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HOMESTAY DEVELOPMENT FOR BACKPACKER TOURISM IN INDONESIA: A FORECASTING ANALYSIS

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Abstract

Backpacker tourism is an alternative tourism development for new destinations in Indonesia. Utilizing homestays managed by indigenous people in this new tourism field will improve the local economy. However, studies related to backpacker tourists and the availability of homestays have not yet been done. This study thus analyzes supply and demand in ten New Bali destinations using five-year modeling and those projections and finds a distribution problem regarding the number of homestays in some of these destinations. Some are already oversupplied; others still need more homestays for backpacker tourists. These results contribute as a reference for policymakers and other stakeholders when reformulating homestay development in the future for ten New Bali destinations. The findings contribute to the current research agenda of homestay development particularly to capture the backpacker tourism in Indonesia, align with the current tourism development agenda in rural area.

Keywords: Backpacker, Homestay, Priority Destination, Supply and Demand, Ten New Bali

1. INTRODUCTION

Backpacker tourism is a type of tour group with very different characteristics from ordinary tourism. A backpacker is a person or group who has decided to travel for fun and adventure to develop their personality (Pearce, 1990; Rodriguez, 2011). Backpacker travelers have longer travel times and travel to a broader area than others (Pearce, 1990). Another definition of a backpacker is a person or group of people who travel from one area to another, either in their own country or another, generally wearing a backpack to have the lowest possible cost (Bradt, 1995; TFS Characteristics Group, 2011). Majstrovic et al. (2013) help identify the ideological pillars of these tourists. Backpackers will (1) travel at low cost, (2) meet different people, (3) seek or feel freedom, independence, and open-mindedness, (4) organize each trip individually and independently, and (5) travel as far a distance as possible.

Indonesia is one of a series of backpacker tourist destinations in Southeast Asia (Sroypetch, 2017; Brugulat & Coromina, 2021) and is also a country that develops affordable

homestay concepts for local entrepreneurship—armed with the knowledge of the behavior of backpacker tourists who like a novelty. According to the Presidential Decree Republic of Indonesia (2016), Indonesia introduced ten National Tourism Strategic Areas called KSPN, later branded with the name "10 New Bali". These destinations are determined based on their natural, social and cultural potential. These ten tourists identified destinations include: (1) Lake Toba, North Sumatra; (2) Tanjung Kelayang, Bangka Belitung Islands; (3) Tanjung Lesung, Banten; (4) Borobudur, Central Java; (5) Bromo-Tengger-Semeru (BTS), East Java; (6) Mandalika, West Nusa Tenggara; (7) Labuan Bajo, East Nusa Tenggara; (8) Wakatobi, Southeast Sulawesi; (9) Likupang, North Sulawesi; and (10) Morotai Island, North Maluku.

The development of these ten New Bali destinations has occurred in tandem with the development of homestays to meet the challenges of limited accommodations that effectively accommodate backpacker tourists. Homestays can be a suitable choice for backpackers looking for affordable accommodation. At the same time, these homestays play an essential role in community-based tourism, offering unique experiences and encouraging community development (Askiah, et al., 2022). Homestays can serve as models of responsible tourism by promoting principles such as respect for local cultures, environmental conservation, and community engagement. The direct interaction with hosts allows tourists to gain insight into the environmental and social impacts of their travels, which encouraging more responsible behavior and fostering a sense of global citizenship. For this reason, more study is needed on the suitability of backpacker demand for homestay availability until 2025. More specifically, this study aims to (i) determine the profile of backpacker tourists in the ten New Bali destinations and projects backpacker tourist visits from 2021 to 2025 and (ii) identify the number of homestays and projects available until 2025. The study's results provide an overview of the suitability of backpacker tourist demand based on the availability of homestays in the ten New Bali until 2025.

2. LITERATURE REVIEW

Backpacker travel behavior thus has become a business that developed in line with low-cost flights, cheap hotels or accommodations, and digital communication. Backpacking has become a lifestyle (Richard, 2015) or a choice for how to travel independently, starting with ticketing, finding a place to stay, and travel schedules. All the travel tasks are undertaken by themselves (Gosal & Kindangen, 2012). Backpackers aim to visit places that tourists have never visited and get to know and understand the local culture. This focus makes backpacker tourists able to contribute significantly to the development of destinations. It also encourages economic growth and indigenous businesses, such as homestays or food and beverage providers, delivered by local MSMEs (Lee & Hallak, 2020), following the characteristics of backpackers who like to move around. Furthermore, this form of tourism contributes to local economic development and the socio-cultural and environmental aspects of the backpackers' destinations (Agyeiwaah & Bangwayo-Skeete, 2021; Visser, 2004). While current discussions address the behavior of backpacker travelers, limited discussion offered to how the profile and number of homestays can be projected. Thus, this study is designed to address the gap.

Homestay is a simple lodging provided for backpacker tourists that commercializes part of residential space for for-profit purposes. Homestay thus offers these tourists an atmosphere of informal family intimacy, novelty, personal service, and authentic interaction with the community (Shamlan, 2018; Wang, 2007). Homestay is also an effort to build a simple entrepreneurial business the family operates. According to the Team for the Acceleration of Tourism Village Homestay Development (Prasyanti et

al., 2018), homestays are homes owned by indigenous people or managed by indigenous people and tourism awareness groups (Pokdarwis) or Village Owned Enterprises (BUMDES). Homestay has its unique characteristics, namely: (1) one house with a maximum of five rooms that can be rented out, (2) a house occupied by the owner, (3) where management meets the Tourism Lodging Business Standards, and (4) either individuals or groups undertake the management. The specific criteria that must be met when developing homestays include (1) location, accessibility, (2) facilities, (3) amenities, (4) cleanliness-sanitation, (6) security -safety, and (7) public services. Homestays are located in natural or cultural-based tourist attractions, are easy to find and accessible by pedestrians or motorized modes of transportation. The homestay building must stand out by using the nuances of Indonesian architecture (Team for the Acceleration of Tourism Village Homestay Development, 2018) and local uniqueness as part of preserving the local wisdom and culture. Further, the tourist experience produced at the homestay is very thick with local cultures, such as cooking and eating traditional food together, offering natural and cultural tourist attractions and buying local crafts. These criteria are especially suitable for backpacker tourists who are always seeking novelty when traveling (Currie et al., 2011; Dayour et al., 2015; Kontogeorgopoulos et al., 2014; Wang, 2007). These studies serve to address current gap about how the profile of backpacker tourists in the ten New Bali destinations can be determined. Furthermore, the findings can predict number of homestays and projects available until 2025, which consequently provide an overview of the suitability of backpacker tourist demand.

3. RESEARCH METHODS
3.1 Research Design

The flow of the research process from its initiation to producing the projected output of backpacker tourists in Indonesia can be seen in Figure 1. The research begins by fundamentally defining the concept of backpacker tourists to identify the relevant data to calculate the projection of backpacker tourists from 2021 to 2025. The attributes of the backpacker tourist concept are developed using this definition. For example, Pitaya et al. (2019) define the inherent character of backpacker tourists, which includes their orientation to the travel process, having more available flexible time, and a strong concern for the surrounding environment. From understanding these definitions, key parameters were developed for a projection model. Then, the research proceeded to a synchronization process between these key parameters and the data availability.
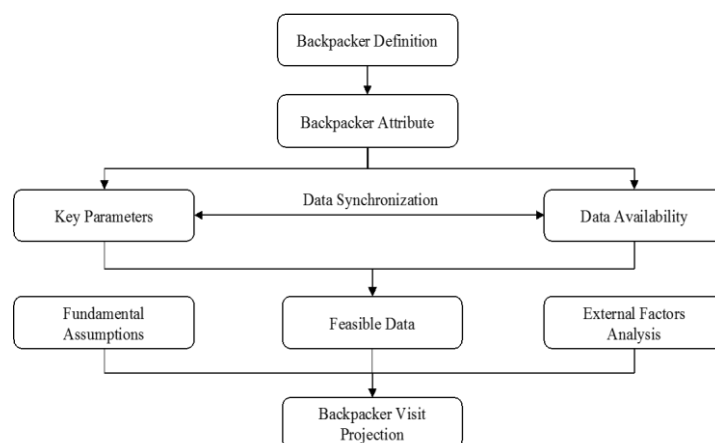

Figure 1. Modeling Framework
Source: Researcher Analysis (2023)

The available data used in creating the projection model for the number of backpacker tourists came from three data groups. First, related field data resulted from synchronization between key parameters and data availability. These data were based on secondary data from various sources related to the ten New Bali destinations: the statistical data on tourist visits gathered from the Indonesian Central Bureau of Statistics (BPS), the Indonesian Data Center (Pusdatin), Indonesian Tourism Development Plan documents, Indonesian Integrated Tourism Master Plan (ITMP) documents, and newspaper articles or scientific journals that supported this study. The second was the fundamental assumptions that functioned as factors that influenced the creation of a projection model, such as the direction of regional economic growth using Gross Regional Domestic Product (GRDP) based on business. The third was an analysis of the external environment, which serves as a way to assess the suitability of the fundamental assumptions for the reality of the current environmental situation. Combining these three elements will produce a precise simulation of backpacker tourist projections that are very close to reality.

This study also assumes that the progress of homestay development is both a positive and a linear process. That means an increase or change in the availability of homestay units can be formulated using the period 2021 to 2025. The following assumption is that there will be differences in the data on the completion of the number of homestay units in each area. Therefore, the results of this analysis will show the differences between the regions in the ten New Bali.

3.2 Modeling Method

The modeling method used a combination of two approaches, namely deductive and inductive (see Figure 2). Deductive reasoning is an approach that uses references from previous research to explain a particular phenomenon. The inductive method uses a series of approaches that apply the bottom-up approach principle because that concept views the truth as coming from direct events in the field. The deductive approach has the power to generalize a phenomenon, but it is still unable to explain it in a contextual context. While the deductive approach is difficult to generalize to a specific phenomenon, it does have the power to explain a contextual phenomenon. Therefore, for backpacker tourist projection modeling, the combination of the two approaches complements each other well when explaining the current phenomenon (Schwaninger & Grosser, 2008).

Projection modeling for backpacker tourists is carried out using a systems approach. This modeling begins with a deductive approach and defines a backpacker tourist's concept. Further, the output of that concept is then aligned with the data available in the field to validate the available data relevant to the backpacker tourist concept. The inductive method is then applied by using available data to harmonize with the backpacker tourist concept to justify the data for suitability. The process of this method is iterative, back-and-forth and complementary. The objective is a projection model that is the closest to reality.
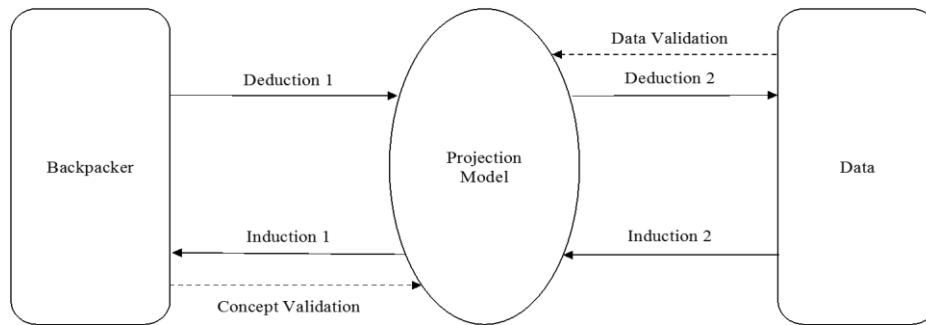
Figure 2. Modeling Approach
Source: Adapted from Schwaninger & Grosser (2008)

The modeling structure has three main elements: the number of backpacker tourists, the growth rate of that tourism, and the projection period. The number of backpacker tourists can be formulated based on the difference of tourists in the N-th period (the number of tourists in the initial period multiplied by the growth rate of the square of N-1). Projection modeling follows the rules of geometric series, which assumes that the number of additions is multiplied or compounded. This assumption is obtained from the behavior of backpacker tourists who return to visit and those who have never visited the same place within a certain period. The subsequent sub-topic discussion explains the development of variables and their various assumptions.

The calculation of the availability of homestays in the ten areas of New Bali is influenced by three main elements: (1) the availability of the latest homestays, (2) the number of homestay development programs, and (3) the projection period. The availability of data on the number of homestays is an absolute requirement for calculating any prediction of the number of homestays because the absence of such data will hinder precise predictive modeling. The program for developing the number of homestays in the ten New Bali is the basis for the assumptions used when calculating the projected number of homestay availabilities. The level of conformity for this program since 2017 has only reached 32.5%, per the data as of September 2019. That data is a reference for determining a linear or arithmetic development rate. Finally, the homestay development prediction period uses the duration of 2021 to 2025.

4. FINDINGS AND DISCUSSION
4.1 Analysis of Backpacker Tourist Demand

Determining the number of backpacker tourists refers to the number of domestic and foreign tourists visiting ten New Bali destinations. The main challenge when determining that number is the lack of data availability that contains behavioral indicators that clearly distinguish backpacker tourists from other tourists. The data sources used as references only provide general data and are not classified in greater detail. This lack of data occurs in Indonesia and other countries that have not seen the need to gather this data. Anticipating the lack of data availability, this study used several data sources as reference material, including Statistic Indonesia (BPS) data, the Indonesian Data Center (Pusdatin) and specific secondary data sources. Some of the data were used for (i) comparison between data sources and (ii) assessing data availability and ongoing data updates.

The assessment of the number of backpacker tourists refers to the data available in the second-level area (district) where the ten destinations are located. The goal is to determine the number of backpacker tourists, more specifically. The number of

backpacker tourists is compared and assessed using several available data sources. The historical data is then used for at least five years or more to help the projected model accuracy be higher. Historical data for the current study were taken from 2015 to 2019 to predict the number of backpacker tourists for 2021-2025.

The WYSE Travel Confederation (2019) notes that the proportion of backpackers is dominated by young people, of which only 14% claim to be backpacker tourists. The qualitative data from the Ministry of Tourism and the Creative Economy (2019) indicate that the contribution of young tourists in Indonesia reached 34%. Using these premises, it can be concluded that the number of backpacker tourists in Indonesia is 4.76%, rounded up to 5% to accommodate the number of mistakes and the number of backpacker tourists who claim to be older.

Table 1. Number of Tourists in the Ten New Bali Destinations from 2015 to 2019

Destinations	2015	2016	2017	2018	2019
Toba	123.131	118.392	109.955	141.047	104.173
BTS	495.412	551.099	606.787	662.475	718.163
Wakatobi	18.027	22.380	27.439	25.437	19.987
Tj.Kelayang	260.099	298.555	384.855	258.568	283.962
Likupang	23.389	24.238	25.483	26.728	27.973
Borobudur	3.578.387	3.670.686	3.716.836	3.855.285	3.993.734
Tj. Lesung	3.362.231	3.792.733	3.833.001	3.105.051	2.406.393
Labuan Bajo	40.674	39.831	38.987	38.144	37.300
Morotai	3.043	2.224	2.579	2.615	2.473
Mandalika	100.728	108.917	200.483	153.715	141.332

Source: Statistic Indonesia (2023)

4.2 Projected Backpackers in the Ten New Bali Destinations

The calculation of the availability of homestays in the ten New Bali destinations was influenced by three main elements, namely: (1) the availability of the latest homestays, (2) the number of homestay development programs, and (3) the projection period. The availability of data on the number of homestays is an absolute requirement to calculate the predicted number. The absence of that data or information will hinder accurate predictive modeling. Subsequently, the program for building the number of homestays is utilized by looking at this program's achievement level since 2017, which only reached 32.5% (data as of September 2019). That data is a reference used for determining the rate of development that is either linear or arithmetic. Lastly, the prediction period for homestay construction uses the duration from 2021 to 2025.

Net, the number of backpacker tourists in ten New Bali destinations was projected using the number of backpacker tourists for 2019 (Table 1). This calculation used the growth rate for three figures: optimistic, moderate, and pessimistic. The optimistic growth rate used a 9.80% rate, the moderate used 7.10%, and the pessimistic used 3.87%. The growth rate was obtained from the average growth rate of ten New Bali destinations. The optimistic growth rate was obtained from the highest point of the average growth rate of ten destinations, and the moderate growth rate was obtained from the average growth rate of the ten destinations. The pessimistic growth rate was obtained from the lowest point of the average growth rate for the ten destinations. The analysis results produced the number of backpacker tourists in ten New Bali destinations 394,510, as shown in Figure 3.
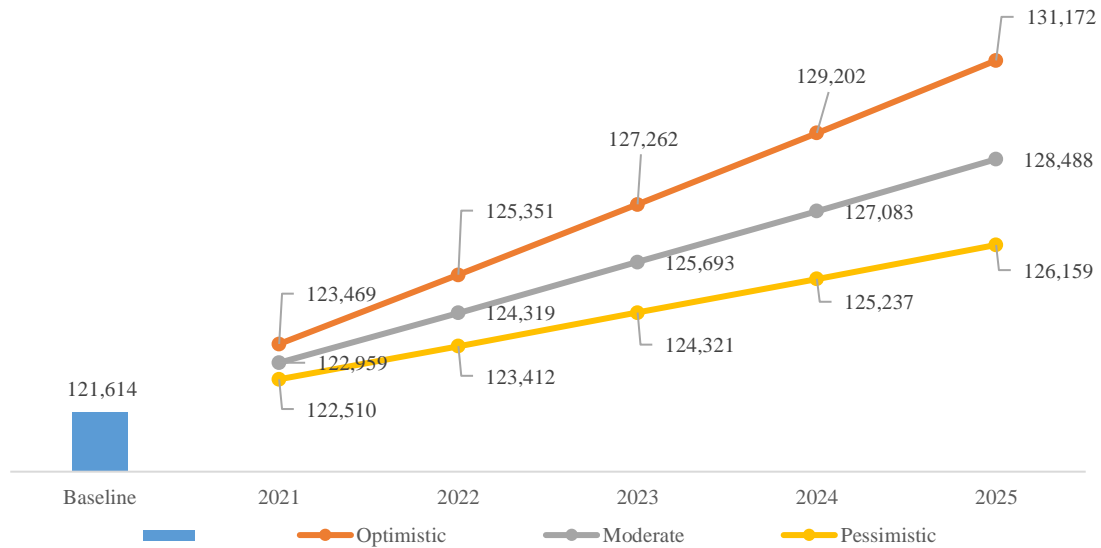
Figure 3. The Scenario of Backpacker Travelers from 2021 to 2025
Source: Researcher Analysis (2023)

4.3 Analysis of Homestay Units Availability

In 2017, the Government of Indonesia used the tourism village strategy to support the Indonesian tourism sector. The aim was to improve the local village economy by providing homestay units. The government designated 7,275 tourist villages as alternative instruments for national tourism development and set aside 10,000 units of homestay rooms (Prasyanti, 2019). The government then targeted the development of 10,000 homestay units in three phases, in 2017, the target was 1,500 room units with achievement of 1,504 rooms, and in 2018, the target was 1,500 rooms with achievement of 1,426 rooms. In 2019, the target was 7,000 rooms, with the realization of 308 rooms.

Initially, the number of homestays before the development program still totaled 229 units. Then, the Government began to set priority destinations known as the Ten New Bali. The homestay, which refers to the Archipelago Architecture (Prasyanti et al., 2018), is a various form of residential buildings with unique characteristics that form Indonesian identity in each tourist area (referred to as tourist villages). The uniqueness of this form will be an attraction for visitors to travel to tourist villages and enjoy direct interaction and experience of life in the local community for themselves. The visit of tourists to a tourist village is also expected to improve the economy of the local people.

The number of homestay availabilities in ten New Bali is 2,201 (Prasyanti, 2019). Of all these destinations, comparing the number of villages to the number of units has no particular pattern (Figure 4). For example, as of September 2019, Toba Destinations had 638 homestays from 37 villages. Meanwhile, there were 530 homestay units from 48 villages at BTS destinations. According to (Prasyanti, 2019), per the acceleration team for homestay development, only 3,250 rooms have been completed of the planned targeted number. The homestay room development program started in 2017 with a progression of 32.5%, based on the data as of September 2019. This slowdown occurred in 2019 when 7,000 rooms were targeted. Currently, the number of units built has only reached 308 homestay rooms. Thus, it can be concluded that the average progression of room construction per year is only 11%. This average progress will be a reference for projecting homestay units' availability in the ten New Bali destinations.

This analysis shows that the total number of homestays available in the ten New Bali areas is projected to be 6,772, as shown in Figure 4. The current study uses a baseline for the number of homestay rooms completed during the construction period, which is 32.5% of the total target (Prasyanti et al., 2019). This data shows that 2,201 units are the number of homestays that can now be used. Using this calculation, the number of homestays will become 6,772 units. The development period will be completed for five years, from 2021 to 2025, assuming the 2020 baseline data is being used.
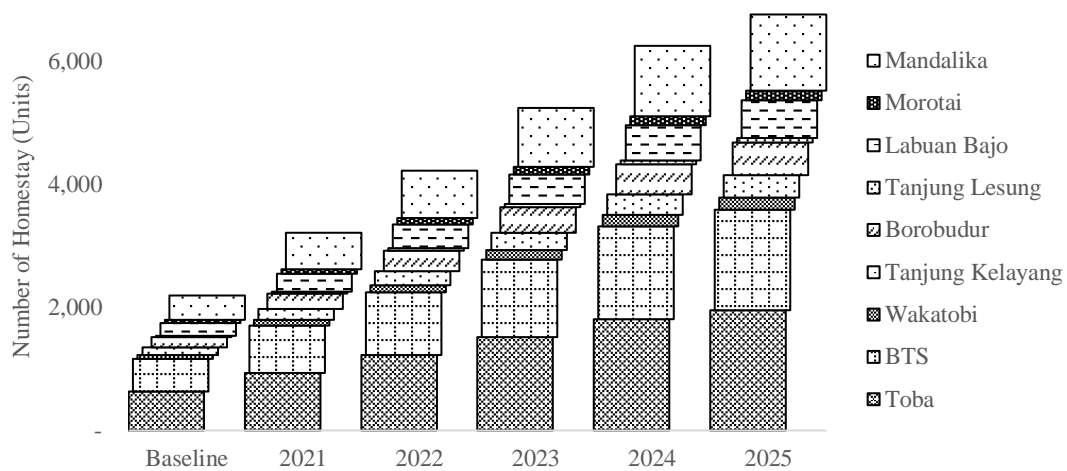

Figure 4. Projected Availability of Homestay Units for 2021 to 2025
Source: Researcher Analysis (2023)

In the report, for the 2017-2019 period, the first two years of completion of development were able to meet that target. However, in 2019, the completion rate fell sharply. However, this study assumes that the development will be able to complete 15% of all the targets set each year. As seen in Figure 4, the prediction for the planned construction will be completed in mid-2025. The ten destinations account for 67.72% of the 10,000 units of homestay room construction throughout Indonesia, assuming one homestay consists of one room. It also can be noted that the Toba destination is the most built homestay unit, with 1,963 by 2025, followed by BTS and Mandalika with 1,631 and 1,237 homestay units, respectively. This study assumes that this development will be proportional to the number of homestay units that have already been completed.

4.4 Gap Analysis

Gap analysis is determined by the projected number of backpacker tourists and the availability of homestay units, but that projection also needs to consider tourist behavior. Several factors need to be taken into account regarding the behavior of backpacker tourists when analyzing the gap, namely: (i) the duration of backpacker tourists' trips; (ii) the length of stay (LoS) of backpacker tourists in homestays; (iii) tourist arrival behavior; (iv) the ratio of tourists to homestay units; and (v) the level of availability of homestay units int he tourist destinations. These factors are the primary basis for analyzing and projecting homestay units' demand and supply gap.

The gap analysis for the ten New Bali destinations shows the projected availability of homestay units that will meet the needs of the number of backpacker tourists in 2024-2025, as shown in Figure 5. The number of requests initially differed significantly from the availability of homestay units. However, with consistent progress in the development

of homestays in ten New Bali destinations, it is projected that the number of requests for this unit of destinations can be met in 2024. In 2021, the number of homestay units available was only 32,168 units, but it is projected that in 2025 there will be excess availability of 67,723 units.

This study identifies four main behaviors whenever backpacker tourists travel to New Bali destinations. First is the duration of the backpacker tourist trip. The duration of that trip follows the school holidays. This argument aligns with backpacker tourism, in which young tourists dominate when school holidays occur at the turn of the semester. Summer vacation in some developed countries lasts three months (spring break) or only 90 days. However, for this calculation, this study assumes that 60 days are used for traveling. Another 30 days are used for preparation and rest after returning from the tourist destinations.

Second is the homestay length of stay (LoS) of backpacker tourists. Dianasari et al. (2020) explain that backpacker tourists' duration at a destination is short, between 2 to 3 nights. Indeed, backpacker tourists live nomadic or nomadic from one destination to another. The goal is to enjoy a different atmosphere while simultaneously gaining experience from a destination, both from a social and a cultural perspective (WYSE Travel Confederation, 2019). Another behavior is that backpacker tourists will repeatedly visit if they like the tourist destination.

The third is the behavior of tourist arrivals. This study assumes that the arrival of backpacker tourists at a homestay unit will not occur simultaneously. The various types of tourism offered in Indonesia will make tourists randomly spread out to various tourist destinations. This study uses this assumption to calculate the potential availability of homestay units in the ten New Bali destinations.
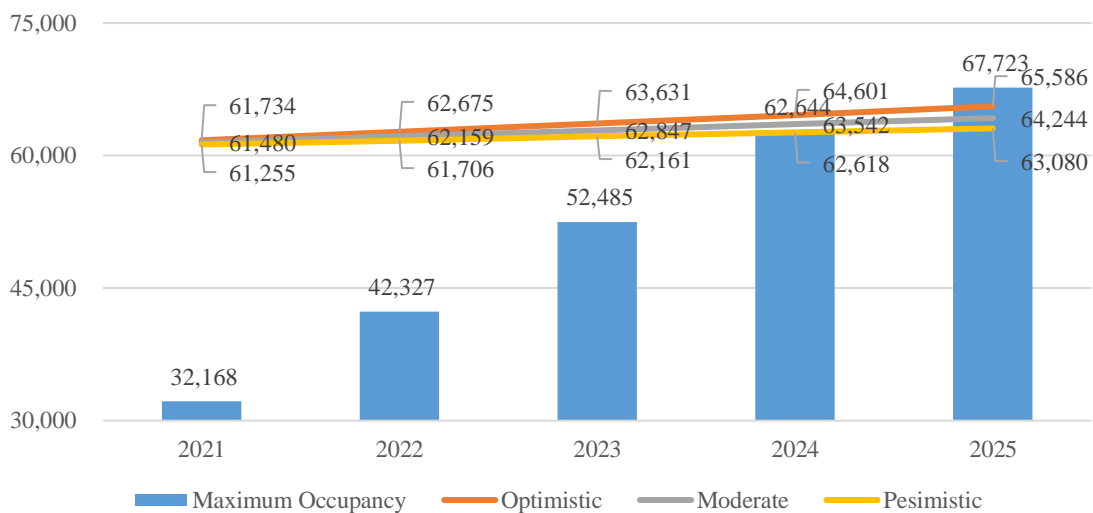

Figure 5. Gap Analysis of Homestay Availability and Visitors for 2021-2025
Source: Researcher Analysis (2023)

Lastly is the ratio of backpacker tourists to the availability of homestays. The behavior of backpacker tourist visits is a group activity, not an individual one (Dianasari et al., 2020). Few references mention the average number of backpacker tourists when traveling. However, some references show that the number of tourists staying in homestays is at least two people for one unit (Prasyanti et al., 2019). Based on the tolerance for homestay occupancy, it is assumed that it is 50 per cent occupancy. Thus,

using LoS for three days, this study can assume an empty period of occupied homestay units. With this assumption, the LoS becomes six days for the backpacker tourist trip, which amounts to 60 days of travel duration.

4.5 Discussion

Overall, the projected availability and demand for homestay units can be met in 2024. By 2025, the volume of availability of homestay units will experience an oversupply. The data thus shows progress in developing homestay units in ten New Bali destinations. This development will encourage tourism and become a new source for the region's economy. Based on this data, there will be problems regarding the demand and supply of homestay units. This issue can be seen in several New Bali destinations with an oversupply of homestay units. Yet, some other destinations will experience a supply shortage, as shown in Table 2. The New Bali destinations with an oversupply include Toba, Bromo-Tengger-Semeru, Wakatobi, Labuan Bajo, Morotai and Mandalika.

Meanwhile, the destinations of Borobudur and Tanjung Lesung will be experiencing a shortage of supply. Therefore, it is necessary to readjust the strategic planning to address this problem. The government needs to review the supply of homestay units in the ten New Bali destinations. The current study found that the ten New Bali destinations in 2025 were already experiencing oversupply. The government thus needs to relocate as soon as possible the construction of homestay units that have been predicted to have excess supply since their early years and allocate them to other New Bali destinations that are in short supply or will be. Thus, supply equity can be achieved, and optimal benefits will accrue for the ten New Bali destinations.

Table 2. A Comparison of the Supply and Demand for Homestay Units

Scenarios	Destination	2021	2022	2023	2024	2025
Optimistic	Toba	OS	OS	OS	OS	OS
	BTS	OS	OS	OS	OS	OS
	Wakatobi	OS	OS	OS	OS	OS
	Tj Kelayang	OD	OD	OS	OS	OS
	Likupang	-	-	-	-	-
	Borobudur	OD	OD	OD	OD	OD
	Tj Lesung	OD	OD	OD	OD	OD
	Labuan Bajo	OS	OS	OS	OS	OS
	Morotai	OS	OS	OS	OS	OS
	Mandalika	OS	OS	OS	OS	OS
	Total	OD	OD	OD	OD	OS
Moderate	Toba	OS	OS	OS	OS	OS
	BTS	OS	OS	OS	OS	OS
	Wakatobi	OS	OS	OS	OS	OS
	Tj Kelayang	OD	OD	OS	OS	OS
	Likupang	-	-	-	-	-
	Borobudur	OD	OD	OD	OD	OD
	Tj Lesung	OD	OD	OD	OD	OD
	Labuan Bajo	OS	OS	OS	OS	OS
	Morotai	OS	OS	OS	OS	OS
	Mandalika	OS	OS	OS	OS	OS
	Total	OD	OD	OD	OD	OS
Pessimistic	Toba	OS	OS	OS	OS	OS
	BTS	OS	OS	OS	OS	OS
	Wakatobi	OS	OS	OS	OS	OS
	Tj Kelayang	OD	OS	OS	OS	OS

Scenarios	Destination	2021	2022	2023	2024	2025
	Likupang	-	-	-	-	=
	Borobudur	OD	OD	OD	OD	OD
	Tj Lesung	OD	OD	OD	OD	OD
	Labuan Bajo	OS	OS	OS	OS	OS
	Morotai	OS	OS	OS	OS	OS
	Mandalika	OS	OS	OS	OS	OS
	Total	OD	OD	OD	OS	OS

Legend: OS is Stand for Oversupply; OD is Stand for Over Demand
Source: Researcher Analysis (2023)

This study expands previous literature that outlines the importance of homestays for developing new tourist destinations, particularly in rural areas. Homestays are recognized for their significant role in developing tourism in rural areas and offer various benefits to both the local communities and tourists. As mentioned by Pasanchay and Schott (2021), the first benefit is that homestays provide economic boosts and additional resources for the residents in rural areas. Prediction modelling of homestay demand and supply will help the stakeholders manage the destination's carrying capacity. Hence, the homestay development will contribute to the local economy efficiently and effectively (Dey et al., 2020). As Dewantara et al. (2023) mentioned, destination operators and locals should work collaboratively to ensure that each stakeholder will receive similar benefits during each stage of the destination's development.

Second, identifying homestay units' availability and occupancy rate will ensure several social benefits from homestays from the perspective of locals and authorities. According to Tsang et al. (2022), homestays allow travellers and tourists to immerse themselves in the local culture. This event enables cultural exchange between the guests and the hosts, which fosters a deeper appreciation and understanding of different cultures (Dey et al., 2020; Tsang et al., 2022). Moreover, homestays bring a more unique experience and authenticity than conventional hotels, allowing tourists to participate in local activities, interact with the community, and taste traditional cuisines. Hosting tourists in the homestays will motivate local communities to showcase and preserve their cultural traditions and heritage, which might otherwise be at risk of fading away from modernization and industrialization (Huang et al., 2020).

This research underlines the importance of identifying the unique tourists' behaviors and characteristics to find accurate measures of homestay development availability. Homestays are generally more sustainable tourism as they tend to have a smaller carbon and environmental footprint than large hotels (Dey et al., 2020). Furthermore, they can serve as a tool to encourage sustainable practices that the tourism industry can run to benefit local communities and the environment (Kulshreshtha & Kulshrestha, 2019). However, without clear measures and forecasting of homestay availability and tourist' demand, the sustainability of tourism development will be challenging.

This study believes forecasting and identifying homestay numbers in tourism areas are crucial for multiple factors and characteristics. First, having a precise number and understanding of the measures of homestays will assist the tourism industry stakeholders in managing the sector in a sustainable approach (Thakur et al., 2023). As Thakur et al. (2023) mention, it will help local authorities navigate the rules and regulations to achieve the growth of the tourism sector while avoiding overcrowding in the earliest stages of development. This precise forecasting and identification process can prevent adverse impacts from social and environmental aspects (Dey et al., 2020).

A forecasting process of homestay development enables the stakeholders to maintain the number of resource allocations. Accurate forecasts assist the developers in allocating resources efficiently. Tourism organisations and local authorities can plan for developing the infrastructure, while waste management and other services will be delivered based on the expected number of tourists and homestays. Identifying the number of homestays enables regulators to perform quality control. Thus, the tourism stakeholders can meet certain requirements and comply with specific quality standards and regulations. In the latest stage, it can help them to maintain a consistent level of safety and service quality for the tourists.

Another benefit is to balance between supply and demand. Understanding a precise number of homestays allows better alignment between the market demand and supply. That means when the homestay numbers are too high, there is a possibility of price competition, leading to a decline in quality. Conversely, if the homestay numbers are too low, it can lead to higher prices, which cannot meet the targeted demand. Predicting demand and supply can significantly assist marketing efforts (Janjua et al., 2023; Tsang et al., 2022). Tourism marketers can tailor their promotional and marketing strategies effectively with the correct number of potential customers by considering the capacity of available homestay or accommodation (Janjua et al., 2023).

The results will help the current progress of community involvement in planning local tourism development. Identifying homestays with accurate forecasting involves the capacity of residents during the planning stages. It allows them to propose their arguments in the tourism development stage (Janjua et al., 2023; Kulshreshtha & Kulshrestha, 2019). Further, it can ensure that the identification results align with the economic and cultural interests. Discussing economic impact assessment, having a clear picture of the homestays forecast helps assess the tourism sector's economic impact on the area, particularly in rural areas (Janjua et al., 2023). These implications include income generation, job creation, and other overall contributions to the local economy.

Last but not least, the identification and accuracy of forecasting will assist in performing risk management and enhancing the tourist experience. Identifying a precise number of homestays helps assess potential risks, such as natural disasters or market change (Janjua et al. 2021). Most new tourist' priority destinations in Indonesia are built in high-risk natural disaster areas (Wibowo & Hariadi, 2022). Furthermore, the tourism sector has been badly affected by public health risks, as seen during the COVID-19 pandemic. It made a blurred prediction of market conditions. Risk mitigation can be undertaken through proper planning and forecasting in developing the tourist's accommodation. It is also an appropriate effort to maintain a positive tourist experience. Developing too many homestays will lead to overcrowding. Consequently, overcrowding can lead to a decline in the quality of the experience. On the other hand, too few accommodations can result in tourists being turned away. At the same time, local authorities can preserve the local environment and culture. Knowing and regulating the number of homestays enables authorities to protect the local culture and environment from excessive tourism pressure. This study allows for a more sustainable and responsible form of tourism. Our study aligns with existing literature that forecasting and identifying the number of homestays in a tourism area is essential for effective and sustainable tourism management. It helps balance the needs of tourists, the local community, and the environment while maximizing the economic benefits of tourism.

5. CONCLUSION

This study aimed to identify the number of backpacker tourists and the availability of homestay units and support the development programs in ten New Bali destinations through homestay development. Prediction modeling of both the demand and supply of homestay units used several fundamental assumptions and gap analysis as the main output of the study. The analysis for this study used several tourist behaviors that are supported by valid references (Dianasari et al., 2020; Prasyanti, 2019), namely: (i) the duration of a trip is sixty days; (ii) a three-day average LoS; (iii) random tourist arrivals (iv) the ratio of tourists to homestay units; and (v) a 50% occupancy rate for the homestay during the trip. The prediction modelling is presented to understand current demand and supply of homestay units to address current gap occurred in the homestay development. It is essential to ensure the sustainability and continuity of tourism development progress in emerging tourist destinations in Indonesia.

This study concludes that from 2021 to 2025, the number of homestay units available will experience an oversupply due to the imbalance in the number of homestay unit developments to the arrival of backpacker tourists. By 2025, the number of homestay units will far exceed the number of tourists visiting. In addition, if one looks at the ten New Bali destinations, problems exist in the distribution of demand and supply for homestay units. Based on the fundamental assumption, several New Bali destinations have experienced an oversupply of homestay units. On the other hand, several others are experiencing excess demand, like what happened to the Borobudur and Tanjung Lesung destinations.

Therefore, based on the gathered input from this study, we recommend that policymakers immediately evaluate the homestay unit development program in the ten New Bali destinations. Policymakers are remained crucial for its position to decide the number of permits released for new homestay development. Therefore, they should limit the total number of homestay units available in each destination. If left unchecked, an imbalance will affect the effectiveness of budget absorption and the potential for uncompetitive pricing due to the abundant availability of homestay units. Policymakers at the central level need to coordinate with local governments and other government agencies and work with indigenous peoples to re-evaluate overall homestay development (King et al., 2021; Situmorang et al., 2019).

This study further concludes that the leading cause of this imbalance is the crisis caused by the COVID-19 virus pandemic, which has reduced the number of requests (Atmojo & Fridayani, 2020; Japutra & Situmorang, 2021; Malahayati, Masui, & Aggraeni, 2021; Riadil, 2020). Another reason is that the proportion of backpacker tourists continues to decline (King et al., 2021; Wirawan et al., 2021). These symptoms clearly signal policymakers to immediately make strategic adjustment plans for the inter-regional homestay unit development program at New Bali destinations. For New Bali areas that have experienced excess supply, the development of homestay units can be relocated to the New Bali destinations with the potential for excess demand.

5.1 Limitation and Future Research

The main challenge of this study was the lack of data available from both the supply and demand sides for homestay units. This problem makes it difficult to justify precise modeling of demand and supply projections for homestay units. Although this study used relevant previous studies as the basis for justifying the projection model, research bias still has the potential to occur in this modeling study. The following

limitation is the lack of data availability that discusses the attributes of backpacker tourists and homestay units. Thus, this study took the initiative and used general references and generalized the attributes needed to support a study of demand and supply predictions for homestay units.

For a future study, this study suggests redefining some of the concepts that support this study, such as backpacker tourists, homestay units, or other concepts that align with general homestay development studies. Alignment of this concept is needed to make the results more effective and high-quality. Different approaches also need to be considered to deepen the current study. For example, future research could use a qualitative research approach by conducting in-depth interviews with key informants, such as backpacker tourists, homestay unit owners, community leaders, and policymakers, in both the central and local governments due to the strong influence of the Indonesian cultural context on tourism.

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