

Beyond Wages: Quantifying the Direct and Spillover Impacts of Tourism on Livelihoods in Tsumeb, Namibia

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Abstract

Tourism is a vital economic pillar for Namibia, tasked with driving job creation and poverty alleviation (World Travel & Tourism Council, 2023). This mixed-methods study investigated the contribution of tourism to the economic livelihoods and broader social well-being of community members in the high-poverty Tsumeb Constituency, Oshikoto Region. Using an explanatory sequential design (Quantitative survey, N=300; Qualitative interviews, N=30), a Multiple Regression Analysis found a strong, statistically significant positive relationship between key tourism activities and improved livelihoods. The model demonstrated high explanatory power ($R^2=0.78$, $F(3, 296) = 210.55$, $p < 0.001$). The study found a strong association between tourism and primary employment generation, with 72% of respondents employed in the sector. Critically, beyond the direct economic gains, tourism delivered significant spillover benefits across health, education, and infrastructure (Thomsen *et al.*, 2022). However, qualitative data highlighted severe economic inequity, where large business owners benefit substantially more than low-paid employees, perpetuating wealth disparity. We recommend the Ministry of Environment, Forestry and Tourism (MEFT) shift policy focus from maximizing tourist volume to regulating benefit distribution through a Public Private Partnership (PPP) framework that mandates local SME ownership and management to ensure a more equitable outcome.

Keywords

Livelihoods, Tsumeb, tourism benefits, spill-over effects, economic development

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INTRODUCTION: THE PARADOX OF INEQUALITY

Namibia views tourism as a core sector for realizing its national development goals, aiming for sustained economic growth and employment creation (National Planning Commission, 2023). However, this paper addresses a critical paradox: despite high tourist inflows into the Oshikoto Region (253,921 visitors between 2022 and 2023), the poverty incidence in Tsumeb Constituency remains high. While tourism has recorded significant national revenue, contributing NAD 11.1 million (5.6% of GDP) in 2022, there remains a lack of empirical evidence detailing how these gains "trickle down" to the day-to-day economic livelihoods of local households (Asa *et al.*, 2022). The paper utilizes Livability Theory and Social Exchange Theory (Chen *et al.*, 2020) to provide a comprehensive framework that connects economic benefits (income, jobs) to the enhancement of overall quality of life and social well-being.

This research addresses the paradox of poverty amidst prosperity by testing the following research questions:

RQ1: To what extent do tourism activities (tourist volume, employment, and business income) quantitatively impact the economic livelihoods of residents in Tsumeb?

RQ2: Which demographic categories (age and gender) demonstrate the most significant measurable benefits from tourism employment in Tsumeb?

RQ3: What spillover benefits (unplanned consequences) emerge from tourism development that enhance the overall livability of the Tsumeb community beyond direct income generation?

Literature and Theoretical Foundations

The study is underpinned by Livability Theory and Social Exchange Theory to provide a comprehensive framework that connects economic benefits (income, jobs) to the

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enhancement of overall quality of life and social well-being.

Empirical Review

The empirical literature confirms that tourism is a major driver of economic growth (Meyer & Meyer, 2015). Studies consistently show that the greatest challenge to sustainable tourism lies in the unequal distribution of wealth (Thomsen *et al.*, 2022). Research across Southern Africa validates that positive economic impacts often vary significantly across beneficiary groups, confirming that employees often earn comparatively low wages despite being the backbone of the industry (Jehan *et al.*, 2022; Gnanapala & Sandaruwani, 2016).

Contextualizing Tourism and Livelihoods in Namibia

The dynamics of tourism, livelihood, and equity are fundamentally shaped by Namibia's post-independence development mandate. Namibia views tourism as a core sector for realizing national development goals, particularly sustained economic growth and employment creation (National Planning Commission, 2023).

The Community-Based Tourism and Conservancies Debate

Namibian tourism scholarship is heavily focused on the success and challenges of Community-Based Tourism (CBT), where conservancies grant local communities rights over wildlife and tourism revenue to bridge livelihoods and conservation (Ahebwa *et al.*, 2015). Studies exploring this model have analysed community perspectives on empowerment, particularly within trophy hunting tourism (Thomsen *et al.*, 2022). However, the Tsumeb Constituency presents an important contrast to the conservancy model. Despite experiencing high tourist traffic, Tsumeb and the broader Oshikoto Region face high poverty incidence (National Planning Commission, 2015), highlighting a structural failure in wealth distribution outside the conservancy framework.

The Problem of Equity and Benefit Sharing

The literature consistently highlights that the greatest challenge to sustainable tourism lies in the unequal distribution of wealth (Gumbo, 2022).

Studies across Southern Africa and Namibia confirm that positive economic impacts often vary significantly across beneficiary groups (Asa *et al.*, 2022). This persistent micro-level inequity suggests the failure of tourism to alleviate poverty is a governance and structural problem, rather than an industry viability problem.

Tourism's Indirect Dividend: The Spillover Debate

In line with the principles of Livability Theory, tourism generates critical spillover benefits that enhance the overall quality of life beyond direct wages (Chen *et al.*, 2020). Regional research recognizes these enduring, unplanned dividends:

- **Physical Capital:** Tourism often drives investments in physical infrastructure, such as the construction and paving of roads, which subsequently benefit residents (Gariseb & Mosimane, 2016).
- **Social and Human Capital:** The industry leads to improvements in public service delivery and enhances human capital (language skills, literacy) (Matiku *et al.*, 2020).

By focusing on Tsumeb, this study aims to provide empirical evidence that triangulates these well-known indirect dividends with the quantitative assessment of direct economic drivers and the qualitative documentation of the resulting equity challenge.

METHODOLOGY: RIGOR AND TRIANGULATION

The study adopted a Mixed Methods Research (MMR) approach using an explanatory sequential design (Zvikonyaukwa *et al.*, 2022) to bridge the gap left by mono-method studies.

Ethical Considerations

The study received ethical approval from the University of Namibia's Research Ethics Committee (Reference No: DEC OSH 0143). Participation was entirely voluntary, and all participants provided informed consent prior to both the survey and the interviews. Participants were assured of confidentiality and anonymity; personal identifiers were stripped from the data, and names used in the qualitative quotes were

replaced with pseudonyms to protect participant identity.

Sampling Procedure

The study employed a multi-stage sampling approach. For the Quantitative Phase (Survey, N=300), Systematic Random Sampling was utilized across key residential and business wards in Tsumeb to ensure representativeness and mitigate systematic bias. The sampling frame was derived from a listing of occupied households provided by the Tsumeb Constituency Office. For the Qualitative Phase (Interviews, N=30), Purposive Sampling was used to select key informants (business owners, service staff, tour

guides) who could provide deep, nuanced insights (Gumbo, 2022). This sample size of 30 was deemed sufficient to achieve thematic saturation within the qualitative data.

The quantitative phase questionnaire survey was administered to 300 community respondents (72% return rate). The resulting demographic profile revealed a high participation rate among males (69%) and the age group of 41-45 years (27.1%), reflecting the workforce distribution where men often hold managerial and guiding roles (Table 1). Qualitative data was analysed thematically to gain deeper insight into feelings and perceptions (Matiku *et al.*, 2020).

Table 1: Sampling Flow Chart and Demographic Profile

Step	Detail	Size	Response Rate / Percentage	
Surveyed Sample	Questionnaires successfully returned and used for Multiple Regression Analysis.	n = 300	72%	
Qualitative Sample	In-depth interviews successfully conducted.	n = 30	100%	

Key Demographic Indices of the Final Survey Sample (n=300)

Demographic Index	Largest Category	Percentage	Second Largest Category	Percentage
Gender	Male	69%	Female	31%
Age	41-45 years (Middle-aged adults)	27.1%	18-25 years (Younger adults)	16.1%
Employment Status	Employed in Tourism	72%	Non-employed in Tourism	28%
Qualification	Others / No Qualification	29.6%	Grade 12	28.4%

FINDINGS AND DISCUSSION: THE MEASURABLE IMPACT

Quantifying the Economic Contribution

The Multiple Regression Analysis established a robust and statistically significant positive relationship between tourism activities and improved livelihoods (Meyer & Meyer, 2015). The model exhibited a strong fit, with an R² value of 0.78, indicating that 78% of the variation in local

livelihoods is explained by the model's tourism variables (Number of Tourists, Employment, and Business Owner Income). The model was highly predictive, as confirmed by the ANOVA summary Table 2, {F (3, 296) = 210.55, p < 0.001}. Assumption checks confirmed that the data met the criteria for normality, homoscedasticity, and multicollinearity (Variance Inflation Factor scores below 5.0).

Table 2: Summary of Regression Coefficients

Predictor Variable	Beta Coefficient (β)	Standard Error (SE)	p-value	95% Confidence Interval (CI)
Number of Tourists	{0.45}	{0.07}	<0.001	[0.31, 0.59]
Employment (Service Staff)	{0.30}	{0.06}	<0.001	[0.18, 0.42]



Income for Business Owners	{0.25}	{0.05}	<0.001	[0.15, 0.35]
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Direct Impact: Translating Coefficients into Policy Levers

The regression coefficients reveal the relative influence of each tourism factor on local livelihoods, establishing clear policy priorities:

Number of Tourists

Showing the strongest positive coefficient (beta=0.45) and a tight confidence interval [0.31, 0.59], this suggests that increasing tourist flow is the most direct policy lever for improving general local economic conditions. The high coefficient and precision of the estimate underscore the necessity of targeted international marketing campaigns.

Employment (Service Staff)

The coefficient for Employment was 0.30 (CI [0.18, 0.42]). This quantifies the social multiplier effect, as these are jobs with fewer formal qualifications required, making them an essential economic lifeline for most residents (Jehan *et al.*, 2022).

Income for Business Owners

The coefficient (beta=0.25) is statistically significant (CI [0.15, 0.35]), quantifying the necessary role of profit and private enterprise (Gnanapala & Sandaruwani, 2016). The lower coefficient compared to tourist volume indicates that while business profit is important, driving tourist volume remains the most efficient lever for general livelihood improvement across the community.

The Spillover Effects on Livability

Beyond direct income, the study found that tourism delivered lasting public goods that enhance the overall "Livability" of the community (Ahebwa *et al.*, 2015).

Infrastructure Development (Physical Capital)

Roads were constructed and paved primarily for tourist travel, but these improvements subsequently benefited residents by increasing accessibility to essential services and markets (Gariseb & Mosimane, 2016). A community member (Ms. Shikulo, 43 years old, female)

confirmed this dual benefit: *"Because of tourism, our roads have been well constructed, and we can make use of these roads to reach town easily... these roads were built in order for tourists to access this area and to the good part of it they are not restricted to tourists' use only, we can also make use of them"*. The improved transportation infrastructure made travel to towns and other destinations more efficient, significantly reducing travel time for residents.

Health and Service Access (Physical & Human Capital)

The construction of a clinic and the introduction of ambulance services were directly driven by tourism development, significantly enhancing the quality of life for the local community. As Ms. Jessica Nauyoma, 52 years old, female confirmed the life-saving impact: *"Today, if a person is severely sick, we can just call for an ambulance, which takes less than thirty minutes to reach here and take the person to the hospital within a short time"*. This improvement reduced the time and cost previously associated with travelling long distances for medical attention

Human Capital & Knowledge Transfer

Tourism provided non-formal educational benefits. Fifty-eight percent (58%) of respondents reported an improvement in their literacy and language skills (English and foreign languages), which residents viewed as a positive change enhancing job prospects. Local workers also reported adopting healthier eating habits and better knowledge of nutrition, inspired by the dietary practices of tourists.

The Problem of Inequity: Categories of Beneficiaries

Despite the overall strong, positive measurable impact of tourism, the greatest challenge revealed by the qualitative data is the unequal distribution of wealth (Thomsen *et al.*, 2022).

Financial Disparity (Owners vs. Employees)

Primary Beneficiaries (hotel and restaurant owners) earn substantial profits, while the Least



Advantaged (employees) earn comparatively low wages. The financial disparity was powerfully captured as one *Tate Natangwe Nyangwas*, (59 years, male) narrated: *"There is a very big gap between what we produce in a day and what we get as our take-home pay at the end of the month... you will end up getting paid peanuts"*.

Vulnerability of Small-Scale Entrepreneurs

Small-scale entrepreneurs (e.g., street vendors and artisans) are frequently overshadowed by large, well-established retailers, struggling to compete due to a lack of resources, capital, and marketing. One small business owner (*Me Indileni Mahoto*, 37 years old, female) noted, *"Sometimes our products get spoiled as there are no customers and we do not have refrigerators to keep them fresh all the time, this leads to a big loss"*. This dynamic highlight that while tourism is a strong economic driver, its structure needs deliberate policy intervention to shift from *wealth concentration* to *equitable distribution*.

Limitations

This study, while providing rigorous empirical evidence, is subject to several limitations that affect the interpretation and generalizability of the findings. First, the research employed a cross-sectional design, which allows us to confirm strong correlational relationships between tourism variables and livelihoods, but it does not prove causation. Second, the qualitative phase utilized convenience sampling to access some key informants, which may limit the generalizability of the qualitative perceptions regarding equity. Third, the self-reported nature of livelihood improvement may be subject to social desirability bias. Finally, while the regression model was strong, future studies should incorporate a wider range of control variables to isolate the specific impact of tourism further.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The Tsumeb case study establishes tourism as a dominant, measurable driver of local livelihood improvement, providing a direct counter-narrative to those who focus only on macro-level

national figures (Matiku *et al.*, 2020). The high R^2 value (0.78) confirms tourism's quantitative power, and the enduring spillover dividends enhance the overall livability of the community. The positive impacts measured in this study were found to outweigh the negative ones reported by respondents. However, the central lesson is the persistence of poverty amidst tourism prosperity, a paradox directly associated with structural inequality and the concentration of wealth at the top (National Planning Commission, 2015). The unequal distribution of generated wealth is the single greatest obstacle to achieving the national development goals of poverty reduction.

Policy Recommendations (The Mandate)

The paper provides a direct mandate for a policy shift, moving beyond just increasing tourist numbers:

- **For MEFT and the NTB (National Level):** The policy focus must shift from maximizing tourist volume to regulating benefit distribution. The highest priority must be implementing a Public Private Partnership (PPP) framework that grants local SMEs (individuals and communities) a true mandate and hand-on experience in managing tourist attraction sites. This converts passive employment into active ownership.
- **For Oshikoto and Local Authorities (Regional Level):** Local governance must use tourism revenue streams to solve the structural problems of the working poor. This includes regulating fair wage practices and actively supporting vulnerable small-scale entrepreneurs who face intense competition.
- **Contribution to Global Knowledge:** The research provides an original contribution by demonstrating that the failure of tourism to alleviate poverty is strongly associated with a micro-level governance and equity problem, suggesting the challenge is primarily structural.

Acknowledgments

The authors wish to express their profound gratitude for the support received during this research. Institutional support was provided by

the University of Namibia (UNAM), which facilitated the necessary fieldwork logistics and ethical clearance. We thank the Tsumeb Constituency Office for their invaluable cooperation, particularly in providing the sampling frame essential for executing the systematic random sampling. We also extend our gratitude to the local leaders and key informants in Tsumeb who dedicated their time and local expertise to the in-depth interviews. Above all, the authors are indebted to the residents, employees, and business owners of Tsumeb Constituency who willingly participated in the surveys and interviews, sharing their valuable experiences on tourism's impact on their livelihoods. Their participation forms the foundation of this study.

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Conflict of Interest: No Conflict of Interest

Source of Funding: Author(s) Funded the Research

How to Cite: Ng'haamwa, T. V. T., & Nyankweli, E. M. (2025). Beyond Wages: Quantifying the Direct and Spillover Impacts of Tourism on Livelihoods in Tsumeb, Namibia. *Humanities and Society Review*, 1(4), 1-6.