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Analysis LQ-DLQ of the Potential Tourism Sector of Bali Province for the Period 2018-2023

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Abstract

One of the Indonesian provinces where tourism is a major source of revenue for residents is Bali. A great number of Balinese people own businesses in the tourism industry, ranging from large-scale ventures to micro, small, and medium-sized firms in the travel, housing, and culinary industries, among other things. After examining the current situation, it is determined that Bali Province's leading tourism industry has the potential to grow, thus DLQ (dynamic loqation quotient) and LQ (location quotient) analyses are conducted. This analysis's goal is to demonstrate whether or not the tourism industry has the capacity to boost Bali Province's GDP between 2018 and 2023. Using LQ and DLQ analysis, this study finds that the provision of food and drink and lodging are still viable industries in Bali Province. obtained from the analysis of the base sector of Bali Province (LQ>1 value), but DLQ<1 value (slow growth rate or lack of development potential).

Keywords: *DLQ Analysis, LQ Analysis, Torism Sector*

Abstrak

Provinsi Bali merupakan salah satu provinsi di Indonesia yang menjadikan sektor pariwisata sebagai pendapatan ekonomi masyarakat. Masyarakat bali banyak yang memiliki usaha dalam sektor pariwisata baik dalam skala besar sampai usaha mikro kecil menengah seperti penginapan, biro perjalanan wisata, travel, kuliner, berbagai pertujukan seni dan lain lain. Dengan melihat realita yang ada, sektor pariwisata dominan menjadi sektor potensial di Provinsi Bali maka dilakukan analisis LQ (loqation quotient) dan DLQ (dynamic loqation quotient). Tujuan dari analisis ini untuk membuktikan secara data apakah sektor pariwisata untuk periode 2018-2023 masih menjadi sektor potensial untuk memberikan kontribusi dalam ekonomi Provinsi Bali. Dalam penggolongan PDRB sektor pariwisata dapat dilihat dalam penggolongan sektor Penyediaan Akomodasi dan Makan Minum. Penelitian ini melihat Penyediaan Akomodasi dan Makan Minum masih menjadi sektor potensial di Provinsi Bali menggunakan analisis LQ dan DLQ. Didapatkan dari hasil analisis nilai LQ>1 yang artinya sektor basis dari Provinsi Bali, akan tetapi nilai DLQ<1 yang artinya laju pertumbuhan lambat atau tidak potensial untuk dikembangkan.
Kata Kunci: *Analisis LQ, Analisis DLQ, Sektor Pariwisata*

INTRODUCTION

Because Indonesian provinces differ from one another in a number of ways, so do the potential economies in each area. Indonesia is abundant in natural resources. For instance, the mining industry is highly prosperous in the islands of Kalimantan and Papua, the fishing industry is prosperous in North Maluku, and the province of Bali is rich in stunning natural scenery that draws tourists (Arif et al., 2023). Regional Gross Domestic Product, or GRDP It is a technique for figuring out how quickly an area's economy is growing based on the sectors that are already there, allowing each sector to reach its full potential . Indonesia is a nation with great economic potential that is well-known throughout the world. Southeast Asia's largest economy, Indonesia, is well-positioned for rapid economic development due to a number of factors (Jafar & Meilvidiri, 2021). Understanding the foundational industries that can support a region's economic growth is essential to accelerating the accomplishment of economic development objectives. Planning for regional development also takes into account the economy's growth and contribution to the GDP as a whole. To expedite the attainment of economic development objectives, it is vital to comprehend the foundational domains that can foster regional economic expansion.

Furthermore, the expansion of economic sectors and their share of the GDP constitute a significant role in regional development planning. Implementing a procedure to determine a sector's or region's economic potential is the first step in economic planning activities for the growth of economic activity sectors. When determining prospective local economic activity, there are two key things to take into account. First, which economic

sectors shown superiority or competitiveness in the previous year, and what was the prospect for them going forward? Second, despite their current lack of competitiveness, economic sectors have room to grow in the future (Sumardi, 2017). Both domestic and foreign travelers love Bali as a vacation spot. Bali offers a wide range of tourism options, including several beaches, tourist communities, and other intriguing sights. Additionally, there are a number of other factors that influence travelers' decision to visit the province of Bali. Balinese cultural tourism is characterized by local culture that is strongly ingrained in people's lives and continues to exist, in addition to safety. The largest number of travelers visited Indonesia in 2019—8,246,610 local tourists and 6,275,210 foreign tourists—according to (Fickri Amalia & Gita Suari Miranti, 2/023).

Agriculture, Forestry, and Fisheries; Mining and Quarrying; Processing Industry; Wholesale and Retail Trade; Car and Motorcycle Repair; Transportation and Warehousing; Provision of Accommodation and Food & Drink; Information and Communication; Financial Services and Insurance; Real Estate; Corporate Services; Government Administration, Defense, and Compulsory Social Security; Educational Services; Health Services and Social Activities; Other Services Are Included in GRDP (Sumardi, 2017). The GRDP data's accommodation and food and drink provision sector can be used to represent the tourism industry since travelers unquestionably require these services. Based on constant prices across business areas, the GRDP of Bali Province is calculated for the 2018–2023 period using data from Table 1 and BPS data(Dedi Sufriadi, 2015). With a GRDP of 28391.84 billion rupiah in 2023, the Accommodation and Food and Drink Provision sector leads the field. Agriculture, Forestry and Fisheries comes in second with 21022.07 billion rupiah, and Construction comes in third with 16589.35 billion rupiah.

Table 1. GDRP Bali Province 2018-2023

Lapangan Usaha	2018	2019	2020	2021	2022	2023
a. Pertanian, Kehutanan, dan Perikanan	20760,22	21479,55	21269,19	21338,45	21146,42	21022,07
b. Pertambangan dan Penggalian	1441,411	1423,738	1362,771	1363,738	1426,412	1447,48
c. Industri Pengolahan	9700,322	10359,04	9694,782	9701,452	10240,99	10472,56
d. Pengadaan Listrik dan Gas	323,9947	338,6392	282,8073	268,4326	311,4455	354,558
e. Pengadaan Air; Pengelolaan Sampah, Limbah, dan Daur	319,2849	338,9762	337,2615	323,911	322,2518	333,6957

Ulang						
f. Konstruksi	15256,99	16305,01	15856,02	15843,03	16439,96	16589,35
g. Perdagangan Besar dan Eceran; Reparasi Mobil dan Sepeda Motor	14250,45	15297,79	14219,22	14016,09	14817,39	15616,98
h. Transportasi dan Pergudangan	11347,35	11872,27	8062,815	6638,325	8070,176	10110,82
i. Penyediaan Akomodasi dan Makan Minum	31391,18	32970,99	23902,89	21460,21	24441,9	28391,84
j. Informasi dan Komunikasi	10888,27	11657,32	12375,04	12713,89	12639,6	12858,5
k. Jasa Keuangan dan Asuransi	6214,395	6759,77	6456,681	6244,502	6750,328	7651,31
l. Real Estat	7054,141	7468,383	7504,59	7541,645	7716,793	7756,11
m, n. Jasa Perusahaan	1730,609	1810,448	1736,624	1681,048	1824,128	1949,663
o. Administrasi Pemerintahan, Pertahanan, dan Jaminan Sosial Wajib	8569,581	8955,575	8921,601	8973,815	8632,767	8539,731
p. Jasa Pendidikan	8574,398	8991,011	8916,706	8987,387	8989,233	8976,159
q. Jasa Kesehatan dan Kegiatan Sosial	3709,331	3930,788	4042,261	4269,265	4314,726	4410,789
r,s,t,u. Jasa Lainnya Produk Domestik Regional Bruto	2540,735	2734,057	2557,685	2506,492	2745,881	2965,958

LQ-DLQ analysis was the method utilized to analyze the data for this investigation. To ascertain a region's comparative advantage in identifying its flagship industry, LQ analysis is utilized to identify base/centralization and non-base sectors. Dynamic Location Quetient (DLQ) analysis can be used to address the drawbacks of LQ analysis (BPS, 2024)

RESEARCH METHOD

GDRP

The Gross Regional Domestic Product, or GRDP for short, is a commonly used metric to indicate the size of a region in terms of its regional revenue. This GDP indicator is frequently brought up while discussing the effectiveness of developing a region; the greater the region's GDP number, the more successful the region's development has been overall. The definition of GRDP, which is defined as the quantity of added value that, is always explained in the statistical book of GRDP.

The volume added produced, or the total volume of final goods and services produced, and the price of valued goods and services are the two components multiplied to get the added value created or the total value of the final goods and services produced. Production activities yield the added value or all of the final goods and services produced; these are called "economic units" in that definition. The "entire economic units" that exist in a given location are the GDP's end, which represents the aggregate (whole) revenue of that region. It is the economic units that produce items or added value. Therefore, it encompasses all production activities or economic units of various types of industries that exist in that specific region, rather than just the added value or final value of goods and services of one or two economic units, not even just one or two specific industries like agriculture or processing industries (BPS, 2022).

Analisis LQ DLQ

Nature determines the economic base of an area, the commonly used approach is the Location Quotient (LQ) method. LQ analysis is used to determine the contribution of a region as a supplier or importer to an activity or economic sector in the area (Schaffer, 2010). One aspect of LQ analysis is as one of the indicators to determine the leading sector (Basuki &; Mujiraharjo, 2017), measuring the relative concentration of economic activity in determining the leading sector as the leading sector of an economic activity (R. Jumiyanti, 2018). The LQ method uses the following formula (Isserman, 1977):

$$\boldsymbol{LQ} = \frac{\boldsymbol{X_{ij}/(RV_j)}}{\boldsymbol{X_i/(RV)}}$$

LQ = Location Quotient coefficient of sector i in province j

X_{ij} = GDP sector i in province j

RV_j = Total PDRB provinsi j

X_i = GDP sector i at the country/provincial reference level j

RV = Total GDP at country/provincial reference level j

The results of calculating LQ values greater than 1 show that the growth rate of the munatan sector in a provincial area is greater than the growth rate of the same sector in the country/reference regional economy. It also shows that the sector is becoming the base sector of the economy in the area. The results of calculating LQ values smaller than 1 show that the growth rate of the munatan sector in a provincial area is slower than the growth rate of the same sector in the country/reference regional economy. In other words, the sector is not the economic base in the area.

The Dynamic Location Quotient (DLQ) method is a development of LQ by accommodating the growth rate factor of economic sector output from time to time (Nugroho, 2010). DLQ accommodates the economic growth rate of a sector as well as the economy as a whole over a certain period. The results of DLQ analysis show the potential of a sector to become the basis of the economy in the future. By combining LQ and DLQ, policymakers can assess the role of an economic sector in the economy including the sector's future prospects.

The DLQ method uses the formula:

$$\boldsymbol{DLQ} = \frac{(\mathbf{1} + \boldsymbol{g_{ij}})/(\mathbf{1} + \boldsymbol{g_j})}{(\mathbf{1} + \boldsymbol{g_{ip}})/(\mathbf{1} + \boldsymbol{g_p})}$$

DLQ = DLQ coefficient of sector i in province j

g_{ij} = Average GDP growth of sector I in province j

g_j = Average growth of total GDP in province j

g_{ip} = Average GDP growth of sector i at the country level p

g_p = Average growth of total GDP at the country level p

DLQ value greater than 1 indicates that the sector in the area has the potential to be developed or is prospective. Conversely, if the DLQ value is less than 1, then the sector is not prospective in becoming an economic base sector in a particular location or area (Pribadi, 2021). Numerical analysis is one of the quantitative methodologies used in this study. During the 2019–2023 research period, secondary data from the Provincial Central Bureau of Statistics were used in the study. Secondary data with time series data types were employed in this investigation. The information gathered takes the form of GDP (gross domestic product) data for the province of Bali and information on the source of state foreign exchange receipts in Indonesia. The data used in this study are secondary data from economically relevant literature, journals, annual reports, and the region's Gross Regional Domestic Product (GDP). The study employs a quantitative approach using descriptive methodologies (BPS, 2022).

Table 2. GDRP Indonesia 2019-2023

	PDRB ADHK Nasional				
Sektor	2019	2020	2021	2022	2023
Pertanian, Kehutanan, dan Perikanan	1354399,1	1378398,9	1404191	1435853	1454587
Pertambangan dan Penggalian	806206,2	790475,2	822099,5	858146,6	910679,4
Industri Pengolahan	2276667,8	2209920,3	2284822	2396603	2507800
Pengadaan Listrik dan Gas	111436,7	108826,4	114861,1	122451,9	128460,5
Pengadaan Air, Pengelolaan Sampah, Limbah dan Daur Ulang	9004,9	9449,3	9919,3	10240,1	10741,4
Konstruksi	1108425	1072334,8	1102518	1124725	1179989
Perdagangan Besar dan Eceran; Reparasi Mobil dan Sepeda Motor	1440185,7	1385651,2	1449831	1529952	1604114
Transportasi dan Pergudangan	463125,9	393418,9	406169,3	486873,8	554854,9
Penyediaan Akomodasi dan Makan Minum	333304,6	299122,4	310737,6	347854,6	382674,5
Informasi dan Komunikasi	589536,1	652062,9	696506,1	750319	807304,6
Jasa Keuangan dan Asuransi	443093,1	457486,5	464637,7	473623,8	496236,8
Real Estate	316901,1	324259,4	333282,9	339014,9	343864,8
Jasa Perusahaan	206936,2	195671,1	197106,7	214399	232076,1
Administrasi Pemerintahan, Pertahanan dan Jaminan Sosial Wajib	365538,8	365446	364246,6	373404	378989,1
Jasa Pendidikan	341349,9	350272,8	350660	352673,5	358952,1
Jasa Kesehatan dan Kegiatan Sosial	127487,9	142227,3	157085,5	161397,8	168926,2
Jasa lainnya	205011,4	196608,9	200773,2	219778,4	242891,7
Produk Domestik Regional Bruto	10949155,4	10722999,3	11120060	11710248	12301394

The conceptual framework of this research from the LQ – DLQ GDRB analysis of Bali province to determine the base/superior sector and non-base sector can be seen through the following chart:

RESULT AND DISCUSSION

In order to ascertain an area's economic foundation, location analysis is typically employed. According to Miller, Mark M.; Gibson, Lay James; Wright, 1991, quotient is primarily derived from the contribution criterion, which compares the size of a larger region (a country) with a smaller region (a province). This comparison aims to ascertain whether a functioning area can be a net importer or net exporter by comparing production and consumption in that area. LQ analysis is hence one of the markers used to identify excellent industries. When the coefficient value is more than one, it indicates that the region's sub-sector. It is a prominent subsector with the ability to strengthen the local economy.

On the other hand, if the LQ coefficient is less than 1, the subsector cannot be considered superior to the sector as the output is limited to consumption inside the designated area. The examination of the dynamic location quotient (DLQ) takes into account the rate of growth in the economy's sectoral output on a periodic basis. The average Location Quotient (LQ) value for Bali Province from 2019 to 2023 is displayed in Table 3. Table 3 demonstrates that from 2019 to 2023, the base sector consistently has a superior LQ value (LQ > 1).

Table 3. Analysis LQ

Sektor	LQ Rata-Rata		
	Nilai		Ket.
Pertanian, Kehutanan, dan Perikanan	1,12	LQ>1	Basis
Pertambangan dan Penggalian	0,12	LQ<1	Non Basis
Industri Pengolahan	0,32	LQ<1	Non Basis
Pengadaan Listrik dan Gas	0,20	LQ<1	Non Basis
Pengadaan Air, Pengelolaan Sampah, Limbah dan Daur Ulang	2,50	LQ>1	Basis
Konstruksi	1,08	LQ>1	Basis

Perdagangan Besar dan Eceran; Reparasi Mobil dan Sepeda Motor	0,74	LQ<1	Non Basis
Transportasi dan Pergudangan	1,43	LQ>1	Basis
Penyediaan Akomodasi dan Makan Minum	5,80	LQ>1	Basis
Informasi dan Komunikasi	1,33	LQ>1	Basis
Jasa Keuangan dan Asuransi	1,08	LQ>1	Basis
Real Estate	1,70	LQ>1	Basis
Jasa Perusahaan	0,64	LQ<1	Non Basis
Administrasi Pemerintahan, Pertahanan dan Jaminan Sosial Wajib	1,77	LQ>1	Basis
Jasa Pendidikan	1,90	LQ>1	Basis
Jasa Kesehatan dan Kegiatan Sosial	2,07	LQ>1	Basis
Jasa lainnya	0,94	LQ<1	Non Basis

The base sectors of Bali province are listed in Table 3 as follows: Agriculture, forestry, and fisheries; Water supply, waste management, Waste and Recycling; Construction; Accommodation and Food & Drink Providers; Information and Communication; Financial Services and Insurance; Government Administration, Defense, and Compulsory Social Security; Educational Services; Health Services, and Social Activities. Of these sectors, the sector that produces the most economic growth in Bali Province is Accommodation and Food and Drink Providers, with the highest LQ value; Water Procurement, Waste Management, Waste and Recycling is the second-highest LQ value, followed by Health Services and Social Activities. If these potential sectors can be developed properly, it certainly has a significant influence on the economic growth of a region, which in turn can increase regional income optimally.

Table 4. Analysis DLQ Provinsi Bali

Sektor	DLQ		
	Nilai		Ket.
Pertanian, Kehutanan, dan Perikanan	1,038535	DLQ>1	Prospektif
Pertambangan dan Penggalian	1,025946	DLQ>1	Prospektif
Industri Pengolahan	1,047877	DLQ>1	Prospektif
Pengadaan Listrik dan Gas	1,070629	DLQ>1	Prospektif
Pengadaan Air, Pengelolaan Sampah, Limbah dan Daur Ulang	0,941723	DLQ<1	Non Prospektif
Konstruksi	1,088384	DLQ>1	Prospektif
Perdagangan Besar dan Eceran; Reparasi Mobil dan Sepeda Motor	1,047373	DLQ>1	Prospektif
Transportasi dan Pergudangan	0,893336	DLQ<1	Non Prospektif

Penyediaan Akomodasi dan Makan Minum	0,905185	DLQ<1	Non Prospektif
Informasi dan Komunikasi	0,918641	DLQ<1	Non Prospektif
Jasa Keuangan dan Asuransi	1,163682	DLQ>1	Prospektif
Real Estate	1,09077	DLQ>1	Prospektif
Jasa Perusahaan	1,093944	DLQ>1	Prospektif
Administrasi Pemerintahan, Pertahanan dan Jaminan Sosial Wajib	1,048413	DLQ>1	Prospektif
Jasa Pendidikan	1,081787	DLQ>1	Prospektif
Jasa Kesehatan dan Kegiatan Sosial	0,963238	DLQ<1	Non Prospektif
Jasa lainnya	1,045706	DLQ>1	Prospektif

Table 4 lists the potential industries in Bali province: wholesale and retail trade; car and motorcycle repair; financial services and insurance; real estate; corporate services; government administration, defense, and mandatory social security; mining and quarrying; processing industry; electricity and gas procurement; construction; and other services. The financial services and insurance industry has the greatest DLQ value of all of these, making it the sector in Bali Province that produces the most economic growth. The Real Estate sector has the second-highest DLQ value, followed by Corporate Services, which has the third-highest DLQ value. DLQ analysis accommodates the factor of growth rate of economic sectoral output per periodic, meaning DLQ value > 1 is that the sector has the potential for faster development.

CONCLUSION

This study describes the characteristics of the economy by using several models of comparative advantage of LQ and DLQ by identifying potential sectors to be developed in the province of Bali in 2019-2023. For sectors related to the tourism sector, namely the provision of accommodation and food and beverages, the LQ model calculation has a value of LQ>1 which means that this sector is a base sector or a superior sector. The LQ>1 value means that in the area it means that the sector is export or exhausted in its own territory. Meanwhile, in the DLQ analysis, the accommodation and food and beverage sector has a DLQ<1 value, which means that the sector is a non-prospective sector, meaning that the sector has a slow growth rate or has no potential to be developed.

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