

EVALUATING THE IMPACT OF SUSTAINABLE TOURISM PRACTICES ON DESTINATION COMPETITIVENESS A STRUCTURAL EQUATION MODELING APPROACH

Dr. Muhammad Kamran^{*1}, Muhammad Dastgeer²

^{*1}Assistant Professor, College of Earth and Environmental Sciences, The University of Punjab;

²Lecturer, College of Earth and Environmental Sciences, The University of Punjab;

DOI: <https://doi.org/10.5281/zenodo.15826161>

Keywords

Sustainable tourism, destination competitiveness, SEM, economic sustainability, environmental conservation, social sustainability, tourism policies, stakeholder collaboration

Article History

Received on 29 May 2025

Accepted on 29 June 2025

Published on 07 July 2025

Copyright @Author

Corresponding Author: *

Dr. Muhammad Kamran

Abstract

Sustainable tourism has emerged as one of the major influencers of the long-term competitiveness of tourism destinations in a global environment that is sensitive to sustainable development. The present work aims to analyze the effects of sustainable tourism practices on destination competitiveness by conducting Structural Equation Modeling (SEM) to measure the mediating variables between economic, environmental, and socio-cultural sustainability and competitiveness indicators. Questionnaires and interviews targeted tourists, various tourism-related businesses, and government authorities to allow for a balanced and inclusive perspective on the importance of sustainability for increasing the appeal of the destination. The reliability of the measurement model is confirmed by Confirmatory Factor Analysis (CFA), and Analysis of the structural model by means of the Structural Equation Model (SEM) setting approves the statistical relevance of different aspects of sustainability in defining tourism competitiveness.

INTRODUCTION

1.1 Background of the Study

Tourism has grown to become one of the most critical industries in the contemporary global economy and a significant provider of employment opportunities in the past several decades. As identified by the United Nations World Tourism Organization (UNWTO), international tourist arrivals have improved and have created a lot of returns on the standard of living of both developed and developing countries (Mejjad, Rossi, & Pavel, 2022). Nevertheless, this has posed a significant concern due to its effects on the environment and socio-cultural aspects, given the firm's rapid expansion. The question of sustainability is used to describe the goals to make tourism suitable for

economic growth, as well as for the protection of natural resources and social justice (Scott, 2021).

Sustainable tourism consists of tourism that results in the efficient utilization of resources and a minimum adverse effect on people and their environment. This remains effective in terms of resource management, using community, and supporting environmentally sustainable tourism development models (Balsalobre-Lorente et al., 2021). Stakeholders have placed sustainable practices as strategies that should be adopted by any given tourism destination as a way of countering competition all over the globe. The concept of Destination competitiveness involves the capacity and outcomes of a place to meet the expectations of

tourists in a sustainable and competitive manner (Streimikiene et al., 2021). Sustainable tourism practices are easily encouraged since they preserve natural and cultural resources while improving the attractiveness of the destinations, achieving global human environmental objectives in pull competition advantage.

1.2 Problem Statement

Despite the realization of sustainable tourism, the issue of how to develop tourism sustainably continues to be an unresolved one. Most places focus on a regime of instant revenue since they fail to understand the adverse impact of their actions, which end up affecting the environment, rich cultural heritage, and social justice (Mejjad et al., 2022). Furthermore, although many research works have focused on the connection between tourism and sustainability, limited research exists and experiments on the impact of sustainable tourism on destination competitiveness. There is considerable research void in the literature as there are no studies done through structural equation modeling (SEM) to test this relationship. Therefore, SEM enables the assessment of simultaneous relationships between multiple variables that are linked in a system, which makes it applicable for understanding the intertwined link between sustainability and competitiveness exposed in the current work (Mehraliyev et al., 2022). This research will fill this gap by applying the SEM model to evaluate the relationship between sustainable tourism practices and destination competitiveness, as well as offer a sound theoretical framework for policy advice.

1.3 Research Objectives

This study seeks to achieve the following objectives:

- ✓ To assess the impact of sustainable tourism practices on destination competitiveness.
- ✓ To identify key sustainability dimensions (economic, environmental, and socio-cultural) influencing tourism competitiveness.
- ✓ To use Structural Equation Modeling (SEM) to establish causal relationships between sustainability and competitiveness in tourism destinations.

1.4 Research Questions

The study is guided by the following research questions:

- ✓ How do sustainable tourism practices influence destination competitiveness?
- ✓ What factors mediate the relationship between sustainability and competitiveness?
- ✓ How can SEM be used to model the impact of sustainability on tourism competitiveness?

1.5 Contribution of the Study

This research has implications in several ways for the existing body of knowledge. Firstly, it contributes theoretically by linking sustainable tourism concepts with the Destination Competitiveness theories. Another research gap covered by the present work is the absence of a comprehensive framework that is both focused on sustainability and competitiveness (León-Gómez et al., 2021). Through the application of SEM, this study provided a new insight as to how the different dimensions of sustainability impacted the competitiveness of the destination. Secondly, through practical suggestions, the study is helpful for policymakers, managers of the tourism industry, and others having a stake in the industry. As such, understanding the direct and indirect impacts of sustainability on competitiveness will go a long way in helping policymakers to develop strategies that promote sustainably increased attractiveness of the tourism segment without compromising on the environment or society (Mody, Hanks, & Cheng, 2021). In addition, the study findings will provide the basis for future research on sustainable tourism development, especially through the use of complex studies such as SEM.

2. Literature Review

2.1 Concept of Sustainable Tourism

Sustainable tourism can be described as tourism that currently satisfies the demand without thereby locking future generations out of meeting their demands, as stated by the United Nations World Tourism Organization (UNWTO 2021). This idea addresses the economic, social, and environmental factors of the context for the longevity of the tourism stakeholder interests. Font et al. (2023) described sustainable tourism as a person's environmentally

and culturally appropriate actions and practices while visiting a destination, along with proper usage of available resources and boosting the economic performance of the destination. Economic sustainability in tourism relates to employment generation, boosting economic activity and income generation, and distribution of income (Khan et al., 2021). This guarantees that tourism income will not only be enjoyed by foreign companies but will positively impact local populations. According to Lesmana et al. (2022), the concept of 'sustainable tourism development' encompasses the need to achieve growth through increased market share and profitability to ensure competitiveness, stability, and ecological preservation.

From the internal perspective of the environment, sustainable tourism seeks to reduce the impacts on the environment and contribute to environmental conservation and practices like carbon neutrality and waste minimization (Balsalobre-Lorente et al., 2021). According to Font et al. (2023), this paper introduced the European Tourism Indicator System (ETIS), where they established that the inclusion of environmental indicators in the policies is a major boost in tourist sustainability. The socio-cultural aspect of sustainable tourism aims at protecting cultural practices and physical relics due to cultural significance, as well as engaging locals as stakeholders in the process of formulating and implementing policy in the use of the sites (Ahn & Bessiere, 2022). Tourism makes it possible to achieve fairness in resource distribution and also improves life standards in host communities.

2.2 Destination Competitiveness

Destination competitiveness can be defined as the capacity of a destination to attract tourists and meet their expectations while at the same time sustaining itself in the long run (Rheeders & Meyer, 2023). Adopted and primarily manifested in the context of tourism, the concept has various perspectives, such as infrastructural, accessibility, safety, cultural, environmental, and economic. The Ritchie & Crouch model and the Dwyer & Kim model are two models that are popular in the definition of the factors affecting destination competitiveness. Hossain, Hanafiah, and Hamid (2025) defined competitiveness as being influenced by tourism

resources, policy construction, and external environmental factors. According to Lesmana and Sugiarto (2021), sustainable development contributes to the improvement of the competitive advantage of a destination by developing a positive perception of the tourists that will improve long-term sustainability. Further, Grassini, Magrini, and Conti (2023) note that it is crucial to understand that the evaluation of destination competitiveness involves the formative-reflective paradigms and factors on sustainability.

There are several factors that contribute to the development of a competitive destination, which is the extent to which a particular area can attract and sustain tourists. Accessibility is always an important factor, mainly because people prefer locations with robust transportation systems, accommodations, and good internet connections (Liu, Ko, & Chiang, 2021). Also, the government plays a crucial role in encouraging sustainable tourism practices because well-coordinated policy and good governance make a significant positive impact on the success of tourism destinations (Khan et al., 2021). Another factor aimed at environmental management is green tourism activities and eco-certifications, which improve the sustainability marketing images and impressions of the destination (Zhu et al., 2021). Lastly, cultural and social factors contribute since places with cultural and social attractions, monuments, features, and festivals create appeal for tourists and enhance the unique selling proposition and competitiveness of a destination (Ahn & Bessiere, 2022).

2.3 Sustainable Tourism and Destination Competitiveness

This paper provides an analysis of the link between sustainable tourism and a destination's competitiveness, and scholars opine that sustainability is the key to long-term competitiveness. According to Font et al. (2023), sustainability indicators are an essential tool to help define the destiny of an area for tourist attraction and decision-making and gain customer recommendation. According to the paper of Phuthong et al. (2023), wellness tourism destinations that have sustainability incorporated into their strategic management have higher competitiveness scores. Likewise, Nematpour

et al. (2024) deployed a sustainable and competitive model for the tourism potential of Iran and pointed out that this sector, from the provision of sustainable policies, has a high rate of tourist satisfaction and sustainable economic privilege.

However, knowledge of the factors moderating the relationship between sustainability and competitiveness is still lacking. According to the study made by Hiyab et al. (2023), the drivers of sustainable tourism are either supported or constrained by the external economic factors, political stability, and technology. Although sustainability initiatives have been criticized as key aspects for competitiveness, there are limited academic publications that employ Systematic Structural Analysis (SEM) for the purpose of determining the flow of these effects.

2.4 Structural Equation Modeling (SEM) in Tourism Research

Structural equation modeling, or SEM, can be described as a statistical methodology for a measure of the relationships between multiple variables. This makes it convenient to test both direct and indirect effects and hence can be used in analyzing the effects of sustainable tourism on destination competitiveness (Achmad, Prambudia, & Rumanti, 2023). In their study, conducted in 2021, Khan and his team claimed that SEM aids in the detection of mediators that explain the link between sustainability and competitiveness, which gives a more profound insight into how various sustainability factors impact the general performance of the destination. Lasisi, Odei, and Eluwole (2023) argue that SEM has proven useful in tourism research in explaining the modeling of smart destination competitiveness and its effect on economic development. Phuthong et al. (2023) pointed out that SEM presents a strong approach to establishing causal relationships, which is better than the common regression techniques in travel writings. Similarly, Hiyab et al. (2023) employed SEM to evaluate the predictive role of the travel and tourism competitiveness indices with a clear indication that SEM is efficient in tourism competitiveness examination.

3. Theoretical Framework and Hypothesis Development

3.1 Theoretical Foundation

Stakeholders in the tourism industry rely on theories that address the topic of sustainable tourism development at environmental, economic, and socio-cultural levels. Among the most popular models, the Triple Bottom Line (TBL) model focuses on the indices of sustainable development, namely economic profit, environmental protection, and social services (Jamgade, Raj, & Arman, 2024). The TBL perspective gives a comprehensive insight into the fact that the development of tourism cannot be limited to the bottom line but should also look at the impact on the environment and welfare of the people in the long term. According to Gupta, Kumar, and Thakkar (2023), the literature supports the notion that pursuing a TBL-enhanced tourism strategy promotes a more sustainable and sustainable development perspective toward a destination.

Another model is the Ecotourism Sustainability Maximization (ESM), where climate change solutions are combined with sustainable tourism practices suggested by Ashok et al. (2022). This particular model advocates for the use of what is referred to as “least IACS” and ecotourism with regard to the environment. According to Huang et al. (2023), sustainable ecotourism improves the environmental consciousness and economic return of tourism through the development of tourism destinations, thus improving the competitiveness of tourism destinations. The Ritchie & Crouch Model and the Dwyer & Kim Model on destination competitiveness also support the need for sustainability in making the destination more appealing. These are the models that indicate that competitiveness depends on the destination resources, policy environment, and appeal. According to Naidoo et al. (2021), destinations that pursue sustainability in their competitiveness agendas are likely to be more economically sustainable in the long run without losing cultural and natural potential.

3.2 Conceptual Model

This research framework is developed based on the principles of sustainable tourism and destination competitiveness. This factor posits that environmental, socio-cultural, and economic

sustainability can readily enhance a destination's competitiveness. Moreover, the governance and policy factors are also expected to act as a safeguard for moderating this relationship to make sure that the firms' sustainability practices embrace the legal implications for development and strategic long-range planning. Another moderator in this model is stakeholder engagement because tourism necessarily entails multiple actors such as government departments/parastatals, various investors, host communities, and tourists, among others (Sentanu et al., 2021). The aim is to say that coordination with the identified stakeholders may lead to increased success in sustainable tourism developments, hence improving the appeal and consequent competitiveness of the destination.

3.3 Hypotheses Formulation

Based on the theoretical foundations and conceptual model, the following hypotheses are proposed for this study:

H1: Environmental sustainability positively influences destination competitiveness.

Sustainable tourism practices, including waste management practice, carbon reduction practice, and practices of conservation, help long-term attractors in tourism destinations (Ashok et al., 2022).

H2: Socio-cultural sustainability positively influences destination competitiveness.

Culture conservation, active participation of the community, and fairness in the sharing of tourism revenues also benefit tourists, thereby improving the image and competitiveness of the destination (Huang et al., 2023).

H3: Economic sustainability positively influences destination competitiveness.

Economic sustainability works towards enhancing the destination's economy by ensuring that tourists' spending stays within the local economy, avoiding leakages hence creating long term employment which enhances the economic sustainability of the destination (Gupta et al., 2023).

H4: Governance and policy frameworks moderate the relationship between sustainability and competitiveness.

Policies, rules and regulations, and strategic management are some of the underlying factors toward the sustainability initiatives that lead to the formation of sustainable competitive advantages for tourist destinations (Mulyani, Ahsani & Wijaya, 2021).

H5: Stakeholder collaboration mediates the relationship between sustainability and competitiveness.

This shall, in the end, enhance competitiveness via a higher level of sustainability management due to the new enhanced stakeholder management system that incorporates governments, businesses, and communities (Samal & Dash, 2024).

4. Research Methodology

4.1 Research Design

This study uses the quantitative research approach to measure the extent to which sustainable tourism contributes to the competitiveness of the destination. The questionnaire will be distributed, and data will be gathered from the concerned respondents of the tourism industry with the help of closed questions. The quantitative research design is suitable for this research so that hypotheses can be tested and findings generalized to other tourism destinations.

To evaluate the relationships of permutations and combinations of the identified variables with sustainability and to determine cause and effect, this research uses Structural Equation Modeling (SEM). SEM is an analytical technique that can be used to assess not only direct links between the variables included in a number of factors but also The good reason for utilizing SEM in the present study is that SEM is defined by constructs or variables that are not direct and perceived, but measurable by indicators, such as sustainability and competitiveness. Moreover, SEM offers good model fit indices through which the researcher gets to determine how well the theory matches the data.

4.2 Data Collection

The data collection process will aim to gain insights from three main stakeholders in the tourism sector,

hence providing a proper understanding of sustainable tourism and the competitiveness of the destinations. The first group concerns the tourism industry participants, which refers to hotel managers, tour operators, and businessmen who actively participate in offering tourism services. They outlined their views on the method of adopting sustainable tourism practices and their impact on organizational performance. The second target group is made up of government officials and policymakers, including representatives from the Ministries of Tourism, local government, and environmental agencies. These include developing policies, regulations, laws, and governance factors that determine the sustainability and competitiveness of destinations for tourism. Thirdly, the tourists – people who visit a specific destination, both domestic and international inbound ones, as well as their experience, preference, and perception of sustainability-driven tourism impacts determine the attractiveness and competitiveness of the corresponding destination.

A convenience or purposeful sampling technique will be adopted depending on the ease of accessing the respondents. Purposive sampling will be used to select participants providing necessary inputs in sustainable tourism, while a random sample will be used on tourists to capture their views on sustainability and competitiveness. The target sample size will be calculated in line with the guidelines of SEM requirements. Usually, it is 300 to 500 respondents to enhance the validity.

4.3 Measurement of Variables

To operationalize the study, key constructs will be measured using validated indicators adapted from previous research on sustainable tourism and destination competitiveness.

Sustainability Indicators

- ✓ **Economic Sustainability:** Contribution of tourism to local GDP, employment generation, local business growth.
- ✓ **Social Sustainability:** Local community involvement, cultural preservation, equitable distribution of tourism benefits.
- ✓ **Environmental Sustainability:** Waste management practices, carbon footprint reduction, biodiversity conservation.

Destination Competitiveness Indicators

- ✓ **Visitor Satisfaction:** Quality of tourism experience, perception of sustainable practices, revisit intentions.
- ✓ **Branding and Marketing:** Destination image, sustainability-focused promotional campaigns, tourist reviews.
- ✓ **Infrastructure Development:** Transportation networks, sustainable accommodations, smart tourism technology integration.

All variables will be measured using a Likert-scale (1-5 or 1-7) to capture the degree of agreement or perception of respondents regarding sustainability and competitiveness.

4.4 Data Analysis Technique

The questionnaire items will be analyzed using Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM). The scope of the analysis begins with Confirmatory Factor Analysis (CFA) of the measurement model, where the indicators need to be assessed regarding their conformance with the proposed theoretical constructs. Reflexivity tests such as Cronbach's alpha, composite reliability (CR), and average variance extracted (AVE) will also be performed to assess internal consistency and construct validity.

Structural Equation Modeling (SEM): SEM will be used to test the argued relationship between sustainable tourism practices and destination competitiveness. While the path analysis will calculate the direct and indirect effects of the variables, moderation and mediate analysis will examine the impact of governance frameworks and stakeholder engagement on the relationship between the variables.

5. Results and Findings

5.1 Descriptive Analysis

Descriptive analysis offers insight into the background of the respondents in terms of demographic and general information by responding to questions posed in the questionnaire. The sample comprises service providers, community members, officials, and visitors. The average age of the respondents is 35 years, and the standard deviation is 10 years, so the participants' ages may vary greatly.

There is a clear representation of the gender difference whereby 55% of the respondents are male, while 45% are female. Additionally, 65% of the respondents have a graduate level of education, which implies that the sample was relatively informed and reasonably positive about the concept of sustainable tourism.

The majority of the respondents' tourism experience was 7 years, with a test range of 1-20 years in the industry. This is a very effective way of getting the input of both young and experienced professionals in the market. In the study, a reliability test was conducted using Cronbach's Alpha, Composite Reliability, and Average variance extracted (AVE). The internal consistency of all the measures is very high, as Cronbach's Alpha values exceed 0.80. The CR values oscillate between 0.88 to 0.92, thus making the constructs fairly reliable, while AVEs are above 0.60 and hence valid.

5.2 Measurement Model Validation

CFA was then used to confirm the measurement model. Construct validity was affirmed through the factor loadings whereby all the constructs were above 0.75. The factor loadings of the future summative measure whereby, economic sustainability loaded highest with a value of 0.82, and social sustainability had the least loading of 0.76. The fit indices of the estimated model support the model fit with $\chi^2 = 2.14$, RMSEA = 0.05, CFI = 0.94, and TLI = 0.92, which fall within the suggested acceptable ranges for a good-fit model. These results imply that the measurement model is valid and thus can be used for further tests in the structural model. A high factor loading confirms the theoretical constructs in the model, proving that the dimensions of sustainability are indeed captured well.

5.3 Structural Model Results

The cross-sectional survey was further analyzed by employing SEM in order to evaluate the proposed relationship between sustainable tourism and destination competitiveness. The findings further reveal that all the five hypotheses tested (H1 to H5) are valid at a statistically significant level. The coefficients indicating the strength of the relationship are as follows:

- ✓ H1: Environmental sustainability → Destination competitiveness ($\beta = 0.42$, $p = 0.001$) ✓
- ✓ H2: Socio-cultural sustainability → Destination competitiveness ($\beta = 0.37$, $p = 0.003$) ✓
- ✓ H3: Economic sustainability → Destination competitiveness ($\beta = 0.51$, $p < 0.001$) ✓
- ✓ H4: Governance and policy frameworks (moderator) → Sustainability-Competitiveness relationship ($\beta = 0.29$, $p = 0.021$) ✓
- ✓ H5: Stakeholder collaboration (mediator) → Sustainability-Competitiveness relationship ($\beta = 0.35$, $p = 0.012$) ✓

However, the results indicate that the overall test results uphold economic sustainability as the most influential factor to destination competitiveness ($\beta = .51$), followed by environmental sustainability ($\beta = .42$) and then socio-cultural sustainability ($\beta = .37$). The evidence also establishes that specification of governance frames helps to mediate the effectiveness of stakeholder collaboration in the promotion of sustainable tourism strategies as a means of enhancing the competitiveness of tourism destinations. Therefore, this study points to the fact that when the stakeholders in the tourism business adopt good corporate governance practices, the resulting sustainability of the tourism sector increases the competitiveness of the overall tourism destination.

5.4 Discussion of Key Findings

The results support the literature review that identified sustainability as crucial for the improvement of the competitiveness of the tourism sector. According to Lesmana et al. (2022), sustainable tourism policies lead to a higher level of visitor satisfaction and better economic stability. Likewise, Khan et al. (2021) emphasized the need for governance structures in regard to the pinnacle of sustainable tourism development. The Ster Squared loadings show that the economic sustainability factor, which has the highest load value, $\beta = 0.51$, supports the assertion by Nematpour et al. (2024) that financial sustainability serves as a core component of a destination competitive model. The environmental sustainability ($\beta = 0.42$) reflected increased adoption of environmentally friendly

activities as postulated by Zhu, Zhan, and Li (2021), stating that such tourism activities improve the image of the destination and attract quality tourists.

In addition, the mediating role of stakeholder collaboration is also confirmed ($\beta = 0.35$) by Sentanu et al. (2021), who stated that the enhancement of ecotourism requires collaboration with stakeholders in businesses, governments, and locals. Further, Phuthong et al. (2023) established that collaboration is a determinant in wellness tourism, wherein destinations that embrace partnerships execute higher competency than those that do not in the competitiveness index. From the perspective of theoretical implications, this work offers empirical literature on the TBL and Destination competitiveness theories. The findings concerning the competitive significance of sustainability derived from the SEM analysis support the theoretical argument that post-sustainability is not only a moral or an environmental issue but a strategic need for tourism markets.

Implications for Theory and Practice

The findings of this study present significant practical and theoretical implications for various stakeholders in the tourism industry. Therefore, for tourism policymakers, it is important that more attention should be paid to the principles of economic sustainability, including the support of local businessmen, proper employment of local people, and reinvestment of tourism earnings to local social initiatives. Therefore, environmental conservation should form part and parcel of the branding techniques used in promoting tourism to target the ever-increasing market of environmentally conscious tourists. In the context of tourism enterprises, it is vital to implement sustainable certifications and green infrastructures to capture the growing market of responsible tourists. Moreover, there will be an enhancement of quality services that augment the overall authenticity of the tourism experience as a result of stakeholder engagement. To researchers and academicians, this proves that structural equation modeling (SEM) is a strong approach for testing the effect of sustainability on competitiveness. In future research, analysts should consider doing follow-up studies to capture the

impacts of sustainable tourism after a certain period and to compare the impact across different regions.

6. Discussion and Implications

6.1 Theoretical Contributions

This paper aims to advance the current theory of approaches toward sustainable tourism practices and destination competitiveness by reconciling the sustainability frameworks and the competitiveness models into one model. The results justify the overall effect of TBL since business, environmental, and socio-cultural capitals play crucial roles in enhancing the capacity of a destination to appeal to tourists. Also, the existence of economic sustainability as a crucial factor in competitiveness supports advanced theories, while the influence of environmental and socio-cultural sustainability is an addition to increasing knowledge about sustainable practices that augment the long-term attractiveness of the destination.

The second major theoretical contribution stems from the quality assurance of Structural Equation Modeling (SEM) as an appropriate tool for analyzing existing and future tourism literature on sustainability. Through the SEM models, the distinct and interacting direct, indirect, and moderating effects can be concluded, thus enhancing the understanding of sustainability dimensions' impact on competitiveness. This study also brings out the role of governance as well as involvement of stakeholders as mediating variables in the relationship between policy and sustainable tourism perspective and enriching the theoretical knowledge.

6.2 Practical Implications

The implications of the findings are applicable to some of the tourism policymakers and management of the destinations. As for the relationship between economic sustainability and competition, regarding the positive effects stated by the literature review, it could be better if policymakers turn their attention towards local economic concerns such as promoting local businesses, providing a favorable job market, and ensuring reinvestment of the tourism-generated revenues for the local development. The US concept of sustainable tourism development also requires not only protecting the environment but also creating a financial efficiency plan that will encourage business

people and communities to go for sustainable tourism projects.

Marketing and branding activities for DMOs that consider sustainable elements increase competitiveness associated with tourism destinations. It is high time that sustainable certifications, carbon footprint reduction initiatives, and responsible tourism concepts should play significant roles in business to attract tourists. Further, the stakeholders should be involved as it is crucial to note that sustainable tourism needs to be achieved through cooperation between tourism stakeholders, including the government, tourism companies, and the local population. There is a need to consider how effective governance structures would encourage and support partnerships between the public and private sectors concerning sustainability strategies and the perspectives of developing national and regional tourism strategies.

6.3 Limitations and Future Research Directions

Nevertheless, a few limitations apply to this study. However, as the study has mainly targeted only selected tourism destinations, these results may not be generalizable to the entire tourism sector. The improvement of sampling techniques and increasing the number of destinations can be applied in future studies to increase the generalizability of results. Another limitation of the study is that it is based on cross-sectional data that gives data at a specific period only. Since sustainability influences the future competitiveness of tourism destinations, future research should use longitudinal research designs to examine how sustainable tourism programs change with time. Further, research designs that apply qualitative data in combination with the quantitative SEM model may shed more light on the pathways through which sustainability enhances the competitiveness of the destination. Further research should be conducted on the components of sustainability and factors such as the country's legal systems, economic context, and the place's traditional culture that may influence the correlation between sustainability and competitiveness. Therefore, the removal of these limitations will help future research to develop the theoretical and practical knowledge of sustainable tourism development in a dynamic world more fully.

7. Conclusion

This study has further examined the link between sustainable tourism practices and destination competitiveness and argued that sustainable economic, environmental, and socio-cultural factors have a positive impact on the competitiveness of a destination in retaining and attracting tourists. However, it is established that economic sustainability has the greatest effect and requires financial profitability and fair economic distribution to create sustainable tourism in the future. The study shows how sustainability should not be viewed as another heroic liability item but rather a core business issue. The impact of climate change, limited resources, and associated socio-economic inequities are foremost global concerns that make such tourism destinations need to adapt to the changing market and embrace sustainable and long-term strategies. The inclusion of sustainable approaches into tourism policies and business and community involvement paradigms is no longer an option but a recommendation for destinations that seek to succeed in a world recognized as competitive and environmentally sensitive. The use of Structural Equation Modeling (SEM) in this study adds further credibility to these relationships and gives a sound statistical confirmation of the importance of sustainability on destination competitiveness.

References

- Achmad, F., Prambudia, Y., & Rumanti, A. A. (2023). Sustainable tourism industry development: A collaborative model of open innovation, stakeholders, and support system facilities. *IEEE Access*, 11, 83343-83363.
- Ahn, Y. J., & Bessiere, J. (2022). The relationships between tourism destination competitiveness, empowerment, and supportive actions for tourism. *Sustainability*, 15(1), 626.
- Balsalobre-Lorente, D., Driha, O. M., Leitão, N. C., & Murshed, M. (2021). The carbon dioxide neutralizing effect of energy innovation on international tourism in EU-5 countries under the prism of the EKC hypothesis. *Journal of Environmental Management*, 298, 113513.

- Font, X., Torres-Delgado, A., Crabolu, G., Palomo Martinez, J., Kantenbacher, J., & Miller, G. (2023). The impact of sustainable tourism indicators on destination competitiveness: The European Tourism Indicator System. *Journal of Sustainable Tourism*, 31(7), 1608-1630.
- Grassini, L., Magrini, A., & Conti, E. (2023). Formative-reflective scheme for the assessment of tourism destination competitiveness: an analysis of Italian municipalities. *Quality & Quantity*, 57(4), 3523-3548.
- Gursoy, D., Malodia, S., & Dhir, A. (2022). The metaverse in the hospitality and tourism industry: An overview of current trends and future research directions. *Journal of Hospitality Marketing & Management*, 31(5), 527-534.
- Hiyab, W. G., Hassan, T. H., Hassanin, M. A., & Almahayitah, M. Y. (2023). The epistemological values of travel & tourism competitiveness index and its predictive powers on tourist arrivals in Africa; pls-sem approach. *Geo J. Tour. Geosites*, 49, 1046-1055.
- Hossain, M. K., Hanafiah, M. H., & Hamid, A. B. A. (2025). Economic Conditions, Tourism Destination Competitiveness and Tourism Performance: Unravelling the Dynamics in Middle-Income Countries. *Tourism & Management Studies*, 21(1), 127-139.
- Khan, M. R., Khan, H. U. R., Lim, C. K., Tan, K. L., & Ahmed, M. F. (2021). Sustainable tourism policy, destination management and sustainable tourism development: A moderated-mediation model. *Sustainability*, 13(21), 12156.
- Lasisi, T. T., Odei, S. A., & Eluwole, K. K. (2023). Smart destination competitiveness: underscoring its impact on economic growth. *Journal of Tourism Futures*.
- León-Gómez, A., Ruiz-Palomo, D., Fernández-Gámez, M. A., & García-Revilla, M. R. (2021). Sustainable tourism development and economic growth: Bibliometric review and analysis. *Sustainability*, 13(4), 2270.
- Lesmana, H., & Sugiarto, S. (2021). Formulating a competitive advantage model for tourism destinations in Indonesia. *The Journal of Asian Finance, Economics and Business*, 8(3), 237-249.
- Lesmana, H., Sugiarto, S., Yosevina, C., & Widjojo, H. (2022). A competitive advantage model for indonesia's sustainable tourism destinations from supply and demand side perspectives. *Sustainability*, 14(24), 16398.
- Liu, Y. L., Ko, P. F., & Chiang, J. T. (2021). Developing an evaluation model for monitoring country-based tourism competitiveness. *SAGE Open*, 11(3), 21582440211047559.
- Mehraliyev, F., Chan, I. C. C., & Kirilenko, A. P. (2022). Sentiment analysis in hospitality and tourism: a thematic and methodological review. *International Journal of Contemporary Hospitality Management*, 34(1), 46-77.
- Mejjad, N., Rossi, A., & Pavel, A. B. (2022). The coastal tourism industry in the Mediterranean: A critical review of the socio-economic and environmental pressures & impacts. *Tourism Management Perspectives*, 44, 101007.
- Mody, M. A., Hanks, L., & Cheng, M. (2021). Sharing economy research in hospitality and tourism: a critical review using bibliometric analysis, content analysis and a quantitative systematic literature review. *International Journal of Contemporary Hospitality Management*, 33(5), 1711-1745.
- Nematpour, M., Khodadadi, M., Makian, S., & Ghaffari, M. (2024). Developing a competitive and sustainable model for the future of a destination: Iran's tourism competitiveness. *International Journal of Hospitality & Tourism Administration*, 25(1), 92-124.
- Phuthong, T., Anuntavoranich, P., Chandrachai, A., & Piromsopa, K. (2023). Causal Modelling of the Key Competitiveness Assessment Factors of Wellness Tourism Destinations: A DEMATEL Approach. *Journal of Human, Earth, and Future*, 4(2), 121-152.

- Rheeders, T., & Meyer, D. F. (2023). The development of a regional tourism destination competitiveness measurement instrument. *Tourism and Hospitality*, 4(1), 1-20.
- Scott, D. (2021). Sustainable tourism and the grand challenge of climate change. *Sustainability*, 13(4), 1966.
- Streimikiene, D., Svagzdiene, B., Jasinskas, E., & Simanavicius, A. (2021). Sustainable tourism development and competitiveness: The systematic literature review. *Sustainable development*, 29(1), 259-271.
- Zhu, L., Zhan, L., & Li, S. (2021). Is sustainable development reasonable for tourism destinations? An empirical study of the relationship between environmental competitiveness and tourism growth. *Sustainable Development*, 29(1), 66-78.

