International Journal of Economics, Business and Innovation Research
https://e-journal.citakonsultindo.or.id/index.php/IJEBIR
E-ISSN : 2964-0865
IJEBIR

Analysis of the Determination of Regional Excellence in the Agricultural Sector in Gorontalo Province

Amir Hamza Hadju[1], Amir Halid[2], Ria Indriani[3*]

[1]Master of Agribusiness Study Program, Posgraduate Program, Gorontalo State University, Gorontalo
[2,3]Agribusiness Study Program, Agribusiness Depatement, Agriculture Faculty, Gorontalo State University, Gorontalo

[3*]Corresponding Author: ria.indriani@ung.ac.id

Abstract

This research aims to Analyze the territorial prevalence of agrarian sub-sector in macroeconomic advancement in Gorontalo Province. The results of the study are: Location Quotient (LQ) shows that Food Crops and Fisheries sub-sectors in Gorontalo Province are superior sectors with significant contributions to the local economy. However, other sub-sectors such as Horticulture, Plantation, and Livestock do not have comparative advantage, showing lower contributions compared to the national economy. LQShare and LQShift analyses identify Food Crops as a laggard sector, while Fisheries shows progressive growth potential. The Agricultural Services and Hunting sub-sectors are growing, while other sectors are regressing, indicating challenges in competitiveness and economic development.

Keywords: Supply Chain, Chicken Egg, Supply Chain Operation Reference

INTRODUCTION

The primary challenge in regional development lies in prioritizing policies that reflect the unique characteristics of each area, leveraging local human resources, institutions, and physical assets. This focus encourages region-driven initiatives aimed at generating new job opportunities and boosting economic activity. (Aneta, 2014). Development planning priorities in regions that have rich natural resource potential are different from development priorities in regions that have large natural resources (Badan

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

Pusat Statistik, 1999). Meanwhile, regions that are in transitional development towards changes to a more advanced level, will have different problems with border and remote areas or areas that are declining in development and experiencing stagnation. Differences in the potential and conditions of a region will require different handling in planning development priorities and development (Murdiyana & Mulyana, 2017).

In addition to this concept, another factor that necessitates development planning at the regional or local level is the differences in potential and economic and social conditions between regions (Badan Pusat Statistik Indonesia, 2023). This encourages a region to design steps so that development goals can be achieved gradually and continuously. In that case, normatively the development paradigm has changed, but not a few autonomous districts in creating improvement arranging are regularly not in agreement with the potential of the locale in question . In regional economic development planning, efforts should be made to base the process as much as possible on the area's inherent potential (Usman, 2015), because if it is not based on the potential of the region, undoubtedly development will not provide added value (value added). On this basis, development planning and policies, especially in the framework of regional autonomy, should be based on regional potential. This is in line with Blakely's (1989) view that in regional (local) economic development (planning), the business sectors that are sought to be developed through regional (local) economic development are market-oriented business sectors and in accordance with local (regional) potential (Indrayani & Cahyani, 2023). Therefore, the purpose of the research is to see the economic base sector and the superiority sector of the Gorontalo province.

RESEARCH METHODS

The method used in this research was a survey method which is empirical data collection based on interviews and observations. This activity comprises of auxiliary information study and essential information study. Secondary data survey was intended to obtain available data related to the contribution and development of the agricultural sector in the economic development of Gorontalo Province. While the initial survey was conducted in 6 (six) regions namely Gorontalo City, Bone Bolango Regency, Gorontalo Regency, Boalemo Regency, Pohuwato Regency and North Gorontalo Regency. The types of data in this research are primary data and secondary data. Primary data is data obtained directly in the field by researchers as the object of writing. Primary data sources are farmers working in the agricultural sub-sector and parties directly related to

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

agricultural activities (Dewi, 2019). Secondary data is data obtained not from the first source. The secondary data required includes, among others, GRDP, population, and labor. Furthermore, secondary data from the Department of Agriculture with each subsector, namely the Food Crops, Livestock, Fisheries, Forestry, Horticulture sub-sectors with a time series database, is an important part of this research (Manurung & P, 2008). There are two analyses used in this study, namely Location Quotient analysis to determine the base and non-base subsectors and LQshift LQshare analysis to determine the leading subsectors.

Location Qoutient Analysis

LQ (Location Question) analysis is used to determine agricultural sub-sector commodities that have comparative advantages, with the criteria of LQ> 1. Operationally, the LQ formulation can be formulated as follows

$$LQ = \frac{E_{ij}/E_J}{E_{in}/E_n}$$

Where:

E_{ij}=Number of agricultural sub-sectors at the Regency level

E_J= Total of all agricultural sub-sectors at the Regency level

E_{in}= Number of agricultural sub-sectors at the Provincial level

E_n= Total of all agricultural sub-sectors at the Provincial level

LQ_{share} and LQ_{Shift} Analysis

LQShare and LQShift analysis are developed from the LQ analysis model. This analysis is dynamic because it takes into account the development of the sector at two points in time with the following formula:

$$LQ_{Share} = \left[\frac{\frac{(Q_{Rkn} + Q_{Rko})}{(Q_{Rn} + Q_{Ro})}}{\frac{(Q_{Nkn} + Q_{Nko})}{(Q_{Nn} + Q_{No})}}\right]$$

Where:

QRko = Economic indicators of sector k of the region at the beginning of the period

QRkn = Economic indicator of sector k of the region at the end of the period

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Economics, Business and Innovation Research
https://e-journal.citakonsultindo.or.id/index.php/IJEBIR
E-ISSN : 2964-0865
IJEBIR

QRo = Total economic indicators of the region's sectors at the beginning of the period
QRn = Total economic indicators of the region's sectors at the end of the period
QNko = Economic indicators of sector k of the reference region at the beginning of the period
QNkn = Economic indicator of sector k of the reference region at the end of the period
QNo = Total economic indicator of the sector of the reference region at the beginning of the period
QNn = Total economic indicators of the reference region sectors at the end of the period

$\left[\frac{(Q_{Rkn}+Q_{Rko})}{(Q_{Rn}+Q_{Ro})}\right]$ = Share component of sector k of the observation region

$\left[\frac{(Q_{Nkn}+Q_{Nko})}{(Q_{Nn}+Q_{No})}\right]$ = Share component of sector k in the reference region

The criteria of LQShare are:

- LQ_{Share}> 1, Sector with a higher level of specialization/concentration than the reference region.
- LQ_{Share} < 1, Sector with a lower level of specialization/concentration than the reference region.
- LQ_{Share} = 1, Sector with the same level of specialization/concentration as the reference region

To obtain a formula for the development of regional competitiveness at two points in time (period) then:

$$LQ_{Shift} = \left[\frac{\frac{(Q_{Rkn}-Q_{Rko})}{(Q_{Rn}-Q_{Ro})}}{\frac{(Q_{Nkn}-Q_{Nko})}{(Q_{Nn}-Q_{No})}}\right]$$

Where :

$\left[\frac{(Q_{Rkn}-Q_{Rko})}{(Q_{Rn}-Q_{Ro})}\right]$= The shift component of sector k of the observation region

$\left[\frac{(Q_{Nkn}-Q_{Nko})}{(Q_{Nn}-Q_{No})}\right]$= Shift component of sector k of reference region

LQ_{Shift}>1, Sector with higher development/competitiveness than the reference region

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Economics, Business and Innovation Research
https://e-journal.citakonsultindo.or.id/index.php/IJEBIR
E-ISSN : 2964-0865
IJEBIR

LQ_{Shift}<1, Sectors with lower development/competitiveness than the reference region

LQ_{Shift}= 1, Sectors with the same development/competitiveness of the reference region

Determination of the relative position of sectors based on the following criteria:

- LQ_{Share} ≥1 dan LQ_{Shift}≥1 = Progressive Sector. The level of specialization/concentration and rate of change/competitiveness of the sector is high, the sector plays a very important role..
- LQ_{Share} <1 dan LQ_{Shift} ≥1 = Developing Sector. Indicates that the level of specialization/concentration of the sector is still low but the rate of change is relatively high, so the sector has good prospects to play a role.
- LQ_{Share} ≥1 dan LQ_{Shift}<1 = Sluggish Sector. Indicates that the specialization/concentration of the sector is high but with a low rate of change/competitiveness.
- LQ_{Share} <1 dan LQ_{Shift} <1 = Backward Sector. Indicates that the specialization/concentration of the sector and the rate of change/competitiveness of the sector is low, the sector has poor prospects for growth.

RESULT AND DISCUSSION

Regional superiority of agricultural sub-sector in macroeconomic improvement in Gorontalo Territory. The leading sector is as a rule related to a comparison, be it a territorial, national or international comparison. (Amalia et al., 2022). A region will have a leading sector if the region can win the competition in the same sector with other regions so that it can produce exports. In this study, the leading sector is focus on the superiority of agriculture sub-sector area in macroeconomic development in Gorontalo Province, it is necessary to do Location Quotient (LQ) analysis, Shift Share analysis and LQ_{Share} and LQ_{Shift} analysis (Usman, 2015).

Location Quotient Analysis

Location Quotient (LQ) is an approach used to determine the base or non-base sectors of a region. The basic logic of Location Quotient (LQ) is the theory of economic base which essentially is because the base industry produces goods and services for the market in the region and outside the region concerned, then sales out of

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Economics, Business and Innovation Research
https://e-journal.citakonsultindo.or.id/index.php/IJEBIR
E-ISSN : 2964-0865
IJEBIR

the region will generate income for the region. The calculation results regarding Location Quotient (LQ) are presented in Table 1.

Table 1. Results of Location Quotient (LQ) Analysis

No	Business Fields	Averages LQ 2019-2023	Categories
1	Food Crops	2.430	Featured
2	Horticultural Crops	0.606	Not Featured
3	Plantation Crops	0.284	Not Featured
4	Livestock	0.595	Not Featured
5	Agriculture Services and Hunting	0.718	Not Featured
6	Forestry and Logging	0.345	Not Featured
7	Fishing	1.225	Featured

Source: Refined data, 2024

Based on Table 1. during the 2019-2023 period, the Food Crops and Fishing sub-sectors in Gorontalo Province showed a Location Quotient (LQ) value greater than 1, which indicates that these two sub-sectors are categorized as leading or basic. An LQ value greater than 1 indicates that the sector's contribution to the local economy (GRDP) exceeds its contribution to the national economy (GDP). In this context, the Food Crops and Fisheries sub-sectors have a comparative advantage in Gorontalo, which means that the region is able to produce food commodities and fishery products more efficiently and in larger quantities than other regions in Indonesia.

Moreover, the status as a base sector indicates that Food Crops and Fisheries are the main drivers of Gorontalo's local economy (Keratorop et al., 2016). This not only reflects the great potential in producing products that can meet local needs, but also has the capacity to meet demand outside the region, even to export. This sub-sector is also likely to be one of the main contributors to employment and income for the people of Gorontalo, as well as contributing to food security and the economic welfare of the local community (Setianto & Susilowati, 2014).

On the other hand, the Horticultural Crops, Plantation Crops, Livestock, Agriculture Services and Hunting, and Forestry and Logging sub-sectors have Location Quotient (LQ)

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

values smaller than 1. This puts them in the non-excellence or non-base category. LQ values smaller than 1 indicate that the contribution of these sub-sectors to the Gorontalo economy is lower than their contribution at the national scales.

As non-base sectors, these sub-sectors do not have a comparative advantage in Gorontalo, which means that the region may be less efficient or have less potential in the production and development of these sectors compared to other regions in Indonesia (Halid et al., 2023). As a result, these sub-sectors tend to focus more on meeting local needs and are less able to compete in the broader market. Despite this, these non-base sub-sectors remain important to the local economy, especially in providing economic diversification and employment for the community. Efforts to increase productivity and efficiency in this sub-sector are still needed in order to make a more significant contribution to Gorontalo's economic development in the future.

LQ_{share} and LQ_{shift} Analysis

LQ_{Share} and LQ_{Shift} analysis are developed from the LQ analysis model. This analysis has a dynamic nature because it takes into account the development of the sector at two points in time. In addition, LQ_{Share} and LQ_{Shift} analysis can identify the specialization/concentration and development of regional sectors because they are based on very similar calculation concepts, so that the calculation results support each other in determining the relative progress or decline of regional sectors. The overall analysis results of LQ_{Share} and LQ_{Shift} are presented in Table 2.

Table 2. Results of LQ Share and LQ Shift Analysis

No	Business Field	Value LQ Share	Value LQ Shif	Description	Categories
1	Food Crops	2.468	0.020	$LQ_{Share} \geq 1$ and $LQ_{Shift} < 1$	Slow Sector
2	Horticultural Crops	0.611	0.779	LQShare < 1 and LQShift < 1	Slow Sector
3	Plantation Crops	0.282	0.696	LQShare < 1 and LQShift < 1	Slow Sector
4	Livestock	0.589	0.761	LQShare < 1 and LQShift < 1	Slow Sector
5	Agriculture Services and Hunting	0.717	1.195	LQShare< 1 and LQShift ≥ 1	Developing Sector
6	Forestry and Logging	0.338	0.589	LQShare < 1 and LQShift < 1	Slow Sector

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

7	Fishing	1.221	1.352	$LQ_{Share} \geq 1$ and $LQ_{Shift} \geq 1$	Progressive Sector

Source: Processed data, 2024

Based on Table 2, the LQ Share value and LQShift value can be explained as follows:

1. Food Crops

The LQ_{Share} value is 2.468. When referring to the applicable criteria, it can be said that the food crops sub-sector has a higher level of specialization/concentration than the reference area. The LQ_{Shift} value is 0.020. If referring to the predetermined criteria, it is included in the unfavorable criteria or in other words, the development of the agricultural sector, especially the food crops sub-sector, development/competitiveness is lower than the reference area or national data of the Republic of Indonesia. Because the value of $LQ_{Share} \geq 1$ and $LQ_{Shift} < 1$, the development of the agricultural sector, especially the food crops sub-sector, is a slow sub-sector. This means that the food crops sub-sector has a high specialization/concentration but with a low rate of change/competitiveness. The sub-sector competes with the same sub-sector from other regions in increasing macroeconomic development (GRDP) in Gorontalo Province.

2. Horticultural Corps

The LQ_{Share} value is 0.611. When referred to the applicable criteria, it can be said that the horticultural crops sub-sector has a lower level of specialization/concentration than the reference area (Lestari et al., 2022; Setianto & Susilowati, 2014). The LQ_{Shift} value is 0.779. When referring to the predetermined criteria, it is included in the criteria that are less good or in other words, the development of the agricultural sector, especially the horticultural crops sub-sector, the development/competitiveness is lower than the reference area or national data of the Republic of Indonesia. Because the value of $LQ_{Share} < 1$ and $LQ_{Shift} < 1$, the development of the agricultural sector, especially the horticultural crops sub-sector, is a backward sub-sector. This means that horticultural crops have a low level of specialization/concentration of the sub-sector but a relatively low rate of change, so that the sub-sector has poor prospects to play a role in improving macroeconomic development (GRDP) in Gorontalo Province.

3. Plantation Corps

The LQ_{Share} value is 0.282. When referring to the applicable criteria, it can be said that the plantation crops sub-sector has a lower level of specialization/concentration than the

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

reference area. The LQ_{Shift} value is 0.696. When referring to the predetermined criteria, it is included in the unfavorable criteria or in other words, the development of the agricultural sector, especially the plantation crops sub-sector, the development/competitiveness is lower than the reference area or national data of the Republic of Indonesia. Because the value of $LQ_{Share} < 1$ and $LQ_{Shift} < 1$, the development of the agricultural sector, especially the plantation crops sub-sector, is a backward sub-sector. This means that plantation crops have a low level of specialization/concentration but a relatively low rate of change, so that the sub-sector has poor prospects to play a role in increasing macroeconomic development (GRDP) in Gorontalo Province.

4. Livestock

The LQ_{Share} value is 0.589. When referring to the applicable criteria, it can be said that the livestock sub-sector has a lower level of specialization/concentration than the reference area. The LQ Shift value is 0.761. If referring to the predetermined criteria, it is included in the unfavorable criteria or in other words, the development of the agricultural sector, especially the livestock sub-sector, the development/competitiveness is lower than the reference area or national data of the Republic of Indonesia. Because the value of $LQ_{Share} < 1$ and $LQ_{Shift} < 1$, the development of the agricultural sector, especially the livestock sub-sector, is a backward sub-sector. This means that livestock has a low level of specialization/concentration but a relatively low rate of change, so that the sub-sector has poor prospects to play a role in increasing macroeconomic development (GRDP) in Gorontalo Province.

5. Agriculture Services and Hunting

The LQShare value is 0.717. When referring to the applicable criteria, it can be said that the agriculture services and hunting sub-sector has a lower level of specialization/concentration than the reference area. The LQ_{Shift} value is 1.195. When referring to the predetermined criteria, it is included in the good criteria or in other words, the development of the agricultural sector, especially the agriculture services and hunting sub-sector, has a higher development/competitiveness than the reference area or national data of the Republic of Indonesia. Because the value of $LQ_{Share} < 1$ and $LQ_{Shift} \geq 1$, the development of the agricultural sector, especially the agriculture services and hunting sub-sector, is a developing sub-sector. This means that agriculture services and hunting have a low level of specialization/concentration but a relatively high rate of change, so that the sub-sector has good prospects to play a role in increasing macroeconomic development (GRDP) in Gorontalo Province.

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Economics, Business and Innovation Research
https://e-journal.citakonsultindo.or.id/index.php/IJEBIR
E-ISSN : 2964-0865
IJEBIR

6. Forestry and Logging

The LQ_{Share} value is 0.338. When referring to the applicable criteria, it can be said that the forestry and logging sub-sector has a lower level of specialization/concentration than the reference area. The LQ_{Shift} value is 0.589. When referring to the predetermined criteria, it is included in the unfavorable criteria or in other words, the development of the agricultural sector, especially the forestry and logging sub-sector, the development/competitiveness is lower than the reference area or national data of the Republic of Indonesia. Because the value of $LQ_{Share} < 1$ and $LQ_{Shift} < 1$, the development of the agricultural sector, especially the forestry and logging sub-sector, is a backward sub-sector. This means that forestry and logging have a low level of specialization/concentration but a relatively low rate of change, so that the sub-sector has poor prospects to play a role in increasing macroeconomic development (GRDP) in Gorontalo Province

7. Fisheries

The LQ_{Share} value is 1.221 When referring to the applicable criteria, it can be said that the fisheries sub-sector (fishing) has a higher level of specialization/concentration than the reference area. LQ_{Shift} value of 1.352. If referring to the predetermined criteria, it is included in the good criteria or in other words, the development of the agricultural sector, especially the fisheries sub-sector (fishing) development/competitiveness is higher than the reference area or national data of the Republic of Indonesia. Because the value of $LQ_{Share} \geq 1$ and $LQ_{Shift} \geq 1$, the development of the agricultural sector, especially the fishing sub-sector, is a progressive sub-sector. This means that fisheries (fishing) have a high level of specialization/concentration and rate of change/competitiveness of the sub-sector, the sub-sector is very instrumental and contributes greatly in improving macroeconomic development (GRDP) in Gorontalo Province.

CONCLUSION

Based on the results of research and discussion, it can be concluded that Location Quotient (LQ) analysis shows that the Food Crops and Fisheries sub-sectors in Gorontalo Province are leading sectors with significant contributions to the local economy. However, other sub-sectors such as Horticulture, Plantation, and Livestock do not have comparative advantage, showing a lower contribution compared to the national economy. LQ_{Share} and LQ_{Shift} analysis identified Food Crops as a laggard sector, while Fisheries

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

showed progressive growth potential. The Agricultural Services and Hunting sub-sectors are growing, while other sectors are regressing, indicating challenges in competitiveness and economic development.

REFFERENCE

Amalia, F., Sinaga, R., Asyari, Soeyatno, R. F., & Silitonga, D. (2022). Ekonomi Pembangunan (R. Kusumaningrum (ed.); 1st ed.). Widina Bhakti Persada Bandung.

Aneta, A. (2014). Penanggulangan Kemiskinan Perkotaan Gorontalo. Ideas Publishing.

Badan Pusat Statistik. (1999). Statistika Indonesia. Badan Pusat Statistik.

Badan Pusat Statistik Indonesia. (2023). Profil Kemiskinan di Indonesia Maret 2023. Badan Pusat Statistik Indonesia. https://www.bps.go.id/id/pressrelease/2023/07/17/2016/profil-kemiskinan-di-indonesia-maret-2023.html

Dewi, S. R. (2019). Akuntansi Biaya (S. B. Sartika (ed.)). UMSIDA Press.

Halid, A., Abdul, I., & Wolok, T. (2023). Perencanaan Pembangunan Ekonomi dan Daya Saing Sektor Unggulan (A. F. Syam & Fadel Muhammad (eds.)). Ideas Publishing.

Indrayani, A. F., & Cahyani, D. (2023). Analisis Sektor Basis Di Kabupaten Gorontalo Utara Menggunakan Location Quentient Analysis. Jurnal Governance and Politics (JGP), 3(2), 1–8. https://doi.org/10.54045/mutawazin.v1i2.154

Keratorop, M., Widiatmaka, & Suwardi. (2016). Arahan Pengembangan Komoditas Unggulan Pertanian Tanaman Pangan Di Kabupaten Boven Digoel Provinsi Papua. Plano Madani, 5, 1–23. https://journal3.uin-alauddin.ac.id/index.php/planomadani/article/view/1586

Lestari, P. F. K., Sukanteri, N. P., & Amaral, N. P. A. (2022). Manajemen Agribisnis. In M. M. A. Dr. Ir Gede Sedana, M.Sc. (Ed.), UNMAS PRESS. Universitas Mahasaraswati Press.

Manurung, M., & P, R. (2008). Pengantar Ilmu Ekonomi: Mikro Ekonomi & Makro Ekonomi (Issue 1).

Murdiyana, M., & Mulyana, M. (2017). Analisis Kebijakan Pengentasan Kemiskinan Di Indonesia. Jurnal Politik Pemerintahan Dharma Praja, 10(1), 73–96. https://doi.org/10.33701/jppdp.v10i1.384

Setianto, P., & Susilowati, I. (2014). Komoditas Perkebunan Unggulan yang Berbasis Pada Pengembangan Wilayah Kecamatan di Kabupaten Banjarnegara Provinsi

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

Jawa Tengah. Jurnal Wilayah Dan Lingkungan, 2(2), 143. https://doi.org/10.14710/jwl.2.2.143-156

Usman. (2015). Analisis Sektor Basis dan Subsektor Basis Pertanian Terhadap Pertumbuhan Ekonomi di Kabupaten Keerom Provinsi Papua. Jurnal Sosial Ekonomi Pertanian (J-SEP), 8(3), 38–49.

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.