

Evaluating the potentials of apitourism in Iran: from the perspective of regional development in Taleqan

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Extended Abstract:

Introduction

Apitourism, derived from the Latin term *Apis* (bee) and tourism, represents a niche form of nature-based tourism centered around honeybees, beekeeping, and related cultural and environmental experiences. As global interest in sustainable and alternative tourism grows, apitourism has emerged as a promising avenue for rural revitalization, offering opportunities to preserve biodiversity, enhance local economies, and promote cultural heritage. Iran, with its rich climatic diversity, historical traditions, and significant beekeeping industry, holds substantial potential for apitourism development. This study focuses on Taleqan, a mountainous region in Alborz Province, Iran, to assess the capacities of apitourism in fostering regional development and improving the local economy. By analyzing environmental, economic, socio-cultural, infrastructural, and managerial components, this research aims to propose a comprehensive model tailored to Iran's unique context, addressing the research question: What are the key components and variables of apitourism in driving regional and local development in Taleqan?

Background and Significance

The 21st century has witnessed rapid economic growth alongside environmental degradation, leading to biodiversity loss and ecosystem disruption. Globalization threatens local cultures, necessitating sustainable tourism models that preserve natural and human resources. Apitourism, encompassing beekeeping, bee products, and eco-friendly tourism services, aligns with these goals by promoting environmental awareness, nutritional benefits, and cultural engagement. Activities such as visiting apiaries, observing beekeeping practices, tasting honey,

and learning about bee products (e.g., royal jelly, pollen, propolis) allow tourists to connect with nature and local traditions. Globally, countries like Slovenia, Poland, and Romania have pioneered apitourism, with Slovenia branding it nationally in 2016. Iran ranks among the top 10 countries in honey production and apiary numbers, yet apitourism remains underexplored, with only two prior studies in the country. Taleqan, with its pristine landscapes, diverse flora, and over 28,000 bee colonies, offers an ideal setting to bridge this research gap and promote sustainable development.

Study Area: Taleqan

Located in the southern foothills of the Alborz Mountains, Taleqan is renowned for its unspoiled nature, rich biodiversity, and authentic local culture. With over 80 villages, including Orizan, Mir, and Karkabud, Taleqan features lush valleys, rivers, waterfalls, and a scenic lake behind the Taleqan Dam. Its diverse flora, including medicinal plants like thyme, yarrow, and rhubarb, supports high-quality honey production, making it a prime candidate for apitourism. The region's proximity to Tehran (166 km) and Karj (115 km) enhances accessibility, attracting urban tourists for short trips. Taleqan's mountainous terrain supports adventure activities like hiking, rock climbing, and cycling, aligning with ecotourism principles. Its beekeeping tradition, bolstered by fertile pastures and skilled local beekeepers, positions Taleqan as a potential hub for apitourism, capable of boosting employment, preserving cultural heritage, and promoting environmental sustainability.

Methodology

This applied research adopts a descriptive survey approach, combining qualitative and quantitative methods to evaluate apitourism's potential in Taleqan. Data were collected through a researcher-designed questionnaire with closed-ended questions, distributed to a random sample of 100 respondents, including local beekeepers, residents, and tourists. Content validity was ensured through expert reviews by academics and specialists. Data analysis utilized SPSS software, employing descriptive statistics (means, variances) to characterize components and regression analysis to estimate relationships and weights of variables. The study assessed apitourism across five components—environmental, economic, socio-cultural, infrastructural, and managerial-policy—encompassing 75 indicators.

Findings

Environmental Component

Environmental indicators, including biodiversity conservation, environmental sustainability, and ecological awareness, yielded means ranging from 3.14 to 3.25. The indicator “number of plant species influenced by bee pollination” (mean 3.17, variance 1.205) highlights bees’ role in enhancing Taleqan’s biodiversity. The use of organic methods in apiaries (mean 3.22, standard error 0.050) reflects sustainable practices, though waste management (mean 3.22) requires improvement to minimize tourism’s environmental footprint.

Economic Component

Economic indicators, focusing on job creation, income generation, and investment, ranged from 3.15 to 3.36. Direct employment from apitourism (mean 3.24, variance 1.232) and income from honey sales to tourists (mean 3.28) underscore its economic potential. However, investment in apitourism advertising (mean 3.32, variance 1.070) needs enhancement to maximize economic benefits.

Socio-Cultural Component

Socio-cultural indicators, covering tradition revival, social interactions, and local identity, had means between 3.28 and 3.34. Honey festivals (mean 3.28) and tourist satisfaction with cultural experiences (mean 3.32, standard error 0.049) indicate strong cultural engagement. However, documentation of local narratives (mean 3.28) requires further effort to preserve Taleqan’s heritage.

Infrastructural Component

Infrastructural indicators, including tourism facilities and educational infrastructure, ranged from 3.24 to 3.43. Educational-recreational centers related to apitourism (mean 3.43) demonstrate Taleqan’s potential as a learning destination. Internet access for advertising (mean 3.37, variance 0.968) highlights the need for digital infrastructure improvements.

Managerial and Policy Component

Managerial indicators, encompassing policy-making, planning, and empowerment, ranged from 3.32 to 3.42. Local manager training (mean 3.42, variance 0.980) and support for apitourism startups (mean 3.41) indicate robust governance, though policy alignment with environmental and economic goals needs strengthening.

Regression Analysis

Regression analysis revealed that the environmental component ($\beta=0.32$) had the greatest impact on regional and local development, emphasizing biodiversity and

sustainability's role. Economic ($\beta=0.28$) and socio-cultural ($\beta=0.25$) components also significantly contributed, driven by job creation and cultural revival. Infrastructural ($\beta=0.20$) and managerial ($\beta=0.15$) components showed positive but lesser impacts, suggesting the need for enhanced infrastructure and policy support.

Proposed Model

The proposed apitourism model for Taleqan integrates the five components to balance environmental conservation, economic growth, and cultural preservation. Key features include:

1. **Environmental Sustainability:** Promoting organic beekeeping and biodiversity conservation to attract eco-conscious tourists (correlation with economic component: 0.855).
2. **Economic Development:** Enhancing employment and income through honey sales and tourism services, with digital marketing to expand market reach.
3. **Socio-Cultural Preservation:** Reviving beekeeping traditions via festivals and documenting local narratives to strengthen cultural identity.
4. **Infrastructural Development:** Investing in educational centers, ecotourism lodges, and digital platforms to improve tourist experiences (correlation with managerial component: 0.630).
5. **Managerial Coordination:** Formulating supportive policies, training local managers, and fostering public-private partnerships to ensure cohesive development.

Recommendations

1. **Enhance Digital and Educational Infrastructure:** Develop high-speed internet and online platforms for marketing apitourism, alongside educational centers offering beekeeping workshops.
2. **Strengthen Intersectoral Collaboration:** Form advisory councils with beekeepers, local authorities, and tourism experts to align policies with environmental and economic objectives.
3. **Boost Digital and International Marketing:** Create multilingual platforms and virtual festivals to promote Taleqan's apitourism globally.
4. **Expand Training Programs:** Provide specialized training for beekeepers and managers in sustainable practices and digital marketing.
5. **Promote Sustainable Resource Management:** Implement waste recycling systems and incentivize organic beekeeping to ensure environmental sustainability.

Conclusion

Apitourism in Taleqan offers a viable pathway for sustainable regional and local development, leveraging the region's natural, cultural, and beekeeping assets. The proposed model, grounded in rigorous statistical analysis, integrates environmental, economic, socio-cultural, infrastructural, and managerial components to create a balanced framework. By addressing challenges such as digital infrastructure gaps and waste management, and capitalizing on strengths like biodiversity and cultural heritage, Taleqan can emerge as a leading apitourism destination. This model serves as a blueprint for other rural regions in Iran, promoting economic vitality, environmental stewardship, and cultural preservation through apitourism.

Keywords: Epitourism potentials, regional development, local economy, Taleqan.

