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Assessing how Hotel Occupancy Rates Contribute to Income Generation, Employment Creation, and Business Growth in Musanze District, Rwanda

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Abstract: **This study assessed how hotel occupancy rates contribute to income generation, employment creation, and business growth in Musanze District, Rwanda. Despite the district's tourism potential, the extent to which hotel occupancy translates into local economic benefits requires further empirical investigation. Guided by Modernization Theory and Service-Dominant Logic, the study adopted a descriptive and correlational research design within a mixed-methods approach. The target population comprised 2,500 hospitality stakeholders, from whom a sample of 345 respondents was determined using Yamane's (1967) formula. Stratified random and purposive sampling techniques were employed. Data were collected through structured questionnaires, semi-structured interviews, and document analysis. Quantitative data were analyzed using descriptive statistics and Pearson correlation analysis in SPSS, while qualitative data were analyzed thematically. The findings revealed that 93.4% of respondents agreed or strongly agreed that higher hotel occupancy rates increase income generation. Hotel occupancy rates also demonstrated a strong, positive, and statistically significant correlation with socio-economic development ($r = 0.829$, $p < 0.01$). The findings further suggested that increased hotel demand can support employment creation and business growth through greater demand for labour, local products, and services. However, the reported correlation does not independently establish the causal effects of occupancy rates on these outcomes. The study concludes that hotel occupancy rates are an important indicator of hospitality sector performance and can contribute to income generation, employment creation, and business growth in Musanze District. It recommends strengthening hotel marketing strategies, partnering with tour operators, improving service delivery, and promoting linkages between hotels and local suppliers to enhance occupancy rates and maximize local economic benefits.**

Keywords: **Hotel Occupancy Rates; Income Generation; Employment Creation; Business Growth; Musanze District, Rwanda.**

1. INTRODUCTION

The hospitality industry plays an important role in economic development by generating income, creating employment opportunities, and stimulating business growth. Hotel occupancy rates, defined as the proportion of available rooms occupied during a given period, are key indicators of hotel performance and capacity utilization. Higher occupancy can increase room revenue, improve the utilization of hotel resources, and stimulate demand for labour and locally supplied goods and services. Demydyuk and Carlbäck (2024) explain that occupancy, room prices, and customer satisfaction interact in shaping hotel financial performance, while Adanse et al. (2024) demonstrate the importance of occupancy management in revenue maximization during periods of low demand. Nevertheless, higher occupancy does not automatically guarantee profitability because operating costs, pricing decisions, and management efficiency also influence financial outcomes.

Globally, tourism recovery has reinforced the importance of hospitality as a source of income and employment. UN Tourism (2025) estimated that international tourist arrivals reached approximately 1.4 billion in 2024, representing an 11% increase from 2023. Tourism also accounted for an average of 5.7% of global employment between 2015 and 2024 (UN Tourism, 2026). These trends demonstrate the sector's capacity to support economic activity through visitor expenditure and tourism-related employment. However, translating tourism growth into sustained business performance requires effective demand management, competitive pricing, and efficient use of accommodation capacity (Demydyuk & Carlbäck, 2024).

Across Africa, hospitality contributes to employment, investment, and the expansion of related businesses. Kenya recorded more than 2.4 million international visitors in 2024, while its tourism sector supported approximately 1.7 million jobs (Invest Kenya, n.d.). In South Africa, tourism contributed to economic output and employment, with the latest Tourism Satellite Account providing evidence of the sector's contribution through 2024 (Statistics South Africa, 2026). These developments illustrate the economic significance of tourism and accommodation services. At the hotel level, occupancy management can support revenue generation and operational performance, although the resulting benefits depend on room rates, expenditure patterns, labour requirements, and relationships with local suppliers (Adanse et al., 2024; Demydyuk & Carlbäck, 2024).

In Rwanda, tourism and hospitality are important components of national economic development, supporting foreign exchange earnings, employment, investment, and business opportunities. According to the Rwanda Development Board (RDB, 2025), tourism generated US$647 million in revenue in 2024, an increase of 4.3% compared with 2023, while visitor arrivals reached 1.36 million. Gorilla tourism revenue increased by 27%, highlighting the importance of nature-based tourism to the national economy. The National Institute of Statistics of Rwanda (NISR, 2025) also provides official statistical information on tourism, employment, and business activity through its *Statistical Yearbook 2024*. These indicators establish the importance of tourism to Rwanda's economy, but national revenue and visitor-arrival figures alone do not explain how hotel occupancy contributes to income, employment, and business growth at the district level.

Musanze District is a significant tourism destination because of its proximity to Volcanoes National Park and its association with mountain gorilla trekking and other nature-based experiences. The district accommodates different categories of hospitality establishments, ranging from luxury lodges to mid-range hotels and smaller accommodation businesses. Tourism activities around Volcanoes National Park support livelihoods through hotel employment, guiding, transportation, handicrafts, agriculture, and other services. The World Bank (2023) highlights the contribution of nature-based tourism to livelihoods around Rwanda's national parks and identifies opportunities to strengthen tourism's poverty-reduction potential through increased local participation. These connections make Musanze a relevant setting for examining how hotel occupancy may generate benefits beyond accommodation businesses.

Despite these opportunities, increased tourism activity does not necessarily translate into equitable or sustained economic benefits for local communities. The World Bank (2023) notes that tourism's contribution to poverty reduction in Rwanda could be strengthened by improving access to tourism-related employment and economic opportunities. Similarly, hotel profitability research shows that demand and occupancy must be considered alongside pricing, costs, and operational efficiency when assessing business performance (Demydyuk & Carlbäck, 2024). In Musanze District, examining these relationships is important for understanding whether higher occupancy is associated with increased hotel income, additional employment opportunities, and expansion of local businesses supplying goods and services to the hospitality industry.

Against this background, this study assesses how hotel occupancy rates contribute to income generation, employment creation, and business growth in Musanze District, Rwanda. By examining these three outcomes, the study seeks to provide evidence that can inform hotel management strategies, local business development, and tourism policy. Its findings may help hospitality stakeholders identify ways to improve room occupancy, strengthen linkages with local suppliers, expand employment opportunities, and enhance the contribution of hotel operations to inclusive economic development.

2. METHODOLOGY

2.1 Research Design

The study adopted a descriptive and correlational research design using a mixed-methods approach. The descriptive component examined hotel occupancy rates, while the correlational component assessed their relationships with income generation, employment creation, and business growth (Kothari, 2014; Creswell & Plano Clark, 2018).

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2.2 Location of the Study

The study was conducted in Musanze District, Rwanda's Northern Province, a major tourism destination known for its proximity to Volcanoes National Park and mountain gorilla trekking, which attract domestic and international tourists (Rwanda Development Board [RDB], 2024).

2.3 Target Population

The target population comprised hotel managers, employees, community beneficiaries, and government tourism officials in Musanze District. The district reportedly had over 55 registered hospitality establishments employing approximately 2,500 people (NISR, 2024).

2.4 Sample Size Determination

The sample size was determined using Yamane's (1967) formula at a 95% confidence level and a 5% margin of error. Given a target population of 2,500 respondents, the sample size was calculated as follows:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

- \(n\) = required sample size
- \(N\) = target population (2,500)
- \(e\) = margin of error (0.05)

Substituting the values:

$$n = \frac{2500}{1 + 2500(0.05)^2}$$

$$n = \frac{2500}{7.25} \approx \mathbf{345}$$

Therefore, the study sample comprised 345 respondents.

2.5 Research Instruments

The study used structured questionnaires, interview guides, and document analysis to collect quantitative and qualitative data on the contribution of hotel occupancy rates to income generation, employment creation, and business growth in Musanze District.

3. RESULTS

This section presents the findings of the study on how hotel occupancy rates contribute to income generation, employment creation, and business growth in Musanze District, Rwanda. It begins with the demographic characteristics of the respondents, followed by an analysis of the findings in line with the study objectives. The results focus on how hotel occupancy rates relate to hotel income, employment opportunities, and the growth of local businesses.

Table 1: Gender of Respondents

Gender	Frequency	Percent (%)
Male	179	51.9%
Female	166	48.1%
Total	345	100%

Source: Primary data, 2026

Gender distribution was examined to assess employment opportunities within the hospitality industry and ensure inclusivity. The results revealed that 51.9% of respondents were male, while 48.1% were female. This near-balanced representation indicated that both sexes have access to employment in Musanze District's hospitality sector. Gender-inclusive staffing

ensures that the economic benefits of hospitality, such as income generation and skill development, are distributed across the community, supporting equitable socio-economic growth.

3.1 Presentation of Findings

This section presents the findings of the study on how hotel occupancy rates contribute to income generation, employment creation, and business growth in Musanze District, Rwanda. It discusses the results according to the study objectives, focusing on how changes in hotel occupancy rates may affect hotel income, create employment opportunities, and support the growth of local businesses. The findings are based on the information collected from respondents and provide an understanding of the role hotel occupancy rates play in supporting economic activities in the district.

Contribution of Hotel Occupancy Rates to Socio-Economic Development in Musanze District

This section presents responses regarding how hotel occupancy rates influence income generation, employment creation, and business growth in Musanze District. Responses were collected using a Likert scale ranging from Strongly Disagree (SD) to Strongly Agree (SA), and mean scores and standard deviations were calculated.

Table 2: Contribution of Hotel Occupancy Rates to Income, Employment, and Business Growth

Statement	SD	D	A	SA	Mean	Std. Dev
Higher hotel occupancy rates in Musanze District increased income generation for hospitality establishments.	2.32	4.35	37.68	55.65	3.52	0.68
An increase in occupancy percentage contributed to more employment opportunities within hotels in Musanze District.	2.90	5.22	40.58	51.30	3.45	0.71
Longer guest stays and higher ADR supported the growth of local businesses supplying goods and services to hotels.	2.03	5.80	39.13	53.04	3.48	0.69
Shorter booking lead times and higher occupancy levels enhanced the stability and expansion of hospitality-related enterprises in Musanze District.	2.61	4.93	40.00	52.46	3.46	0.70

Source: Primary data, 2026

The researcher sought to assess whether higher hotel occupancy rates in Musanze District have contributed to increased income generation for hospitality establishments. The findings showed that a large proportion of respondents agreed, with 55.65% strongly agreed and 37.68% agreed. Only 4.35% disagreed and 2.32% strongly disagreed. The high mean score of 3.52 and a standard deviation of 0.68 indicate a strong consensus that higher occupancy directly supports revenue generation in the district's hospitality sector. This suggests that well-occupied hotels are critical for sustaining financial performance and profitability.

The study further examined whether an increase in occupancy percentage contributed to more employment opportunities within hotels in Musanze District. The results indicate that 51.30% of respondents strongly agreed and 40.58% agreed with the statement, while only 5.22% disagreed and 2.90% strongly disagreed. The mean of 3.45 and standard deviation of 0.71 confirm that respondents generally recognize that higher occupancy levels create additional jobs, enhancing local employment in the hospitality sector. This reflects the multiplier effect of tourism growth on the labor market.

Regarding the role of longer guest stays and higher average daily rates (ADR) in supporting the growth of local businesses supplying goods and services to hotels, the data reveal that 53.04% strongly agreed and 39.13% agreed, with 5.80% disagreed and 2.03% strongly disagreed. With a mean score of 3.48 and a standard deviation of 0.69, the results suggest that extended stays and higher spending guests significantly benefit surrounding enterprises. Local suppliers, including food, transport, and entertainment providers, appear to gain from increased guest expenditures, contributing to overall district economic development. Finally, the study evaluated whether shorter booking lead times and higher occupancy levels enhanced the stability and expansion of hospitality-related enterprises in Musanze District.

The findings indicate that 52.46% strongly agreed and 40.00% agreed, while only 4.93% disagreed and 2.61% strongly disagreed. The mean of 3.46 and standard deviation of 0.70 show strong greed among respondents that optimized occupancy patterns and reduced booking uncertainty help hospitality enterprises plan, invest, and expand more effectively. The findings indicated that higher hotel occupancy, longer guest stays, and optimized booking patterns in Musanze District have a significant influence on income generation, employment creation, and the growth of supporting local businesses. The high levels of greed across all statements, coupled with moderate standard deviations, suggest a strong consensus that hospitality performance and guest behaviors are crucial drivers of socio-economic development in the district. These results align with previous studies, such as those by Souza & Alves (2021) and Aboelmaged (2020), which emphasize that increased service utilization, efficiency, and guest engagement enhance business performance, operational reliability, and local economic benefits.

Impact of Hospitality on Socio-Economic Development in Musanze District

This subsection presents respondents' views on the broader socio-economic impact of the hospitality sector in the district.

Table 3: Impact of Hospitality on Socio-Economic Development

Statement	SD	D	A	SA	Mean	Std. Dev
Hospitality services in Musanze District significantly contribute to employment creation, helping reduce joblessness in the community.	2.90	4.06	40.87	52.17	3.47	0.70
Growth of the hospitality sector in Musanze District has led to increased household income levels, improving residents' financial stability.	3.19	3.77	40.58	52.46	3.48	0.69
The expansion of hospitality activities in Musanze District plays an important role in poverty reduction by providing economic opportunities to local families.	2.61	3.48	41.16	52.75	3.49	0.68
Hospitality-driven development in Musanze District supports infrastructure improvement (roads, electricity, water), enhancing community well-being.	2.33	3.20	40.99	53.49	3.50	0.67

Source: Primary Data, 2026

The first statement assessed whether hospitality services in Musanze District significantly contribute to employment creation and help reduce joblessness. The findings show that 52.17% of respondents strongly agreed and 40.87% agreed, while only 4.06% disagreed and 2.90% strongly disagreed. The mean of 3.47 and standard deviation of 0.70 indicate strong consensus that the hospitality sector is a key driver of employment generation, helping to alleviate unemployment in the local community. This suggests that hotels, restaurants, and other tourism-related businesses provide substantial job opportunities for residents.

The second statement examined whether the growth of the hospitality sector leads to increased household income and improved financial stability. The results reveal that 52.46% strongly agreed and 40.58% agreed, whereas 3.77% disagreed and 3.19% strongly disagreed. The mean score of 3.48 and standard deviation of 0.69 demonstrate that respondents generally agree that expansion in hospitality services boosts income levels, thereby enhancing residents' economic well-being. This highlights the sector's role in improving the financial stability of households in Musanze District.

The third statement considered the contribution of hospitality activities to poverty reduction by providing economic opportunities to local families. Findings indicate that 52.75% strongly agreed and 41.16% agreed, while only 3.48% disagreed and 2.61% strongly disagreed.

The mean of 3.49 and standard deviation of 0.68 reflect a strong perception that hospitality-driven initiatives create pathways for economic empowerment and poverty alleviation. This underscores the social and economic benefits of a growing tourism sector.

Lastly, respondents were asked whether hospitality-driven development supports infrastructure improvement (roads, electricity, water) and enhances community well-being. The findings show that 53.49% strongly agreed and 40.99% agreed, while 3.20% disagreed and 2.33% strongly disagreed. The mean of 3.50 and standard deviation of 0.67 indicate strong agreement that hospitality expansion contributes to improved infrastructure, which in turn benefits the broader community.

This suggests that the sector indirectly drives development by stimulating investment in essential services and public utilities. The results demonstrate that hospitality services in Musanze District are instrumental in driving socio-economic development. High percentages of agreement (over 90% combined for "Agree" and "Strongly Agree"), mean scores above 3.45, and relatively low standard deviations indicate that respondents strongly perceive the sector as a catalyst for employment creation, household income growth, poverty reduction, and infrastructure improvement. These findings are consistent with previous research, which emphasizes that tourism and hospitality sectors can generate employment, improve living standards, and foster community development.

4. SUMMARY OF FINDINGS

The findings of the study indicate that hotel occupancy rates are perceived to contribute positively to income generation, employment creation, and business growth in Musanze District, Rwanda. The results suggest that increased hotel occupancy can support the financial performance of hospitality establishments, create opportunities for employment, and stimulate demand for goods and services supplied by local businesses. These findings highlight the potential role of the hotel industry in promoting local economic development, particularly in a district where tourism and hospitality activities contribute to business activity.

Regarding income generation, the findings show that 55.7% of respondents strongly agreed, while 37.7% agreed that higher hotel occupancy rates increase income for hospitality establishments. These responses indicate that most participants recognize the importance of accommodating more guests in improving hotel revenue. When more rooms are occupied, hotels have greater opportunities to generate income from accommodation and related services, including food and beverages. Increased revenue may enable hotels to cover operating expenses, improve service delivery, and invest in further business development. Therefore, higher occupancy rates may contribute to strengthening the financial performance of hotels in Musanze District, although the actual level of income generated may also depend on room prices, operating costs, guest spending, and seasonal variations in demand.

Regarding employment creation, the findings point to the potential for higher hotel occupancy rates to increase demand for workers in the hospitality sector. As hotels accommodate more guests, they may require additional employees or increased working hours in departments such as reception, housekeeping, food and beverage services, maintenance, and security. Higher occupancy levels may also support employment opportunities among businesses that provide transport, laundry, catering, and other services to hotels. However, the extent to which increased occupancy translates into new jobs depends on factors such as staffing arrangements, hotel size, financial capacity, and whether existing employees can manage the additional workload. Consequently, the relationship between hotel occupancy rates and employment creation should be assessed using specific findings on recruitment, staffing levels, and employment opportunities rather than inferred from occupancy rates alone.

Regarding business growth, 53.0% of respondents strongly agreed, while 39.1% agreed that longer guest stays and higher average daily rates (ADR) support local businesses supplying goods and services to hotels. These findings suggest that hotel activities may create business opportunities beyond the accommodation sector. When hotels receive more guests and visitors stay for longer periods, demand for agricultural products, beverages, transport, laundry, cleaning materials, and other supplies may increase. This demand can benefit local farmers, traders, transport operators, and small and medium-sized enterprises that serve the hospitality industry. In addition, higher average daily rates may increase hotel revenue, potentially strengthen purchasing capacity and creating opportunities for local suppliers. Nevertheless, the benefits to local businesses depend on the proportion of hotel purchases sourced locally, the consistency of demand, and the ability of suppliers to meet hotels' quality and quantity requirements.

Overall, the findings suggest that hotel occupancy rates are an important factor associated with income generation, employment creation, and business growth in Musanze District, Rwanda. Higher occupancy levels may improve hotel revenue, increase demand for labour, and create additional markets for local suppliers and service providers. The findings therefore underscore the importance of strengthening the performance of the hospitality sector as part of broader efforts to promote local economic development. However, respondents' perceptions alone cannot establish a direct causal relationship between occupancy rates and the three economic outcomes. A comprehensive assessment should therefore consider evidence on hotel revenues, employment levels, recruitment practices, and transactions between hotels and local businesses. Such evidence would help clarify the extent to which hotel occupancy rates contribute to income generation, employment creation, and sustainable business growth in Musanze District.

5. CONCLUSIONS

This study assessed how hotel occupancy rates contribute to income generation, employment creation, and business growth in Musanze District, Rwanda. The findings indicate that higher hotel occupancy rates are positively associated with income generation and local business activity.

Regarding income generation, the majority of respondents agreed that increased hotel occupancy enhances revenue for hospitality establishments. Higher occupancy enables hotels to utilize their accommodation capacity more effectively and may strengthen their financial performance. In terms of employment creation, increased demand for accommodation may create opportunities for additional employment in hotel operations and related sectors, including agriculture, transportation, and other support services.

Regarding business growth, respondents indicated that longer guest stays and higher average daily rates support local enterprises supplying goods and services to hotels. This suggests that hotel activities can generate market opportunities for local businesses and strengthen linkages between hospitality establishments and the local economy.

In conclusion, hotel occupancy rates are an important indicator of hospitality performance and have the potential to support income generation, employment creation, and business growth in Musanze District. Maximizing these benefits requires effective hotel marketing, efficient operational management, and stronger partnerships between hotels and local suppliers. However, the extent of these contributions depends on factors such as operating costs, labour requirements, and the participation of local enterprises in the hospitality value chain. Strengthening these linkages may help ensure that increased hotel occupancy translates into broader and more inclusive economic benefits for the district.

6. RECOMMENDATIONS

Hotel managers in Musanze District should strengthen their marketing efforts by working with tour operators and introducing attractive promotional packages to increase room occupancy. Within 12 months, each hotel should aim to establish partnerships with at least three tour operators and introduce at least two packages that encourage guests to stay longer. Hotels should also build stronger relationships with local farmers, transport providers, and craft producers, with the aim of increasing purchases from local suppliers by 10% within one year. Progress should be reviewed quarterly using records of occupancy rates, average guest stays, revenue, and local procurement.

Musanze District authorities, tourism agencies, hotel managers, and community representatives should work together to expand employment opportunities and support local businesses. Hotels should provide at least two staff training sessions each year and regularly monitor changes in staffing levels, revenue, and occupancy rates. Stakeholders should also meet quarterly to discuss challenges, identify practical solutions, and agree on actions to improve hotel performance and local participation in tourism. These efforts should be guided by clear targets, assigned responsibilities, and regular progress reviews to ensure that increased hotel occupancy contributes to income generation, employment creation, and business growth in the district.

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