

The Influence of Star-Rated Hotel Industry Performance as a Tourism Support Sector on GRDP and Its Impact on Poverty in North Sumatera Province

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Abstract

This study analyzes the influence of the hotel industry's performance on the Gross Regional Domestic Product (GRDP) and its impact on poverty in North Sumatera Province, where the hotel industry serves as a key support for the tourism sector and contributes to regional economic growth. The study employs a quantitative approach using secondary data from Statistics Indonesia (BPS). Analysis was conducted using multiple linear regression with the aid of SPSS 22 software. The variables measured over a 15-year period included the number of star-rated hotel accommodations, the number of hotel guests (both foreign and domestic), the occupancy rates of star-rated hotels, and the length of stay of guests at star-rated hotels (both foreign and domestic). The results indicate that the performance of the hotel industry has a significant effect on GRDP, and GRDP, in turn, has a significant negative effect on poverty; this suggests that strengthening the hotel industry as a support for the tourism sector has the potential to boost regional economic activity while simultaneously supporting poverty reduction efforts in North Sumatera.

Keywords: Hotel industry, tourism sector, GRDP, poverty

1. INTRODUCTION

The tourism sector makes a significant contribution to the national economy; indeed, Indonesia is a preferred destination for travelers, offering a wealth of diverse attractions that appeal to both domestic and international tourists. North Sumatera, a province within Indonesia, stands out as a destination boasting unique qualities that are captivating and ensure a truly memorable visit.

North Sumatra Province boasts a variety of unique features, including Lake Toba the world's largest volcanic lake and Samosir Island, which is rich in Batak culture and showcases the tribe's way of life and traditions. Other highlights include Bukit Lawang, Asia's largest tropical rainforest conservation area; Brastagi, a town offering views of active volcanoes and thriving fruit and vegetable farms; and the distinct culture and traditions of the Batak Karo people. The region also offers beautiful beaches with waves that attract surfers from around the world, as well as Indonesia's tallest waterfall, which cascades from a height of 120 meters amidst stunning scenery. These attractions are complemented by a wealth of culinary and cultural experiences, such as traditional markets, dance performances like the Tor-Tor, and various other traditional Batak ceremonies.

However, limited infrastructure access in parts of North Sumatra makes many beautiful destinations difficult for tourists to reach. A lack of information and promotion contributes to the province's destinations remaining relatively unknown globally, while issues regarding cleanliness and waste management at certain sites present specific challenges that require improvement. Furthermore, a shortage of quality accommodation particularly in remote areas poses obstacles for tourists, especially international visitors who prioritize comfort alongside environmental and conservation standards. All these factors create challenges for environmental preservation, which must be managed effectively and appropriately to avoid negatively impacting the long-term sustainability of the region's harmonious natural wealth.

Given the immense tourism potential of this Sumatran province, existing limitations should be promptly addressed and rectified to foster sector growth and attract a larger number of both domestic and international tourists. Ultimately, this would make a significant contribution to the national economy; the province's wealth of tourism assets offers a promising avenue for boosting regional revenue, which in turn would enhance the well-being of local communities for instance, by generating substantial employment opportunities within the region's tourism sector.

Ideally, every nation strives to increase its Gross Domestic Product (GDP) and alleviate poverty or at least reduce it year by year, however gradually with the ultimate

goal of ensuring the well-being of its entire population. This is particularly relevant for Indonesia, a vast nation and the world's largest archipelagic state, which is endowed with abundant wealth across various sectors including cultural heritage, natural resources, and a large human resource pool. While current data and observable facts suggest that not all of Indonesia's human resources yet possess the necessary high-level capabilities, if all parties synergize to improve the situation and implement better management across the board leveraging the immense potential and opportunities spanning from Sabang to Merauke we can overcome the obstacles that sometimes hinder our progress. We especially the government and relevant stakeholders must remain steadfast and confident; with superior management, effective strategies, and wise implementation, all our aspirations can be realized, and the challenges and hurdles standing in our way can be surmounted.

2. RESEARCH METHOD

This study employs a quantitative approach utilizing secondary data obtained from Statistics Indonesia (BPS) of North Sumatra Province. The data encompasses hotel industry performance indicators, Gross Regional Domestic Product (GRDP), and poverty levels over a 15-year period, specifically covering the number of hotel accommodations, number of hotel guests, hotel room occupancy rates, and the average length of guest stays. Data analysis was conducted using multiple linear regression with the aid of SPSS 22, employing two regression models: the first model analyzes the impact of hotel industry performance on the GRDP of North Sumatra Province, while the second model analyzes the influence of GRDP on poverty in the province.

Prior to hypothesis testing, classical assumption tests—comprising tests for normality, multicollinearity, heteroscedasticity, and autocorrelation—were conducted to ensure the regression model met the required assumptions; subsequently, hypothesis testing was performed using partial tests (t-test), simultaneous tests (F-test), and the coefficient of determination (R^2) at a 5% significance level to determine the influence of the independent variables on the dependent variable.

3. RESULTS AND DISCUSSION

Tourism is a journey from one's place of residence to another, which is temporary in nature, undertaken by individuals or groups, as an effort to find balance or harmony and happiness with the environment in social, cultural, natural and scientific dimensions. (Wardiyanta, 2020). This means that during tourism activities, there are also many other business sectors that support the smooth running, development and even progress of tourist attractions, which play a role in supporting the smooth running of tourism productivity.

Industries linked to tourism—such as the hospitality sector—should fully support and complement one another, fostering synergy among all stakeholders to achieve the optimal results we collectively desire: broad-based growth, development, and prosperity that is comprehensively and equitably distributed. Tourism is defined as travel undertaken repeatedly or involving movement from place to place—whether planned or unplanned—that yields a holistic experience for the traveler, (Hidayah, 2019). This is supported by Article 7 of Law of the Republic of Indonesia No. 9 of 1990 concerning Tourism, which defines tourism as encompassing all matters related to travel, including the management of tourist attractions and sites, tourism facilities, and other related business activities.

From an economic perspective, tourism encompasses the various choices and decisions made by consumers, suppliers, the private sector, government institutions, and policymakers. (Wardiyanta, 2020). Meanwhile, according to Kumar and Hussain (2014), tourism—by generating positive impacts on the national economy—often motivates governments, companies, and individuals to participate in and contribute to the development of tourism destinations.

Tourism is an interconnected system; if one element fails, the others cannot function. Several actors play a role in driving this system, which is categorized into three main pillars: the community, the private sector, and the government. The community in tourist destinations acts as the owner of tourism resources or capital—including cultural assets—and comprises community leaders, intellectuals, NGOs, and the mass media. The private sector consists of tourism business associations and entrepreneurs, while the government sector oversees administration. Tourism operations run optimally when these

actors collaborate and support one another in planning, organizing, maintaining, and supervising the various sectors that underpin tourism activities. (Maharani, 2014). The tourism sector cannot be underestimated, as it plays a crucial role in Indonesia's economic development. Moreover, as an archipelagic nation boasting diverse natural, cultural, historical, and culinary destinations, Indonesia has immense potential to leverage tourism as a primary driver of economic growth. This, in turn, can foster greater prosperity for the nation, as noted by Prof. Candra Fajri, Ph.D., who highlighted the sector's progress through its improved competitiveness in 2019. The **Travel & Tourism Competitiveness Report** released by the World Economic Forum (WEF) in 2019 showed that Indonesia's global tourism competitiveness ranking rose from 42nd place in 2017 to 40th place in 2019. (Ananda, 2021). In the context of regional development, the tourism sector plays a pivotal role and can progressively stimulate development in other sectors. (Kapang et al., 2019).

Tourism growth indicates a level of competitiveness equal to—or even surpassing—that of benchmark regions, such as East Java province.(Wahyudi et al., 2019). As a developing nation with abundant natural wealth serving as a vehicle for economic development, Indonesia does not necessarily require massive investment; its natural and cultural attractions constitute significant assets capable of drawing consumers—particularly from high-income or developed nations—to the tourism sector. (Aliansyah & Hermawan, 2019). Furthermore, the presence of tourism fosters regional development, serving as a key driver for generating economic benefits and increasing foreign exchange earnings for both the region and the nation, (Hikmawati, 2019). Strong government support for the tourism sector offers the potential to boost the GDP generated by the industry; as noted by Apriyanti et al. (2023), the sector contributes foreign exchange and local government revenue, creates extensive employment opportunities, and enables local communities to participate by offering valuable products and services to tourists—such as diverse culinary options, cultural performances, guiding services, transportation, and souvenirs—while simultaneously showcasing Indonesia's natural beauty and diversity to the world.(Apriyanti et al., 2023). Thus, tourism is recognized as an industry capable of increasing community income and creating employment

opportunities, with its development driven by the interplay of three key actors: the community, the private sector, and the government. Ultimately, however, synergistic support from all three sectors is essential to maximize the development of tourism,(Elsa, 2016).

Indonesia's tourism sector has the potential to become a world-class destination, given its vast appeal—ranging from cultural diversity (with elements recognized by UNESCO as globally acknowledged heritage) and rich biodiversity to unique geography and abundant natural resources stretching from Sabang to Merauke. It offers the "3 S" (Sun, Sand, and Sea) experience that travelers crave. With a population exceeding 270 million, Indonesia represents a massive potential market; even if foreign visitor numbers are limited, stimulating domestic tourism interest can drive demand and boost the sector's overall revenue. Furthermore, the country boasts stunning destinations that rival those found anywhere else—such as Bali, Lombok, and Raja Ampat—alongside a wide array of tourism experiences and a rich culinary landscape spanning diverse regions. However, this immense potential and the wealth of opportunities will not translate into growth and advancement without sound policies and effective management capable of realizing desired goals and targets.

Gross Regional Domestic Product (GRDP) serves as a measure of a specific region's economic performance and reflects its economic growth. As noted by Ginting (2015), economic growth can be fostered by improving public income and government spending on physical and social infrastructure—thereby enhancing the economy's productive potential and helping to alleviate poverty. This approach aligns with the devolution of financial authority to regional governments initiated in 2001, which granted them the flexibility to manage fiscal policies; by effectively managing routine and development expenditures, regions can reduce poverty levels through the stimulation of public consumption, which in turn drives economic growth and lowers poverty rates. (Ginting, 2015).

The hotel industry is closely linked to the tourism sector, serving as a key pillar of its development. Its contribution is significant to the growth of tourism, as the hotel sector acts as a benchmark for a region's success in attracting visitors; indeed, the

accommodation industry—particularly hotels—is currently a rapidly expanding sector that is essential for supporting tourism activities, especially for travelers staying away from home for more than a day. The progress of the hotel industry can be tracked through indicators such as room occupancy rates, the number of rooms sold or utilized, the average length of guest stays, and the growth in the number of hotels and other accommodation facilities. (Nababan & Sianturi, 2020).

North Sumatra's Gross Regional Domestic Product (GRDP) is driven by several key components: 1. Strong economic diversification—stemming from a wide array of sectors such as agriculture, plantations, manufacturing, trade, tourism, and mining—ensures a more stable GRDP by avoiding reliance on a single economic sector. 2. A strategic location along the Strait of Malacca; the presence of major ports like Belawan and international hubs like Kualanamu Airport facilitates international trade and attracts significant foreign investment, thereby contributing positively to the province's GRDP. 3. Growth in the industrial and service sectors—particularly the rapid expansion of services (including manufacturing, transportation, and tourism)—boosts the province's GRDP contribution. 4. An abundance of natural resources. Ideally, given this immense potential, there is a widespread expectation that North Sumatra's GRDP will experience stable and sustainable growth. This would not only improve economic well-being but also alleviate poverty—starting at the local level—ultimately leading to significant improvements in the community's social welfare.

Currently, there is a vast number of job seekers, and the situation is characterized by a significant imbalance between the number of job seekers and available vacancies; the workforce size exceeds available employment opportunities, and a large population results in a substantial workforce that cannot be fully absorbed. Furthermore, the high rate of population growth has not kept pace with the expansion of job opportunities, and the quality of the workforce remains relatively low—particularly regarding education levels and the mastery of knowledge and technology—coupled with an uneven distribution of labor across Indonesia, where some vast regions face a shortage of workers, (Disnaker, 2019).

Many factors influence poverty levels, one of which is labor absorption; higher rates of labor absorption can potentially reduce poverty. However, if labor absorption is not accompanied by a decline in poverty, the quality of available jobs needs to be improved—for instance, by raising wage levels or providing social security. Looking at the case of East Java, labor absorption has shown a trend of improvement over the years. (Purnomo & Kusreni, 2019), high levels of labor absorption can serve as a driving factor in reducing poverty.

In general, poverty refers to the condition of an individual or a group of people unable to meet basic needs—such as food, clothing, housing, education, and adequate healthcare. (Abdi, 2021).

This study employs two multiple linear regression models: the first analyzes the impact of the hotel industry's performance on Gross Regional Domestic Product (GRDP), while the second analyzes the impact of GRDP on poverty in North Sumatera Province. The analysis of each model is outlined below. Based on the data processing results obtained using SPSS 22, the findings are as follows:

Regression results regarding the impact of the star-rated hotel industry's performance on GRDP. (Variable X to Variable Y)

Variable	coefficient	t	Sig.
Number of star-rated hotel accommodations	1.140	13.398	0.000
Number of foreign guests in star-rated hotels	0.337	4,045	0.000
Number of domestic guests in star-rated hotels	0.403	-1.600	0.148
Room occupancy rate of star-rated hotels	0.528	3.493	0.000

Length of stay of foreign guests in star-rated hotels	57.015	-0.102	0.921
Length of stay of domestic guests in star-rated hotels	266.064	0.608	0.560

Partial test results indicate that, among the six variables significantly influencing Gross Regional Domestic Product (GRDP)—specifically the number of star-rated hotel accommodations, the number of foreign guests at star-rated hotels, and the room occupancy rate of star-rated hotels—three variables showed a significant effect, whereas the number of domestic guests at star-rated hotels, the length of stay for foreign guests, and the length of stay for domestic guests did not. From an economic perspective, these results suggest that the significance of the first three variables is likely driven by the substantial increase in star-rated hotel accommodations, which stimulates investment in the accommodation sector. An increase in foreign tourists visiting Indonesia boosts GRDP because they generally tend to have higher spending levels, resulting in a more pronounced contribution to GRDP compared to domestic guests. Furthermore, higher room occupancy rates reflect hotel utilization, revenue generation, and resulting economic activity. Conversely, the length of stay does not necessarily increase GRDP if the number of guests is low or spending patterns remain unchanged. Finally, the simultaneous test results—showing an F-value of 91.026 and a significance level of 0.000—demonstrate that the independent variables collectively explain the variation in GRDP; specifically, 98.6% of the variation in GRDP is explained by these hotel industry performance indicators, with the remainder attributed to factors outside the model.

Meanwhile, the regression results regarding the effect of GRDP (Variable Y) on poverty (variable Z). in Model 2 show:

Variable	Coefficient	t	Sig.
GDRP	-0.973	-15.212	0.000

The coefficient table indicates that Gross Regional Domestic Product (GRDP) has a significant negative effect on poverty; this suggests that an increase in GRDP tends to be accompanied by a decrease in poverty in North Sumatra Province. With an F-statistic of 231.405, a significance level of 0.000, and an adjusted R-squared of 0.943, Model 2 demonstrates significant regression results, making it a valid model for explaining the relationship between GRDP and poverty in North Sumatra Province. The adjusted R-squared value of 0.943 indicates that 94.3% of the variation in poverty can be explained by GRDP, while the remainder is influenced by factors outside the research model.

From an economic perspective, these findings reinforce the view that increasing regional economic activity has the potential to create jobs, raise public income, and ultimately contribute to reducing poverty levels. Therefore, efforts to foster economic growth by strengthening the hotel industry—which supports the tourism sector—can serve as a regional development strategy that aids in poverty reduction.

4. CONCLUSION

The results of this research indicate that, in the first model, the partial test shows that three out of six variables significantly affect gross regional domestic product (GDRP), namely the number of star rated hotel accommodations, the number of foreign guests staying in start rated hotels, and the room occupancy rate of star rated hotels, Meanwhile, the number of domestic guests, the average length of stay of foreign and domestic guests do not have a significant effect on GDRP. However, the simultaneous test shows that all independent variables jointly have a significant effect on GDRP, indicating that the hotel sector plays an important role in supporting regional economic growth.

The results of the second regression model indicate that GDRP has a significant negative effect on poverty in North Sumatera Province. the statistical results also show

that the regression is valid for explaining the relationship between GDRP and poverty. The finding suggests that an increase in GDRP is associated with a decrease in poverty levels. Therefore, improving the performance of the hotel industry, which contributes to regional economic growth, can directly support poverty reduction in North Sumatera Province.

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