

## SEASONALITY IN BALI: IS PRICE WAR NECESSARY?

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### ABSTRACT

Tourism is a mainstay sector in the province of Bali. The pandemic has forced hotels and restaurants to lower prices in order to survive. This research was conducted before the pandemic with data from 2010-2019 aims to determine the level of seasonality and its patterns so that in the future when the pandemic begins to subside, all tourism stakeholders know that price wars are not the only solution. The research method used is the Gini Ratio. The results obtained from the Gini Ratio are based on data from 2010 - 2019 which shows a consistent value between 0.07 - 0.15 with an average of 0.10 indicating that Bali as a destination is a tourism destination affected by seasonality, but this seasonality level is not very significant compared to several other destinations. The seasonality pattern in Bali also shows the consistency of the months with lower levels of tourist visits compared to other months. Tourism stakeholders should respond to these findings with better knowledge of market characteristics, especially geographic segmentation, so that they can better organize the sustainability of tourism in the future.

### KEY WORDS

Seasonality, Gini ratio, low season. price war.

Tourism is a mainstay sector in the fast growing province of Bali and is one of the main contributors to local revenue in Bali. However, it is known that the tourism business is very fluctuating and vulnerable due to fluctuations in the high and low level of tourist arrivals in a certain period or often called seasonality. During the high season, the industry will enjoy the results of tourism and almost all sectors will get good results, but during the low season many businesses have to sell cheaply and there are frequent tariff wars to continue their business. This is reinforced by the number of hotels in Bali that tend to be over supply (Suryawijaya, Tribun Bali, March 14 2019). According to the Bali Provincial Statistics Agency (2018) there were 66,277 star hotel rooms and 58,617 non-star hotel rooms in 2017 in Bali, not including small villas or inns and boarding houses which are also often occupied by tourists. With the number of rooms that are nearly 125,000, while according to the Central Statistics Agency of Bali Province (2018) the arrival of domestic tourists is 9,757,991 and foreign tourists are 6,070,473, with data on average length of stay of 8 days for foreign tourists (BPS Bali, 2018) and 3.8 days for domestic tourists (Wiranatha and Pujaastawa, 2015), the average occupancy rate of hotels and other accommodations in Bali only reaches 59.56% (star hotels) and 33.03% (non-star hotels) (BPS Bali Province, 2019).

The Bali Regional Tourism Promotion Board and the Bali Provincial Government are starting to worry about the war on hotel rates on the island of Bali which is no longer handled well. This is indicated by the increasing number of star hotels lowering room rates, which started several years ago (Sukawati, Kompas.com, June 6, 2017). There have been attempts from the government to standardize prices but this seems difficult to implement because many businesses have difficulties during the low season.

Wiranatha (2001) states that the IOLF (Index of Load Factors) is calculated based on the average tourist arrivals in a year compared to the highest number of arrivals in a month in the year concerned. According to Wiranatha (2001), the IOLF level in Bali in the period 1988 - 1998 was an average of 82%, which means that the distribution of tourist visits to Bali is quite evenly distributed from one month to another. However, if you look more specifically at certain months such as March, November or December, there is a significant decrease in the

number of visits. Moreover, currently Bali tourism is experiencing an over supply of accommodation, where this will be even harder with the seasonality phenomenon, especially during the low season. The response to the current low season phenomenon still tends to be the easiest step, namely by reducing prices in the hope that they will win the competition. This price war phenomenon is not only for getting instant results, but also because it is indicated by the ignorance of tourism actors regarding other aspects of the marketing mix that can also handle the low season (Sukawati, Kompas, 22 January 2016).

On a micro scale at the industrial level, the gap between one period and another looks more significant, in the STR (Smith Travel Research) report for the period 2015 - 2019, which involves 118 - 169 hotels (representing 21,000 - 29,000 rooms) per month, on occupancy data seen in busy months such as June, July, August, September and October (months with occupancy above 70%) the average reaches 74.9% while in the quietest months (November, December, January, February, March, April May) occupancy only reached 61.2% or only 81.7% of the peak season. (Smith Travel Research / STR.com)

A more significant thing occurs in the REVPAR (Revenue per available room) data, which is a combination of occupancy and Average Daily Rate. The data shown shows that in the high season (June - October) the average REVPAR shows IDR 1,217,554, while in the quiet month (November - May) it is only IDR 911,638 which is only 74.9% of the peak season. This confirms the existence of a price war in these low seasons. (Smith Travel Research / STR.com).

If this is not fixed, tourism in Bali will continue to undergo unhealthy competition in terms of price which will certainly harm all parties and can even drop the image of Bali tourism in the long term. Ideally, all tourism actors try to combine the marketing mix strategy with market character so that the policies carried out can maintain the sustainability of Bali tourism, of course the hotel development moratorium is still carried out followed by more effective promotional activities so that Bali tourism will be advanced and sustainable.

The phenomenon of price reductions suspected to be due to price wars, especially in the low season, is very worrying, so there is a need for knowledge of how much seasonality in Bali is causing the industry to engage in excessive price wars. This research will provide information on how high the level of seasonality in Bali is, so that stakeholders will consider the policy of reducing prices, and also know the pattern of seasonality so that they can focus on other marketing mix policies (besides prices) according to the market potential that exists in this quiet period.

## **METHODS OF RESEARCH**

This research is located in Bali Province with a research period of 10 months from January 2020 to October 2020. This study uses a mixed methods approach where quantitative methods are used to determine the level of seasonality with the Gini ratio method. The Gini coefficient (G) or Gini ratio is the measure most often used in analyzing fluctuations in tourist visits (Duro, 2016), then the research is continued using qualitative methods to analyze seasonality based on geographic-based market segmentation with depth interviews.

The collection of data on tourist arrival rates was obtained as secondary data from tourism statistical data at the Bali Provincial Tourism Office during the period 2010 - 2019. Meanwhile, for field comparisons, interviews were conducted with the Association of Indonesian Hotels and Restaurants Association (PHRI) and the Bali Hotel Association (BHA). Furthermore, to find out the pattern of seasonality in Bali, interviews were conducted with 10 market segmentations based on geographic segmentation, with experts involving association heads or experts in 10 existing markets covering the markets: America, ASEAN, Australia, China, Europe, India, Indonesia, Japan, South Korea, Russia.

## **RESULTS AND DISCUSSION**

According to Butler (1994) Seasonality is a temporary imbalance that is a tourism

phenomenon which can be seen from the dimensions of the number of tourist arrivals (Butler, 1994) and the tendency to repeat the pattern of movement in seasonality, usually one year for monthly data (Cryer (1986), Ismayanti (2010)).

Research on the existence of Seasonality in Bali will be conducted using monthly data for ten years from 2010 - 2019. The data was obtained from the Bali provincial tourism office by combining data on the arrival of domestic tourists from 2010 to 2019 and data on the arrival of foreign tourists from 2010 to 2019.

There are a number of measures commonly used to measure the seasonality of tourist visits. Three measures are commonly used, namely: (a) the coefficient of variation (CV); (b) Seasonality Ratio (SR); and (c) the Gini coefficient (G) (Koenig-Lewis and Bischoff, 2005). The following is a brief review of the three measures::

A. Coefficient of Diversity (CV)

The coefficient of diversity (CV) is the ratio of the standard deviation (sample) to the mean value. The mathematical formulation of CV can be written as in equation (1) where  $s$  and  $\bar{x}$  represent the standard deviation and the sample mean, respectively..

$$CV = \frac{s}{\bar{x}} \dots\dots\dots(1)$$

When the press. (1) observed, CV is no more than a measure that combines the value of the data distribution ( $s$ ) with its concentration value, in this case  $\bar{x}$ . The smaller the CV value, the more data it "collects" the mean value. In the case of the number of tourist arrivals observed in a certain time span (monthly, quarterly, quarterly, or annually), CV indicates seasonality in the observation period. The smaller the CV value, the smaller the seasonality value (Þórhallsdóttir and Ólafsson, 2017).

B. Seasonality Ratio (SR)

Seasonality Ratio (SR) is obtained by dividing the largest observed value ( $x_{max}$ ) by the mean value ( $\bar{x}$ ). The mathematical formulation of SR can be written as in equation (2)

$$SR = \frac{x_{max}}{\bar{x}} \dots\dots\dots(2)$$

On the press. (2) the range of SR values ranges from 1 (the smallest value) to T where T is the number of periods used, for example if the observation period is monthly data then T = 12. The opposite of SR, is called the Seasonality Indicator (SI) with  $SI = 1 / SR$ , sometimes used as a substitute for SR. Quoting Þórhallsdóttir and Ólafsson (2017), SR and SI are very sensitive to the existence of right outlier observations, observations that have the highest value, far exceeding the second highest value.

C. Coef. Gini (G)

It seems that the Gini Coefficient (G) is the measure most often used in analyzing fluctuations in tourist visits (Duro, 2016). There are a number of mathematical formulas commonly used to calculate G. The summarized formula is given by Milanovic (1997) which states that G can be calculated using equation (3).

$$G = \frac{1}{\sqrt{3}} \frac{s}{\bar{x}} \rho(x, r_x) \dots\dots\dots(3)$$

On the press. (3)  $\rho(x, r_x)$  is the Pearson correlation of the observation  $x$  with the rank (rank) of  $x$  which is arranged in ascending order.

The existence of seasonality in Bali can be seen from the measurement of the coefficient of diversity (CV), Seasonality Index (SI) and the Gini Coefficient (G). The three measures indicate the existence of seasonality in Bali (table 5.2). Especially in the Gini Ratio, which is the reference most often used in analyzing fluctuations in tourist visits (Petrevska (2013), Duro (2016)), it can be seen that the results of calculations for the last ten years before the pandemic show consistent results between 0.07 - 0.15 with average G; 0.10. The closer the Gini value to 1, the higher the existing seasonality rate, while the closer to 0 means the lower the existing seasonality level (Milanovic (1997), Syamsudin (2011)).

Table 1 – Recapitulation of Gini Ratio for the Last 10 Years

Year	Total of Tourist		
	SI	CV	G
2010	0,7203	0,2017	0,1114
2011	0,8162	0,1833	0,1039
2012	0,7604	0,2139	0,1202
2013	0,7197	0,2460	0,1376
2014	0,7171	0,2645	0,1521
2015	0,7857	0,1294	0,0700
2016	0,7207	0,1911	0,1053
2017	0,8114	0,1253	0,0700
2018	0,7756	0,1317	0,0719
2019	0,7629	0,1565	0,0877
AVG	0,7590	0,1843	0,1030

Source: Researchers compiled from data on foreign tourist arrivals and Nusantara during 2010 to 2019.

The results obtained also tend to be small when compared with the results of previous studies, the Gini value ranges from 0.19 to 0.64 as follows:

1. Macedonian average G: 0.27 (Petrevska, 2013)
2. Croatia average G; 0.64 (Corluka et al (2018),
3. Montenegro with G average: 0.56 and Turkey average G: 0.29 (Bigovic, 2011))
4. Petra - Jordan average G: 0.19 (Alzboun (2018).

This relatively small result means that the distribution fluctuation from one month to another is not very significant, but still confirms that there is seasonality in Bali that needs to be addressed.

Seasonality pattern:

From the data on monthly tourist arrivals for the past ten years, we determine the months we consider the low season (ranking 1 - 6) and the months with high season (ranking 7-12). The study was conducted using the Mode approach or the most frequent data appearing. The results of this sorting show the consistency of the months that tend to rank 1 - 6 (low season) and those that tend to rank 7-12 (high season) as follows:

Table 2 – Month Rank Recapitulation Based on Number of Tourist Visits in the Last 10 Years

Bulan	Frequensi	Rank									
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Jan	10	3	1	4	3	6	4	4	4	1	4
Feb	10	2	2	1	1	2	3	1	1	2	1
Mar	10	1	3	2	4	1	2	3	2	5	3
Apr	8	5	4	3	2	3	5	2	7	7	5
Mei	8	9	5	5	5	4	9	5	5	3	2
Jun	2	10	10	8	10	9	6	11	6	12	12
Jul	1	11	11	7	6	10	12	12	12	11	10
Agu	1	7	6	10	12	12	7	8	11	9	9
Sep	0	12	12	9	7	8	8	9	10	8	7
Okt	1	8	7	11	9	7	10	7	8	6	8
Nov	8	4	8	6	8	5	1	6	3	4	6
Des	1	6	9	12	11	11	11	10	9	10	11

Source: Processed by Researchers from Data on the Number of Visits by the Tourism Office of Prov. Bali.

From the table above, it can be seen that the consistency of arrivals is lower in certain months (low season) compared to other months (high season).

The months that consistently appear as the months with the lowest tourist arrival rates are November, January, February, March, April and May. In the data for the last 10 years, all the months are in the 6th lowest rank for 8 to 10 times

To get an agreement on the months with low tourist arrivals in Bali, checking the situation in the field and the common perception with tourism actors, especially in the hotel and restaurant sector, is conducted. In-depth interviews to match the calculation results were conducted with sources such as Mr. Jean Charles Le Coz (Bali Hotel Association advisor),

and Mr. IB Purwa Sidemen (Executive Director of Persattuan Hotel and Restaurant Indonesia). In the e-commerce aspect, a pre-interview was conducted with Mr. Gede Gunawan (Director of Agoda Indonesia) and from the MICE aspect an interview was conducted with Mr. Ketut Jaman (Managing Director of Melali MICE). The results of this interview also confirm that the seasonality rate in Bali is actually not that big compared to several other destinations and also confirms that the months of November, January, February, March, April and May are generally lower than the other months.

Jean-Charles Le Coz, as an advisor from the Bali Hotels Association, stated that there was an additional price treatment or high seasons surcharge in periods that were considered not low.

*"Tourism actors before the pandemic only had the confidence to add surcharges in the Christmas and New Year periods and July to August, even though June was getting busy from school holidays, especially domestic ones, and October was still a summer holiday in certain areas"*

Furthermore, IB Purwa sidemen as the executive director of the Hotel and Restaurant Association (PHRI) stated

*"Promotional prices are often offered by the industry from February to May or November to December before Christmas and New Years."*

Gede Gunawan (Director of Agoda Indonesia) from the e-commerce side provided information that:

*"Promotions such as Early birds, last minute, discounted prices and others are mostly carried out in November December (before Christmas) and after the Chinese New Year (January or February) to May".*

In the MICE segmentation, Ketut Jaman as Managing Director of Melali MICE, one of the biggest MICE organizers in Bali stated

*"All stakeholders should be more active so that the arrival of MICE business to Bali during quiet periods such as February to May or November-December (before Christmas)."*

Table 3 – The Potential Period During The Low Season As A Push Factor

n/n	Nov	Jan	Feb	Mar	Apr	May
America	Winter season	Winter season	Winter season	Spring Holiday	Spring holiday Easter hol.	
Asean		Extended New year Holiday	Chinese New Year 2021	1 <sup>st</sup> term School Holiday	Easter Holiday	Idul fitri 2021
Australia				1 <sup>st</sup> term school holiday	Winter season	Winter season
China/ Taiwan	Winter season	Winter season	Chinese new year 2021			Labour Long Holiday
Europe	Winter season	Winter season		Spring Holiday 1 <sup>st</sup> term school holiday		
Japan	Winter season	Winter season			Golden week	Golden week
Korea	Winter season End of Honeymoon season Fall	Winter season		Honeymoon season Spring	Honeymoon season Spring	Honeymoon season Spring
Indonesia	Liburan tahun baru		Tahun baru China 2021		Easter Holiday	
India	Honeymoon Season	Honeymoon Season	Honeymoon Season	MICE season	MICE season	MICE season
Russia & East Europe	Winter season	Winter season Russian X-Mas				Labour Holiday Long Holiday

*Source: Processed by researchers from interviews with experts from 10 market segmentations based on geographic segmentation.*

Further research was conducted on 10 market segmentation experts based on geographic segmentation to see in more detail the seasonality patterns of each market. Seasonality is formed from push factors that occur in the market which are generally easier to see from geographical segmentation (Hylleberg (1986), Kutting (2010), Petrevska (2013)), so of course the market mix in a destination will determine the pattern. seasonality of the destination. This research was conducted with pre-pandemic data so that the existing seasonality pattern is of course based on the current segmentation mix which of course will

change with the current situation and in the future. However, in general, when the situation tends to return to the period before the pandemic, there are several potential moments that can be maximized so that the existing low season does not need to be only addressed by a decline in prices.

Knowledge of the potential arrival of the target market mentioned above should be known with certainty by tourism stakeholders so that before taking a price reduction policy that leads to a price war, the low season can be handled by maximizing the marketing mix other than price (Product, Place, Promotion, Process, People, Physical Evidence) by looking at the potential period of each market as a push factor that must be maximized

## **CONCLUSION**

Based on the results of the discussion and analysis that has been described, it can be concluded that the results of the Gini Ratio are based on data for 2010 - 2019 which shows a consistent value between 0.07 - 0.15 with an average of 0.10 indicating that Bali as a destination is a tourism destination that is influenced seasonality. This means that there is consistency in the months where the tourist visit is lower than the other months. The results of the Gini Ratio with an average of 0.10 for Bali are relatively small compared to other destinations from previous studies which have an average of 0.19 to 0.64 which means that the fluctuation of the difference between months and months with a low visit rate is not too significant. months with high levels of visits The months of lonely months or in this study expressed as the low season are January, February, March, April, May and November. This is also in accordance with the occupancy data for star hotels (BPS Bali) and interviews with industry parties through the Bali Indonesia Hotel and Restaurant Association (PHRI) and the Bali Hotel Association (BHA). Each market segmentation based on geographic segmentation has different characteristics and also the influence of different push and pull factors so that it requires different marketing mix management strategies. The character of each of these markets has a different impact on the handling of the low season in Bali. The current pandemic situation has certainly changed all market characters and all aspects of tourism so that the seasonality pattern for the last 10 years before the pandemic has become different so that adjustments need to be made along with the existing developments.

Based on the research results that have been explained, the following suggestions are that the Bali Regional Government can change the existing festival schedule such as the Bali Arts Festival and others during the low season so that it can be one of the pull factors in increasing tourist visits during the low season. Stakeholders can address the findings of the low level of seasonality in Bali so that they do not only carry out a price war, but maximize other marketing mixes according to the character of the target market. Stakeholders can also increase their knowledge of the character of the market so that they can carry out appropriate handling when there is a business decline. Academics can conduct research to enrich tourism knowledge, especially regarding the phenomenon of seasonality, market character and marketing mix strategies. Research is not only limited to Bali, but can be carried out in other areas.

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