

Sustainable Business Models in Heritage Tourism: A Comparative Study of St Andrews, Scotland and Jaipur, India

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Abstract

Heritage tourism plays a vital role in the preservation of culture and local economic development worldwide. However, as the number of tourists rises, maintaining a balance between economic growth, community well-being, and environmental integrity becomes more complex. This paper compares two culturally rich but socioeconomically distinct cities—St Andrews in Scotland and Jaipur in India—to explore how sustainable business models (SBMs) are implemented in heritage tourism. Drawing on published research, secondary data, and expert interviews, the paper highlights the successes and ongoing challenges in each location. St Andrews emerges as a case of strategic academic collaboration, community empowerment, and environmental foresight. Jaipur, while rich in cultural capital, faces unique issues stemming from its large informal tourism sector and urban pressures. This study offers recommendations focused on improving governance, encouraging innovation through academic partnerships, expanding community involvement, and adopting sustainable certifications. The findings contribute to policy discussions and suggest context-sensitive practices that can make heritage tourism more inclusive, resilient, and sustainable.

1. Introduction

Heritage tourism has become one of the most prominent sectors in global travel, celebrated for its ability to connect visitors with a region's history, art, and identity. Whether through exploring castles, attending traditional festivals, or walking through ancient towns, heritage tourism allows travellers to engage with culture in meaningful ways (Timothy & Boyd, 2015). Yet, the same tourism that promotes cultural understanding can also pose threats to the very heritage it aims to showcase—especially when development is driven purely by commercial motives, with little attention to environmental or community impacts (UNWTO, 2018).

This paper explores how **Sustainable Business Models (SBMs)** are being developed and applied in two distinctive heritage tourism settings: **St Andrews, Scotland** and **Jaipur, India**. These two cities differ in size, governance, socio-economic complexity, and institutional support, making them suitable for a comparative analysis.

The research focuses on four central themes:

- How sustainability principles are integrated into business practices within heritage tourism.
- The role of academic institutions, particularly the **University of St Andrews**, in shaping tourism policy and innovation.
- The extent to which local communities are involved and empowered.
- Key policy and practice recommendations for sustainable heritage tourism.



By drawing from both European and South Asian contexts, this paper aims to offer globally relevant insights into making heritage tourism more equitable and enduring.

2. Literature Review

2.1 Heritage Tourism and the Need for Sustainability

As tourism continues to grow, it brings with it pressures on natural and cultural resources. In fragile historical environments, unregulated tourism can lead to overcrowding, degradation of sites, and displacement of local communities (Graham, Ashworth & Tunbridge, 2016). The concept of **sustainable heritage tourism** aims to address this by ensuring that development meets the needs of the present without compromising future generations' ability to enjoy and benefit from heritage assets (UNWTO, 2018).

2.2 Sustainable Business Models in Tourism

Sustainable Business Models (SBMs) in tourism refer to frameworks that incorporate economic viability, environmental responsibility, and social equity (Geissdoerfer et al., 2017). These models often leverage tools such as eco-certifications, local supply chains, digital innovation, and inclusive hiring practices. In tourism, the focus is not only on profit but also on preserving the cultural fabric and natural landscape of host destinations (Sanchez-Fernandez et al., 2020).

2.3 Community Engagement in Heritage Tourism

A recurring theme in sustainable tourism research is the importance of **community-based tourism**. When communities are actively involved in shaping tourism offerings—such as by managing homestays, organising festivals, or offering craft workshops—they are more likely to benefit from tourism and support its sustainability (Aas, Ladkin & Fletcher, 2005). This approach also tends to enhance visitor satisfaction by offering more authentic experiences.

2.4 Academic Partnerships and Tourism Development

The involvement of universities and research centres in sustainable tourism has grown in recent years. Academic institutions bring evidence-based strategies, technological solutions, and policy influence. At the **University of St Andrews**, the **Sustainable Tourism Research Unit (STRU)** has been instrumental in co-developing tools like augmented reality platforms, sustainability workshops, and stakeholder mapping strategies (University of St Andrews, 2023). Similar models are emerging in India through the **Jaipur Heritage Lab**, although these efforts are relatively newer and face different structural constraints (Chaudhary & Singh, 2019).

3. Methodology

This research uses a qualitative comparative case study design, incorporating:

- A review of academic and policy literature (2010–2024).
- Analysis of secondary data from government reports, tourism boards, and institutional publications.
- Interviews with stakeholders at the **University of St Andrews' STRU** and the **Jaipur Heritage Lab**.

The comparison framework includes four dimensions: economic sustainability, environmental management, community involvement, and academic-industry collaboration.

4. Case Study: St Andrews, Scotland

4.1 City Profile

St Andrews is a small coastal town in Fife, Scotland, home to just over 16,000 residents. Despite its modest size, it attracts more than 700,000 tourists each year, drawn by its historic buildings, world-famous golf

course, and the **University of St Andrews**, founded in 1413 (St Andrews Tourism Board, 2023).

4.2 Economic Aspects and Business Climate

Tourism contributes about 40% to the local economy, mostly via SMEs in hospitality, guided tours, and local crafts. A key feature of this ecosystem is the formalisation of most businesses, which allows for quality control and easier regulation. The **Green Business Certification** program, supported by both the university and local authorities, rewards companies that adopt sustainable practices such as renewable energy usage, reduced plastic consumption, and ethical sourcing.

4.3 Environmental Policies

St Andrews faces significant environmental threats, particularly **coastal erosion** linked to climate change. In response, the town has implemented **adaptive management plans** including shoreline reinforcement, public education campaigns, and data-driven monitoring, often supported by university research teams. Many local businesses now track their carbon footprints and actively seek to reduce energy use.

4.4 Academic-Industry Engagement

The **University of St Andrews** plays a catalytic role in connecting research with real-world application. Projects such as the **Digital Heritage Experience**, which uses AR to create immersive, low-impact tourism alternatives, have helped reduce foot traffic at sensitive sites while improving visitor learning (University of St Andrews, 2023). Training programs, developed in collaboration with tourism operators, offer practical guidance on green certifications and community outreach.

4.5 Community Empowerment

The **St Andrews Community Trust** ensures that tourism benefits are shared locally. Initiatives include grant funding for heritage workshops, youth internships in tourism-related roles, and support for artisan cooperatives. This approach has improved community morale and increased support for preservation efforts.

5. Case Study: Jaipur, India

5.1 Overview

Jaipur, the capital of Rajasthan, is one of India's most celebrated heritage cities. With over 3 million residents, its historic Pink City, forts, and palaces draw millions of domestic and international tourists annually. Tourism comprises about 30% of the local economy (Rajasthan Tourism Department, 2022).

5.2 Informal Economy and Tourism

Unlike St Andrews, Jaipur's tourism sector is heavily reliant on the **informal economy**—including unlicensed guides, street vendors, and small-scale artisans. While this provides livelihoods to thousands, it also presents barriers to quality assurance, environmental regulation, and worker protections.

5.3 Conservation Efforts

Jaipur has made significant strides in **restoration and urban conservation**, particularly through projects like the **Amber Fort Revitalization**, which employed traditional methods and materials (Chaudhary & Singh, 2019). Urban zoning regulations have been introduced to limit high-rise development in heritage zones, although enforcement is inconsistent.

5.4 Environmental Challenges

Despite attempts at sustainable practices—such as rainwater harvesting in palaces and solar panels on hotels—most of Jaipur's environmental efforts are fragmented and lack city-wide coordination. Waste management and pollution remain pressing concerns, particularly during peak tourist seasons.

5.5 Academia and Heritage Research

The **Jaipur Heritage Lab**, working in partnership with scholars from St Andrews and elsewhere, has helped bridge the gap between academic research and tourism practice. Their community-mapping exercises and participatory workshops are slowly improving how tourism projects are designed and implemented.

5.6 Community Participation

In recent years, community-based tourism has gained traction in Jaipur through cultural homestays, food tours, and artisan workshops. NGOs have also worked to **formalise artisan collectives**, offering microfinance and training in product quality and sustainability.

6. Comparative Analysis

Dimension	St Andrews	Jaipur
Economic Model	Predominantly formal, SME-based	Largely informal, with variable quality standards
Environmental Practices	Integrated, supported by data and academic research	Fragmented, under-resourced
Community Involvement	Institutionalised via trusts and university partnerships	Emerging through NGOs and informal groups
Academic Collaboration	High integration (University central to tourism planning)	Developing, with growing collaboration but limited implementation
Technology Use	Advanced (e.g. AR platforms for site preservation)	Limited, with scope for digital transformation

7. Recommendations

- **Integrated Governance:** Jaipur should establish multi-sectoral governance bodies with clear roles for academia, local government, and business leaders, modelled after St Andrews' collaborative approach.
- **Skill Development:** Offer vocational training for informal sector workers, covering digital skills, environmental responsibility, and customer service.
- **Green Certifications:** Promote environmentally certified practices that are financially and culturally accessible for heritage-related SMEs.
- **Tech Innovation:** Introduce mobile apps for site navigation, visitor feedback, and digital ticketing to reduce congestion and track environmental impact.
- **Community-Based Tourism Expansion:** Support initiatives that showcase local culture—like home-cooked food tours and block printing workshops—while ensuring fair income distribution.
- **Long-Term Academic Partnerships:** Formalise academic partnerships through Memoranda of Understanding (MOUs) that enable regular collaboration between universities and tourism bodies.

8. Conclusion

This comparative study reveals that while both St Andrews and Jaipur possess rich heritage assets, their



pathways to sustainable tourism differ due to context-specific factors. St Andrews offers a robust model where governance, education, and enterprise work hand in hand. Jaipur, while facing challenges in informality and urban pressure, shows promising signs of transformation through grassroots efforts and emerging academic partnerships. Strengthening governance structures, investing in local communities, and embracing innovation can enable both cities—and others like them—to lead by example in building a sustainable future for heritage tourism.

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