sup>21</sup> N. K Sari, G. P., & Rasmini, "PENGARUH PENGALAMAN AUDITOR DAN AUDIT CAPACITY STRESS PADA KUALITAS AUDIT DENGAN KOMPETENSI SEBAGAI VARIABEL MEDIASI," *E-JURNAL EKONOMI DAN BISNIS UNIVERSITAS UDAYANA*, 12.4 (2023), 593–604.

<sup>22</sup> Sylvia Tijmstra dan Andres Rodriguez-Pose, "Local Economic Development as an alternative approach to economic development in Sub-Saharan Africa," 0, 2005, 1–20 <<http://siteresources.worldbank.org/INTLED/Resources/339650-1144099718914/AltOverview.pdf>>.

<sup>23</sup> Tarigan, R. (2005). *Ekonomi Regional, Teori dan Aplikasi*. PT Bumi Aksara.

<sup>24</sup> Rustiadi.

<sup>25</sup> Setiani, Unang, dan Rofatin.

<sup>26</sup> Farchan, Qomariah, dan Hidayat.

<sup>27</sup> Ananta Aji Rakhman Sofyan, Harianto, "Analisis Komoditas Unggulan Pertanian Tanaman Pangan Di Kabupaten Pematang Rejang," *Geo-Image*, 3.1 (2014).

commodities in food crop sub-sector in the agroecological zone in Bantul Regency, Special Region of Yogyakarta through an overlay process using LQ, Shift Share Analysis and Agroecological Zones with ArcGis software<sup>28</sup>. This research is different from several previous researches. This research identifies leading commodities using the Static Symmetric Location Quotient (SSLQ) approach and Dynamic Symmetric Location Quotient (DSLQ) to identify superior commodities for 13 urban districts in Central Sulawesi Province so that they can become recommendations for the government regions<sup>29</sup> in developing these superior commodities and making them as local commodities<sup>30</sup>.

Based on the background description, this research are important to specify and identify food crop commodities as superior and competitive commodities from the production aspect so that they can become a reference for local governments in developing commodities which are regional strengths based on local potential. For this reason, main goal of this research is "Analyzing food crop commodities which are superior and competitive commodities for districts/cities in Central Sulawesi for the 2017-2021 period

## **RESEARCH METHODS**

### **Research Type**

Based on the objectives to be achieved, this research uses a descriptive research type. "Descriptive research is research that intends to make systematic, factual and accurate (descriptive) predictions about facts and characteristics in certain areas that explain how they are interconnected to get a meaning or implication. This research uses a descriptive research type because this research is a research that aims to determine the leading commodities of food crop commodities in Central Sulawesi Province in 2017-2021. Based on this understanding, it is hoped that it can provide relatively appropriate directions in solving research problems so that the objectives and uses of research can be achieved<sup>31</sup>.

### **Research Scope and Location**

Scope of this research covers all types of food crop commodities consisting of rice, corn, peanuts, soybeans, tubers from 13 (thirteen) districts and cities in Central Sulawesi. The research location was determined purposively, namely Central Sulawesi Province with the consideration that Central Sulawesi Province is an area whose economy is supported by the agricultural sector<sup>32</sup>. The agricultural sector has a fairly large role in the

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<sup>28</sup> Mulyono dan Munibah.

<sup>29</sup> Richardson, H. W. (1978). *Dasar-Dasar Ilmu Ekonomi Regional* Terjemahan Paul Sitohang (Edisi Revi). Jakarta: Lembaga Penerbit FE UI

<sup>30</sup> Rustiadi.

<sup>31</sup> Prof. Dr. Sugiyono, "Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif dan R&D," *Metode Penelitian Pendidikan (Pendekatan Kuantitatif, Kualitatif, dan R&D)*, 2015, 308.

<sup>32</sup> Gold, M. V. (n.d.). Retrieved from Alternative Farming Systems Information Center. 1999.

GRDP of Central Sulawesi Province. This can be seen from the contribution of the agricultural sector to GRDP at constant prices in 2020 reaching 22.06 percent<sup>33</sup>.

### Data Type and Sources

Type of data used in this research is quantitative data. Quantitative data is data in the form of numbers or calculation results<sup>34</sup>. In this research, the data to be used in the analysis of leading commodities is quantitative data in the form of food crop production data, land area, food crop export value data both in the form of time series and cross sections covering 13 urban districts in Central Sulawesi Province.

Source of data used in research is secondary data. Secondary data is data obtained from documents/publications/research reports from offices/agencies or other supporting data sources<sup>35</sup>. This research will find data through publications and documentation from both the Provincial BPS, Regency BPS and Provincial and District Agriculture Services as well as other data from literature and information from related agencies. Data tracing will be carried out to several district/city agricultural offices if necessary.

### Population and Sample

Considering that the data used for the analysis of leading commodities is secondary data, the population in this research is time series data from all urban districts in Central Sulawesi. However, this research limits the analysis based on the publication of the most recent data, so the sample in this research is to collect 5-year time series data from 13 (thirteen) urban districts in Central Sulawesi, namely time series data for 2017 to 2021.

### Collecting Data Method

Data collection techniques in this research were documentation and literature. Documentation means that researchers collect document material obtained from BPS Central Sulawesi Province, government agencies or research institutions as well as other research results.

### Analytical Method

This research will use 3 (three) analytical method approaches in accordance with the objectives to be achieved. The first objective is to identify and analyze superior commodities using the *Static Symmetric Location Quotient* (SSLQ) and *Dynamic Symmetric Location Quotient* (DSLQ) approaches. Thus the following is the formulation for the analysis of superior commodities in 13 (thirteen) districts and cities in Central Sulawesi:

#### 1. Formulation of Static Location Quotient (SLQ) and Dynamic Location Quotient (DLQ). In simple terms as follows (Kuncoro, 2019):

$$SLQ_{is} = \frac{X_{is}/X_s}{X_{ir}/X_r} \dots\dots\dots(1)$$

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<sup>33</sup> Prof. Dr. Sugiyono.

<sup>34</sup> Prof. Dr. Sugiyono.

<sup>35</sup> Deden Dermawan dan Rusdi, "Keperawatan Jiwa Konsep dan Kerangka Kerja Asuhan Keperawatan Jiwa," *Goysen Publishing*, 2013, 262.

Which:

- SLQ<sub>is</sub>** : production of food crop commodities in research area (Regency)
- X<sub>is</sub>** : production of food crop commodities in research area (Regency)
- X<sub>ir</sub>** : production of food crop commodities in the reference area (Central Sulawesi)

$$DLQ = \left[ \frac{(1+g_{is})/(1+g_s)}{(1+g_{ir})/(1+g_r)} \right] = \frac{IPPS_{is}}{IPPS_{ir}} \dots\dots\dots(2)$$

Which:

- DLQ<sub>is</sub> :Potential index of food crop commodities in the research area
- g<sub>is</sub> :Production share of food crop commodities in the research area
- g<sub>s</sub> :Average share of food crop commodity production in the research area
- g<sub>ir</sub> :Production share of food crop commodities in the reference area
- g<sub>r</sub> :Average share of food crop commodity production in reference area
- t :Difference between the end and the beginning year
- IPPS<sub>is</sub> :Index of the potential development of food crop commodities in research area
- IPPS<sub>ir</sub> :Index of the potential development of food crop commodities in the reference area

Formulation was developed by transforming using *Static Symmetric LQ* (SSLQ) and *Dynamic Symmetric LQ* (DSLQ) as better alternatives in econometric model applications. Conversion of SLQ and DLQ into symmetrical forms is intended to obtain index values ranging from -1 to 1. The transformation of the SSLQ and DSLQ formulations is as follows<sup>36</sup>:

$$SSLQ = \frac{SLQ-1}{SLQ+1} \dots\dots\dots (3)$$

$$DSLQ = \frac{DLQ-1}{DLQ+1} \dots\dots\dots (4)$$

Based on the calculation results then the value:

**Table 1. Superior commodity classification based on the combined value of SLLQ and DSLQ**

Criteria	SSLQ > 0	SSLQ < 0
DSLQ > 0	Superior	Mainstay
DSLQ < 0	Prospective	Fall Behind

Source: <sup>37</sup>

## RESULT AND DISCUSSION

<sup>36</sup> M Kuncoro.

<sup>37</sup> M. Kuncoro, *Ekonomika Regional: Teori dan Praktek*, Edisi 1 Ce (Depok: PT Rahagrafindo Persada, 2019).

## Outcome of SSLQ and DSLQ Analysis and Determination of Superior Commodities

Determination of leading commodities in this research using SSLQ and DSLQ approaches. SSLQ approach is a formulation that compares the contribution of food crop production in the research area to the contribution of food crops in the reference area.

**Table 2. Analysis Outcome of SSLQ and DSLQ From 13 Regencies/cities in Central Sulawesi Province 2017 – 2021 period.**

No	Regencies/cities	Commodity	SSLQ	DSLQ	Annotation
1	Banggai Islands	Rice	-0.54	-0.99	Fall Behind
		Corn	0.06	0.99	Superior
		Soy bean	-0.47	-1.00	Fall Behind
		Peanuts	0.94	1.00	Superior
		Mung beans	-0.60	-1.00	Fall Behind
		Cassava	0.83	-1.00	Prospective
		Sweet Potato	0.72	-0.90	Prospective
2	Banggai	Rice	0.07	-0.68	Prospective
		Corn	-0.21	0.90	Superior
		Soy bean	0.28	-0.94	Prospective
		Peanuts	-0.02	1.00	Superior
		Mung beans	0.15	-1.00	Prospective
		Cassava	0.12	0.80	Leading
		Sweet Potato	-0.03	0.95	Superior
3	Morowali	Rice	0.12	-1.00	Prospective
		Corn	-0.52	1.00	Superior
		Soy bean	0.01	1.00	Leading
		Peanuts	-0.26	1.00	Superior
		Mung beans	0.41	0.98	Leading
		Cassava	0.44	0.91	Leading



No	Regencies/cities	Commodity	SSLQ	DSLQ	Annotation
4	Poso	Sweet Potato	0.09	0.96	Leading
		Rice	-0.03	0.56	Superior
		Corn	0.02	0.40	Leading
		Soy bean	0.05	0.82	Leading
		Peanuts	-0.44	1.00	Superior
		Mung beans	-0.63	-1.00	Fall Behind
		Cassava	0.02	-0.54	Prospective
5	Donggala	Sweet Potato	0.42	0.55	Leading
		Rice	-0.07	-0.71	Fall Behind
		Corn	0.12	-1.00	Prospective
		Soy bean	0.42	0.88	Leading
		Peanuts	0.22	1.00	Leading
		Mung beans	0.27	-1.00	Prospective
		Cassava	-0.06	-0.99	Fall Behind
6	Tolitoli	Sweet Potato	-0.21	-1.00	Fall Behind
		Rice	0.14	0.27	Leading
		Corn	-0.39	0.99	Superior
		Soy bean	-0.65	-0.92	Fall Behind
		Peanuts	0.10	1.00	Leading
		Mung beans	-0.30	-0.98	Fall Behind
		Cassava	-0.22	-0.35	Fall Behind
7	Buol	Sweet Potato	-0.10	0.61	Leading
		Rice	-0.49	-1.00	Fall Behind
		Corn	0.43	-0.40	Prospective

No	Regencies/cities	Commodity	SSLQ	DSLQ	Annotation
		Soy bean	-0.59	1.00	Superior
		Peanuts	-0.54	1.00	Superior
		Mung beans	-0.49	-1.00	Fall Behind
		Cassava	-0.83	-1.00	Fall Behind
		Sweet Potato	-0.92	-0.77	Fall Behind
<b>8</b>	<b>Parigi Moutong</b>	Rice	0.13	-0.91	Prospective
		Corn	-0.35	0.97	Superior
		Soy bean	-0.47	-1.00	Fall Behind
		Peanuts	-0.34	1.00	Superior
		Mung beans	-0.23	-1.00	Fall Behind
		Cassava	-0.38	-0.98	Fall Behind
		Sweet Potato	-0.07	-1.00	Fall Behind
<b>9</b>	<b>Tojo Una-una</b>	Rice	-0.70	1.00	Superior
		Corn	0.46	1.00	Leading
		Soy bean	0.03	0.99	Leading
		Peanuts	-0.27	1.00	Superior
		Mung beans	-0.28	1.00	Superior
		Cassava	0.01	1.00	Leading
		Sweet Potato	-0.21	1.00	Superior
<b>10</b>	<b>Sigi</b>	Rice	0.00	-0.71	Prospective
		Corn	0.03	-0.95	Prospective
		Soy bean	-0.45	-1.00	Fall Behind
		Peanuts	-0.15	1.00	Superior
		Mung beans	-0.07	-1.00	Fall Behind

No	Regencies/cities	Commodity	SSLQ	DSLQ	Annotation
		Cassava	-0.36	0.52	Superior
		Sweet Potato	-0.51	0.45	Superior
11	Banggai Laut	Rice	-1.00	-1.00	Fall behind
		Corn	-0.31	1.00	Superior
		Soy bean	-0.95	-1.00	Fall behind
		Peanuts	0.73	1.00	Leading
		Mung beans	-1.00	-1.00	Fall behind
		Cassava	0.91	-0.79	Prospective
		Sweet Potato	0.75	-0.59	Prospective
12	Morowali Utara	Rice	-0.07	1.00	Superior
		Corn	0.10	-1.00	Prospective
		Soy bean	0.48	0.51	Leading
		Peanuts	0.02	1.00	Leading
		Mung beans	-0.65	-1.00	Fall behind
		Cassava	0.22	0.98	Leading
		Sweet Potato	-0.27	-0.23	Fall behind
13	Palu	Rice	-0.48	-1.00	Fall behind
		Corn	0.31	-0.88	Prospective
		Soy bean	-1.00	-1.00	Fall behind
		Peanuts	0.79	1.00	Leading
		Mung beans	-1.00	-1.00	Fall behind
		Cassava	0.69	-0.96	Prospective
		Sweet Potato	-0.63	-0.63	Fall behind

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Source:<sup>38</sup>, data is reprocessed

Based on the results of calculating SSLQ and DSLQ in the table above, it illustrates that:

1. Rice:

- Leading commodity in Tolitoli District
- Prospective commodity in 1) Banggai District, 2) Morowali District, 3) Parigi Moutong District dan 4) Sigi District.
- Superior commodity in Poso Regency, Tojo Una-una Regency and North Morowali Regency
- Fall Behind Commodities in areas 1) Banggai Islands Regency, 2) Donggala Regency, 3) Buol Regency, 4) Banggai Laut Regency and 5) Palu City.

2. Corn:

- Leading Commodities in the Banggai Islands Regency, Poso Regency and Tojo Una-una Regency
- Prospective commodity in Donggala Regency, Buol Regency, Sigi Regency, North Morowali Regency and Palu City
- Superior Commodity in Banggai Regency, Morowali Regency, Tolitoli Regency, Parigi Mutong Regency and Buol Regency

3. Soy Bean

- Leading commodity in Morowali Regency, Poso Regency, Donggala Regency, Tojo Una – una Regency, and North Morowali Regency
- Prospective commodity in Banggai Regency
- Superior commodity in Buol Regency
- Fall behind commodity in Banggai Islands Regency, Tolitoli Regency, Parigi Moutong Regency, Sigi Regency, Banggai laut Regency, and Palu city

4. Peanuts

- Leading commodity in Banggai Islands Regency, Donggala Regency, Tolitoli Regency, Banggai laut regency, North Morowali Regency and Palu city
- Prospective commodity, there are no district that have peanuts as a prospective commodity

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<sup>38</sup> BPS, *Sulawesi Tengah Dalam Angka*.

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- Superior commodity in Banggai Regency, Morowali Regency, Poso Regency, Buol Regency, Parigi Moutong Regency, Tojo Una – una Regency, and Sigi Regency
  - Fall behind commodity, there are no district that have peanuts as a fall behind commodity
5. Mung bean
- Leading commodity only in Morowali Regency
  - Prospective commodity in Banggai Regency and Donggala Regency
  - Superior commodity only in Tojo Una – una Regency
  - Fall behind commodity in Banggai Islands Regency, Poso Regency, Tolitoli Regency, Buol Regency, Parigi Moutong Regency, Sigi Regency, Banggai laut Regency, North Morowali Regency, and Palu city
6. Cassava
- Leading commodity in Banggai Regency, Morowali Regency, Tojo Una – una Regency, and North Morowali Regency
  - Prospective commodity in Banggai Islands Regency, Poso Regency, Banggai Laut Regency, and Palu City
  - Superior only in Sigi Regency
  - Fall behind commodity in Donggala Regency, Tolitoli Regency, Buol Regency, and Parigi Moutong Regency
7. Sweet Potato
- Leading commodity in Morowali Regency, and Poso Regency
  - Prospective Regency in Banggai Islands Regency, and Banggai laut Regency
  - Superior commodity in Banggai Regency, Tolitoli Regency, Tolitoli Regency, Tojo Una – una Regency, and Sigi Regency
  - Fall behind commodity in Donggala Regency, Buol Regency, Parigi Moutong Regency, North Morowali Regency, and Palu City.

### **Analyze**

Outcome of SSLQ and DSLQ calculations in this research found that rice commodity is a fall behind and uncompetitive commodity for several districts in Central Sulawesi Province, except for Tolitoli Regency. This commodity, although leading from the SSLQ and DSLQ approaches, does not have the competitiveness of the SSA approach. Commodity types that are leading and competitive in Central Sulawesi are Corn, Soy

Beans, Peanuts, and Sweet Potatoes. Corn is a leading commodity in the Banggai Islands Regency and Poso Regency. Soybeans are the leading commodity for the Regencies of Morowali, Poso and Donggala. Peanuts are the leading commodity for the Donggala Regency and Tolitoli Regency.

Rice commodity as reviewed from a production level is higher than other commodities for food crops, but the production level is almost evenly distributed across all districts/cities in Central Sulawesi province so that from a comparative aspect of production levels and comparative production growth rates for the districts as the research area of Sulawesi Province as a reference region, this commodity is not found as a leading commodity. In contrast to other commodities, the level of production owned by each district is more varied. There are districts that have high levels of production and there are areas with low levels of production. So that when SSLQ and DSLQ analyzes are applied, there will be areas that are superior for these particular commodity types.

In addition to the leading commodity category, based on the results of the analysis it was also found that there were three types of commodities as Superior and competitive commodities such as, Corn, Peanuts and Sweet potatoes. Corn is a superior and competitive commodity for the Regencies of Morowali, Tolitoli, Parigi Moutong and Banggai Laut. Meanwhile, peanuts are a leading and competitive commodity for the Regencies of Moroali, Poso, Buol and Sigi. Superior Commodity means that the comparison between the average production growth of certain commodities to the average production growth of all commodities in the research area to the reference area is positive, thus that Corn, peanuts and sweet potatoes have a positive average production growth in the research period , but the contribution is negative.

Other categories based on the analytical approach used are also commodities with prospective and powerful commodity categories. Prospective means the comparative value between the contribution of production of certain commodities to the total production of food crop commodities in the research area and the contribution of certain commodity production to the total production of food crop commodities in the reference area. The research found that there was only one type of commodity, namely corn, in the Buol Regency area

## **CONCLUSION**

Outcome of the analysis and research findings based on the objectives to be achieved in this research, the conclusions of this research include:

1. Food crop commodities which are the leading commodities based on the SSLQ and DSLQ for the 2016-2020 period are: Rice in the Tolitoli Regency area; Corn in the Banggai Islands Regency, Poso Regency and Tojo Una-una Regency; Soy bean in Morowali Regency, Poso Regency, Donggala Regency, Tojo Una-Una Regency and North Morowali Regency; Mung bean, in Banggai Islands Regency, Poso Regency, Tolitoli Regency, Buol Regency, Parigi Moutong Regency, Sigi Regency, Banggai Laut Regency, North Morowali Regency and Palu City; Cassava, in Donggala, Tolitoli, Buol, and Parigi Moutong Regencies; Sweet potato, in Donggala Regency, Buol Regency, Parigi Moutong Regency, and Palu City.

This study uses SSLQ and DSLQ From the calculation results of this approach, this study has limitations in developing research variables because the variables in this study are independent variables using production level data. For this reason, the suggestions put forward for further research consider variables related to the variables that affect the level of production.

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