

PORTRAIT OF ECONOMIC POTENTIAL IN BADUNG REGENCY, BALI

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Abstract: Successful of regional development is inseparable from region ability in exploring and developing its economic potential. Economic potential is dynamic according to the conditions. Aims of this study is to find out Badung regency economic potential in 2011-2018. Data comes from Central Bureau of Statistics of Bali province and Badung regency, using location quotient, Dynamic Location Quotient, Klassen Typology and Shift Share method. Result of this analysis is Badung regency has economic potential to be developed into a locomotive of regional development in the real estate sector that has become the base sector, superior, and due to its location, then followed by the agricultural, forestry, and fishery sectors that have become the base sector, developing, and due to its location. This sector needs to be supported by synergistic policies in order to provide multiplier effect in other sectors.

Keywords: *Location Quotient, Dynamic Location Quotient, Klassen Typology, Shift Share, Economic Potential.*

1. Introduction

Bali is one of the regions in Indonesia that succeeded in implementation of its development (Dewi, Yanti, Dewi, Sanjaya, & Mahendra, 2018). Strategic location of the area, has strong culture and unique characteristics (Ardhana, Maunati, Budiana, Zaenuddin, Gegel, Kawiana, Muka, & Wibawa, 2020). This condition, supporting economic growth to an average of 6.41 percent in 2011-2018. Bali average economic growth is above Jembrana, Tabanan, Klungkung, Bangli, Karangasem, and Buleleng districts but still below Badung, Gianyar districts and Denpasar. Regions that can take advantage and optimize the changes can occur their economic structure to accelerate the development of their regions (Wiwekananda & Utama, 2016). Development is a complex process, so government needs to have awareness (Soeharjoto, 2018). In achieving its success, it is necessary to explore the potential resources and increase its investment (Soekapdjo, Tribudhi, Hariyanti, & Nugroho, 2020). Bali can realize well their sustainable development if government implementation of investment pays attention and maintains environmental sustainability (Arafah, Nugroho, Takaya, & Soekapdjo, 2018).

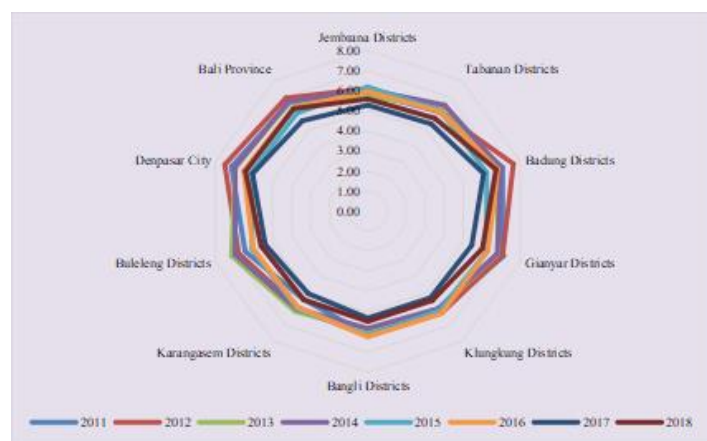


Figure 1. Bali Province Economic Growth (Percent)
Source: Bali Provincial Statistics Agency, 2020

Badung Regency have an 6.81 percent economic growth average in 2011-2018, became the highest growth region in Bali province. Badung economic growth average was highest at 7.64 percent in 2012 and the lowest was at 6.11 percent in 2017, while average growth of Bali province was 6.96 percent in 2013 (the largest) and 5.59 percent (the smallest) in 2017. However, in its sector growth, Badung regency and Bali province have average growth in the same sector. Health service growth is the highest sector and social activities in Bali province was 9.04 percent and Badung Regency was 9.17 percent, while the lowest sector are in agriculture, forestry, and fisheries was 3.24 percent in Bali province and 3.32 percent in Badung Regency.

Success of a region's economic development is the result of local government ability in exploring and developing the potential of its territory (Worumi, 2018). Activities that carried out, will provide competitive advantage that can optimally accelerate development of the region (Wibisono, Amir, & Zulfanetti, 2019). By knowing its economic potential, local government will be more focused in work, so it will make it easier to take policy and implementation of activities in the region, because some types of work that should be done in its implementation to be specialized divided into base jobs and non-base jobs (Jamaludin, 2016). Its exogenous for basic sector, it does not depend on the economy internal condition, while non-base is an activity carried out to serve people needs (Kogoya, Koleangan, & Sumual, 2018). Population activity concentrated in a place or region, can be called a city or center, but for areas outside, its called inland areas (Salsabila, Santosa, & Soeharjoto, 2019). However, to develop an area to become a center, needs have four characteristics: having internal relationships of its economic activities, multiplier effect, geographically concentrated, and having driving properties for other regions (Hamri, Putri, Siregar, & Bratakusumah, 2016).

Research on Bali province economic potential has been done a lot. Research from Ayu and Wiagustini (2016), excellent sectors at Bali province is in construction. Health and social activities sector, potential sectors in agriculture, forestry and fisheries are developed sector, and the underdeveloped sector are electricity and gas procurement sector, as well as the water procurement, waste treatment, waste and recycling sectors. From Pynatih (2017), research in Tabanan district obtained that base sector in agriculture, forestry, and fisheries; mandatory government administration, defense, and social security sectors; real estate sector; other

service sectors; mining and quarrying sector; health care sector and social activities; construction sector; information and communication sectors. Large trade and retail are potential sector, car and motorcycle repair; accommodation and beverage supply sector; the company's service sector; processing industry sector; financial services and insurance sectors. Research in Buleleng district conducted by Susila (2016), shown that sector that can progress and grow quickly is the agricultural sector with the leading sector in the agricultural sector; processing industry sector; and services sector. Research in Badung Regency by Putra & Kartika (2013), shown that the dominant sectors are electricity, gas, and clean water sectors; building sector; trade sector, hotels and restaurants; transportation and communication sectors.

In order to run Economic development implementation optimally, it is necessary to know region potential (Teja, 2015). Because of many sectors in the region, it needs to be made a priority scale in its development in supporting regional development (Prihatin, Daryanti, & Pramadha, 2019). Research needs to be done periodically, because of potential dynamic areas. This study was conducted to determine the economic potential in Badung regency.

2. Research Method

Potential economic research in Badung district in 2011-2018, using Gross Domestic Product (GDP) constant prices data in 2010 (millions of rupiah), from Central Bureau of Statistics of Bali province and Badung regency. Used Location Quotient (LQ) analysis tools, Dynamic Location Quotient (DLQ), Klassen Typology, and Shift Share. The formulas for the analysis tools are:

(1). Location Quotient Analysis (LQ)

In analyzing performance of sector i and other economic sectors, Location Quotient analysis can be used. The formula is:

$$LQ = \frac{(v_i/v_t)}{(V_i/V_t)} \quad (1)$$

Information:

- LQ = Location Quotient Index.
- v_i = GDP sector i in Badung district.
- v_t = Total GDP in Badung district.
- V_i = GDP sector i in the province.
- V_t = Total GDP in Bali province.

Criteria:

1. $LQ > 1$ value, means the base sector.
2. $LQ < 1$ value, means non-base sector.

(2). Dynamic Location Quotient Analysis (DLQ)

To determine the base sector that will occur in the future, in sector i and sub Sector I, can be used Dynamic Location Quotient (DLQ) approach. The formula is:

$$DLQ = \left(\frac{(1 + g_{ij}) / (1 + g_i)}{(1 + G_i) / (1 + G)} \right)^t \quad (2)$$

Information:

- gij = Average growth rate of GDP sector i in Badung district.
- gi = Average growth rate of total GDP in Badung district.
- Gi = Average GDP growth rate of sector i in Bali province.
- G = Average GDP growth rate of total Bali province.
- t = Years of research.

Criteria:

DLQ>1 value, means that a sector can still be expected to become a base sector in the future.
 DLQ<1 value, means that the sector cannot be expected to become a base sector in the future.

(3). Klassen Typology Analysis

Klassen Typology is used as tools analysis that can identify priority sectors or the flagship of an area. This analysis is oriented into four clusters of sectors:

1. LQ>1 and DLQ>1, mean the flagship sector.
2. LQ>1 and DLQ<1, means potential sectors.
3. LQ<1 and DLQ>1, mean emerging sectors.
4. LQ<1 and DLQ<1, mean the sector is lagging.

(4). Shift Share Analysis

To determine the causative factors of the performance of economic sectors and sub-sectors, Shift Share analysis can be used. The formula is:

$$TSS = (gn - gin)Xino + (Gi - G)Xin + (gin - Gi)Xino \quad (3)$$

$$SSS = (gn - gin)Xino + (Gi - G)Xin \quad (4)$$

$$LSS = (gin - Gi)Xino \quad (5)$$

Information :

- TSS = Total Shift Share.
- SSS = Structural Shift Share.
- LSS = Locational Shift Share.
- gn = Average growth rate.
- gin = Average growth rate (GDP) of sector i in Badung district.
- G = Average growth rate (GDP) total in Bali province.
- Gi = Average growth rate (GDP) of sector i in Bali province.
- Xino = GRDP sector i in Badung district at the beginning of the year.

Criteria:

1. SSS>LSS value, means that the factor that determines the performance of sector i in Badung Regency is the economic structure factor.
2. SSS<LSS value, means that the factor that determines the most performance of sector i in Badung Regency is the location factor.
3. SSS=LSS value, means that economic structure factors and location factors are equally strong in determining the performance of sector i in Badung Regency.

1. Results and Discussion

3.1. Results

Result of calculation using Location Quotient (LQ) analysis, base and non-base sectors can be obtained. The base sector in Badung regency is located in seven sectors, namely (1). Agriculture, forestry and fisheries sector, (2). Water procurement, waste management, waste and recycling sectors, (3). Construction sector, (4). Transportation and warehousing sector, (5). Accommodation and food supply sector, (6). Information and communication sector, (7). Real Estate Sector. There are ten sectors for non base are (1). Mining and quarrying sector, (2). Processing industry sector, (3). Electricity and gas procurement sector, (4). Large trade and retail sectors, car and motorcycle repairs, (5). Financial services and insurance sector, (6). Corporate services sector, (7). Government administration, defense and mandatory social security sectors, (8). Education services sector, (9). Health services sector and social activities, (10). Other service sectors.

Using Dynamic Location Quotient (DLQ) as an analysis tool, can be known as a sector that can be expected and not to become a base sector in the future. Sector that can still be expected to become the base sector in the future, in Badung district there are five sectors, which include (1). Agriculture, forestry, and fisheries sector, (2). Mining and quarrying sector, (3). Real estate sector, (4). Financial services sector, (5). Health care sector and social activities. There are twelve sectors that cannot be expected to become base sectors in the future (1). Processing industry sector, (2). Electricity procurement and quarrying sector, (3). Water procurement, waste management, waste and recycling sectors, (4). Construction sector, (5). Large trade and retail sectors, car and motorcycle repairs, (6). Transportation and warehousing sector, (7). Accommodation and food supply sector, (8). Information and communication sector, (9). Financial services and insurance sector, (10). Corporate services sector, (11). The government administration, defense and mandatory social security sectors, (12). Other service sectors.

Table 1. LQ, DLQ dan Shift Share analysis result at Badung Regency

Sector	LQ	DLD	Shift Share		
			TSS	LSS	SSS
Agriculture, Forestry and Fisheries	0.5123717	2.32535049	702971.836	1386301.4	-683329.56
Mining and excavation	0.30970432	5.6079711	32375.5006	149691.768	-117316.27
Processing Industry	0.69199909	0.96811097	392183.314	285315.724	106867.59
Electricity and Gas Procurement	0.96987892	0.42849574	17688.6429	-26842.57	44531.2127
Water Supply, Waste Management, Waste and Recycling	1.34751572	0.98904372	27641.7274	17776.3898	9865.33757
Construction	1.03972115	0.81278135	794085.876	376477.372	417608.503
Wholesale and Retail Car and motorcycle repair	0.85060582	0.59011697	631385.237	-334625.31	966010.542
Transportation and Warehousing	2.46744631	0.42489179	1643214.52	-2208080.9	3851295.46
Provision of	1.32483715	0.83713914	2165546.55	1190013.09	975533.453

Accommodation and Drinking					
Information and Communication	1.17156212	0.68401959	645388.825	-60924.124	706312.95
Financial Service and Accounting	0.69760009	0.98032299	230327.592	248616.304	-18288.712
Real Estate	1.92652714	1.76575836	339934.35	114638624	-114298690
Company Service	0.73368217	0.47288243	69424.2808	-71231.939	140656.22
Government Service, Defense, Mandatory and Social Security	0.67892633	0.99520791	378545.183	406483.657	-27938.474
Education Service	0.67902078	7.21718424	293276.587	-451520.76	744797.344
Health and Social Service	0.66890625	5.33252253	109841.969	972446.423	-862604.45
Another service	0.52762026	0.86874727	71268.7429	44911.6834	26357.0595

Source: Processed data

By using Klassen Typology analysis tool, the sectors in Badung district can be divided into four groups, namely superior, potential, developing, and lagging. Results obtained one sector entered the flagship sector, five sectors entered the potential sector, four sectors entered the developing sector, and seven sectors entered the lagging sector. Real estate sector is the flagship sector and the potential sector includes (1). Water management, waste treatment, waste and recycling sectors, (2). Construction sector, (3). Transportation and warehousing sector, (4). Accommodation and food supply sector, (5). Information and communication sector. Growing sector are (1). Agriculture, forestry and fisheries sector, (2). Mining and quarrying sector, (3). Education services sector, (4). Healthcare sector. However, there are sectors that fall into the lagging category : (1). Processing industry sector, (2). Electricity and gas procurement sector, (3). Large trade and retail sectors, car and motorcycle repairs, (4). Financial services and insurance sector, (5). Corporate services sector, (6). The administrative, defense and social security sectors are mandatory, (7). Other service sectors.

Shift Share analysis tool can be used to determine the development of a sector caused by economic structure factors, location factors or have both factors. Badung Regency has only six sectors that develop due to economic structure factors and eleven sectors that develop due to location factors. Impact of economic structure factors that cause its development to (1). Electricity and gas procurement sector, (2). Large trade and retail sectors, car and motorcycle repairs, (3). Transportation and warehousing sector, (4). Information and communication sector, (5). Corporate services sector, (6). Education services sector. In addition, there is also the impact of location factors that can develop (1). Agriculture, forestry and fisheries sector, (2). Mining and quarrying sector, (3). Processing industry sector, (4). Water procurement, waste management, waste and recycling sectors, (5). Construction sector, (6). Accommodation and food supply sector, (7). Financial services and insurance sector, (8). Real estate sector, (9). The government administration, defense and mandatory social security sectors, (10). Health services sector and social activities, (11). Other service sectors.

3.2. Discussion

Dominant economic sector development in Badung district has begun to shift. Real estate sector is already a potential sector, because for now and future, it is the base sector, and is a leading sector due to its location factors. From previous research, agricultural, forestry, and fishery sectors that are already dominant sectors in Bali province turns out that at this time, the sector needs to get special attention in Badung regency, because it is the base sector for now and future, and has become a growing sector due to its location factors.

Badung Regency economics growth at health care sector and social activities in 2011-2018 is above the real estate sector and agriculture, forestry, and fishery sectors but has a downward trend since 2014-2018, while the real estate sector trend is the same in 2014-2016 except in 2012, but has an increasing trend in 2016-2018. This indicates the sector to grow significant and potential. Agriculture, forestry, and fisheries sector growth has a trend similar to the real estate sector except in 2013 and 2018. This condition indicates that the two sectors support each other, it is necessary to take a policy of real estate sector development that is synergies with this sector, so the trend can immediately follow the real estate sector and not to occur continuous decline in this sector.

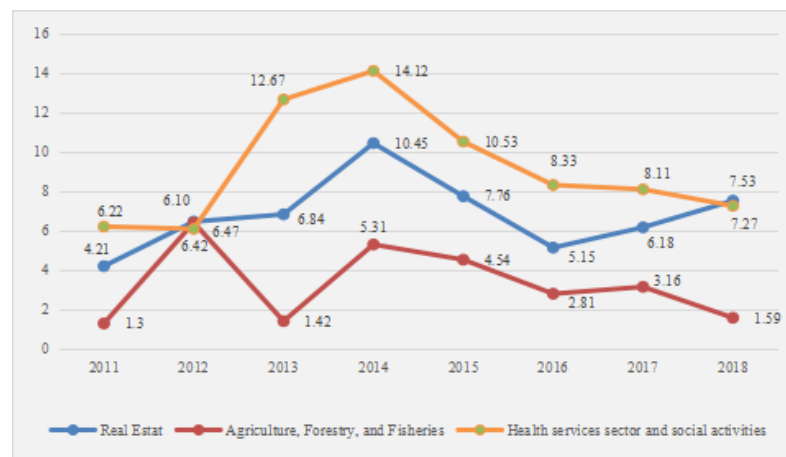


Figure 2 . Health Care Sector Economic Growth and Social Activities, Real Estate Sector, Agriculture, Forestry, and Fisheries (Percent).
Source: Central Bureau of Statistics Badung Regency, 2020.

These two sectors can synergies well if the government can develop and build environmentally friendly real estate by following the local culture. Supported by good natural conditions, real estate will further increase its added value both in terms of aesthetics, prices, occupancy rates, and produce so that it will increase demand for other sectors that can support the increase in regional revenues. Badung Regency, actually has several other sectors that become the dominant sector in the area, with special attention is expected to return to being the dominant sector again, such as (1). Water procurement, waste management, waste and recycling sectors, (2). Construction sector, (3). Transportation and warehousing sector, (4). Supply sector of beverage and food, (5). Information and communication sector. In order to increase the dominance of its sector to become a superior sector, it is necessary to implement policies that can provide multiplier effect of the superior sector against other

sectors, so its progress can be more optimal and accelerate in increasing people's income, without damaging local community environment and culture.

4. Conclusion

Economic potential in Badung district has undergone shifts and developments after research using Location Quotient, Dynamic Location Quotient, Klassen Typology, and Shift-Share methods. The use of Location Quotient and Dynamic Location Quotient in this study can support Klassen Typology analysis results, discovery of excellent, potential, developing, and lagging group sectors. Shift Share analysis results obtained six sectors that developed due to economic structure factors and eleven sectors that developed due to location factors. As a result, this area has potential economic that can be developed into a locomotive of development in real estate sector that has become the base sector and superior due to its location, then the agricultural, forestry, and fishery sectors become the base sector and become a growing sector due to its location. It is necessary to create policies that can provide multiplier effect of superior sectors to other sectors, so the progress can be more optimal and increase people's income, without damaging the environment and local community culture. Conducting further research, we should be able to mapping potential sectors more detail and provide solutions to other sectors to accelerate increase in regional revenues.

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