

INCLUSIVE GROWTH MECHANISMS OF WORLD HERITAGE SITE TOURISM UNDER DIGITAL TRANSFORMATION: AN EXPLORATORY STUDY OF SAMARKAND

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Abstract. Digital transformation is fundamentally reshaping the cultural tourism ecosystem of World Heritage destinations. Focusing on Samarkand, Uzbekistan, this exploratory study unpacks the structural mechanisms governing inclusive growth in heritage tourism under the digital lens. Our analysis of public policy documents and digital platform communication reveals a stark paradox: while digitization markedly amplifies Samarkand's global visibility, its underlying algorithmic structures and traffic distribution mechanisms trigger a "platform-centric concentration." This asymmetry skews tourism revenues and narrative authority heavily toward iconic, high-traffic attractions, structurally sidelining local traditional communities into digital invisibility and economic marginalization. To address these structural frictions, we articulate a four-dimensional co-symbiotic framework—spanning cultural, economic, social, and governance domains—to chart a more equitable path for digital growth in developing-world heritage sites.

Keywords: *digital transformation; inclusive growth; World Heritage site; Samarkand; exploratory study.*

Introduction

The sweeping integration of digital platforms, social media, and smart architecture has pushed global cultural heritage tourism past traditional sightseeing and squarely into the realm of digital governance. More than a mere tool for information dissemination or consumption, digitization has untethered heritage tourism from its purely physical constraints, morphing it into a complex socio-economic arena driven by algorithmic dynamics, platform capitalism, and symbolic consumption. As an iconic Silk Road heritage site, Samarkand lies at the heart of Uzbekistan's national tourism strategy. Bolstered by the country's open cultural tourism policy and the Belt and Road Initiative, the city's international visibility has surged. In this process, global digital platforms like Instagram and TikTok, along with geo-targeted social media marketing, have become deeply embedded in and now steer the trajectory of local tourism development.

Yet digital technologies, for all their promise, do not automatically deliver inclusive benefits. While platforms drive market growth and enhance international communication, their underlying algorithms tend to tilt digital dividends toward headline sites and outside capital, generating structural tensions like traffic polarization, the silencing of local communities, and the shallowing of heritage value. These digital inequalities are particularly acute in developing-country heritage sites where governance systems remain weak. Much of the existing literature stays at the macro level of "technology-enabled growth," overlooking the political economic tensions between digital heritage governance and inclusive growth. This exploratory study of Samarkand seeks to move beyond techno-deterministic narratives, asking a harder set of questions: In the platform networks woven by digital capital, who captures the surplus value? Who monopolizes cultural interpretation? Are local communities becoming alienated appendages within algorithmic matrices?

Literature Review

To situate this study within a broader scholarly conversation, this chapter reviews three intersecting areas: (1) digital transformation in cultural heritage tourism, (2) inclusive growth and platform capitalism, and (3) community participation and narrative authority in World

Heritage sites. The existing literature reveals a gap: while digitization is widely praised, little is understood about how its underlying mechanisms redistribute value, voice, and power—especially in developing-world heritage contexts like Samarkand.

1. Digital Transformation in Heritage Tourism

A substantial body of research has examined how digital technologies reshape heritage tourism. Early work focused on the potential of ICTs to enhance visitor experiences and marketing efficiency (Gretzel et al., 2015), while recent studies have turned to social media and algorithmic recommendation systems in shaping tourist perceptions (Tussyadiah & Pesonen, 2016; Xiang et al., 2017). Yet this literature has been criticized as overly techno-optimistic. As Govers (2018) points out, much research adopts a supply-side perspective, focusing on "what works," while paying insufficient attention to the structural effects of platformization on local communities—particularly how algorithms selectively amplify or suppress certain narratives (van Dijck et al., 2018). This study treats digital platforms as power-laden intermediaries, not neutral infrastructure.

2. Inclusive Growth and Platform Capitalism

Inclusive growth emphasizes not merely economic expansion but also broad-based participation and benefit-sharing (World Bank, 2009). In tourism studies, this concept has been applied to community-based tourism and benefit distribution mechanisms (Scheyvens & Biddulph, 2018). More recently, the rise of platform capitalism (Srnicek, 2017) has added new complexities. Digital platforms act as powerful gatekeepers, concentrating tourism benefits among capital-rich, platform-literate actors (Törnberg, 2021). In heritage contexts, research is sparse, particularly regarding non-Western, post-Soviet, or Silk Road heritage sites. This study aims to fill this geographical gap.

3. Community Participation and Narrative Authority

A long-standing tradition in heritage studies emphasizes local community involvement in World Heritage management (Murphy, 1985; Ashworth & Tunbridge, 2000). The idea that communities are rights-holders, not merely stakeholders, has been embedded in UNESCO policy frameworks (UNESCO, 2015), yet implementation lags far behind rhetoric in non-Western and post-socialist contexts (Labadi, 2018). The digital turn adds a new layer: narrative authority is no longer shaped solely by official channels but increasingly co-produced by algorithms, influencers, and user-generated content, often originating outside the local community (Minca & Borghi, 2020). Scholars have coined terms like "digital gentrification of heritage" (Bolin & Schwartz, 2015), but empirical studies remain rare. Samarkand offers an opportunity to explore this issue.

4. Research Gap and Contribution

Three observations stand out. First, most existing research assumes a Western context and tends toward techno-optimism. Second, debates on inclusive growth and critiques of platform capitalism have largely proceeded separately, leaving the mechanisms of digital-era benefit concentration undertheorized in heritage settings. Third, the digital reconfiguration of community narrative authority remains underexplored. Taking Samarkand as a case, this study brings together digital platform analysis, inclusive growth theory, and heritage governance critique, asking through what mechanisms digital transformation reorganizes cultural, economic, social, and governance relations in a World Heritage site, and under what conditions that reorganization might become more inclusive.

Research Methodology

1. Research Approach

Given the limited availability of micro-level statistical data in Uzbekistan, this study abandons conventional quantitative causal inference in favor of a qualitative, exploratory case study approach. Rather than pursuing statistical significance, the aim is to unpack the shifting governance ecology of World Heritage sites amid digitization, building an interdisciplinary "technology–society–power" analytical framework.

2. Methods

Methodologically, the paper adopts triangulation. First, it uses case study method, centering on Samarkand while drawing selective comparisons with other Silk Road heritage sites like Xi'an. Second, digital text analysis is applied to examine content on Instagram, YouTube, and other major global platforms to assess narrative ownership. Third, policy text analysis is used to review Uzbekistan's tourism strategies and UNESCO reports, aligning national priorities with conservation tensions.

3. Data Sources

The data pool consists of UNESCO conservation reports, official Uzbek statistics, and publicly available social media content. I should be clear: due to real-world constraints, this study lacks large-scale community survey data. It is a phase of exploratory analysis, aimed at precisely identifying governance frictions to chart a course for future quantitative research.

Findings and Analysis

1. Digitization Has Boosted the International Reach of Samarkand's Cultural Heritage

In recent years, Samarkand's visibility on international tourism platforms and social media has grown markedly. Core heritage spaces like Registan Square and the Shah-i-Zinda necropolis have become central to Uzbekistan's national tourism image. Digital communication has played a positive role in raising the destination's international profile. Short video and social media content has reinforced Samarkand's image as a "Silk Road historical city," drawing international attention to Uzbekistan's cultural tourism assets. At the same time, digitization has expanded the tourism consumption space. Online booking, digital maps, and smart tourism services have improved convenience and, to some extent, driven local tourism revenues.

2. Platform-Driven Concentration of Tourism Revenues

But while digitization has expanded the overall tourism market, revenues have not been widely shared. In platform-mediated tourism, large hotels, core sites, and official tourism bodies tend to enjoy higher digital visibility, while small local operators, traditional artisans, and community cultural actors remain far less visible. Platform traffic and tourist spending concentrate in a few hotspot spaces, leading to a centralization of tourism resources. Moreover, platform algorithms favor visually striking, commercial, and entertaining content, so some forms of traditional cultural expression are gradually being "spectacularized" and commodified. Local everyday spaces, in this process, get reduced to tourist clichés. This platform structure does not inevitably harm community interests, but the risk is clear: without effective governance, digital tourism could widen resource gaps between different actors.

3. Limited Community Participation

Looking at publicly available digital content, the main narrators of Samarkand's cultural heritage tourism remain official bodies, tourism platforms, and commercial accounts. Local residents and community organizations have a very limited role in digital content production.

So, while digitization has made tourism communication more efficient, communities remain weak as subjects of digital cultural expression. Many communities are more often displayed than actively participating in digital cultural production or tourism governance. Meanwhile, differences in digital capability also constrain inclusive development. Some traditional operators lack digital marketing skills, making it hard for them to enter platform-based tourism systems, putting them at a disadvantage in digital competition.

4. New Challenges to Cultural Authenticity in a Digital Context

The rapid digitization of cultural heritage tourism also poses fresh challenges to authenticity. Under the logic of social media dissemination, heritage spaces are increasingly becoming visual, entertaining, and commercial. Much digital content emphasizes "check-ins," visual spectacle, and consumption, while giving short shrift to historical-cultural meanings and everyday local life. This does not mean digitization inevitably destroys authenticity, but the commercial logic of platforms does change how heritage is socially represented. Thus, digital governance of heritage tourism must attend not only to growth but also to cultural voice, community participation rights, and cultural sustainability.

5. Manifestations of Symbiotic Imbalance in Samarkand's Digital Heritage Tourism

Drawing on the above exploratory findings, this study argues that the deep involvement of digital technologies has not naturally produced balanced inclusive benefits. On the contrary, under the logic of platform capitalism, Samarkand's digital heritage governance ecology shows varying degrees of co-symbiotic imbalance across four core dimensions: culture, economy, society, and governance. This imbalance constitutes a deep structural friction constraining inclusive growth at this World Heritage site (Table 1).

Table 1

Four-Dimensional Symbiotic Imbalance Matrix in Samarkand's Digital Heritage Tourism

Dimension	Exploratory Evidence from Samarkand	Structural Imbalance Mechanism
Cultural Symbiosis	Core sites like Registan Square go viral on international platforms, reduced to fast, symbolic consumption.	Digital spectacle alienation overrides living cultural space: Algorithms favor high-stimulus visual symbols, displacing deep Silk Road historical narratives with shallow check-in aesthetics, putting heritage authenticity under pressure.
Economic Symbiosis	Online travel platforms and traffic distribution show high failure of decentralization; benefits concentrate on core sites, transnational capital, large commercial actors.	Platform-centric monopoly excludes weaker long-tail actors: Network effects in platform economies produce winner-take-all outcomes; local artisans and micro-entrepreneurs lack digital capital and are shut out of digital dividends.
Social Symbiosis	Digital content on global platforms is dominated by official bodies and outside influencers; local community visibility and participation are extremely low.	External narrative gaze silences local community: As natural holders of World Heritage, local residents are relegated to being gazed upon from behind the scenes, losing interpretive authority; tech gaps become spatial exclusion.
Governance Symbiosis	Tensions exist among Uzbekistan's official digital tourism strategy, UNESCO conservation requirements, and platform self-interested expansion.	Top-down directives and commercial capture lack collaborative governance: Current digital heritage governance leans on state promotion and platform self-interest, with no institutionalized channels for community participation; governance boundaries are fragmented.

In short, Samarkand's current dilemma is not simply slow growth from tourism technologies. It is that the speed of technology-enabled change has far outstripped the speed of building inclusive institutions. This four-dimensional structural imbalance has skewed digital dividends toward the few, demanding systemic redesign in subsequent governance mechanisms.

Discussion

This exploratory analysis of Samarkand shows that digital heritage governance is never merely technological upgrading. Rather, it is a spatial reconfiguration that profoundly reshapes power, interests, and discourse at World Heritage sites. To address the structural imbalances arising from digital transformation, Samarkand and similar heritage sites in developing countries must move beyond a techno-centric approach and shift toward an integrated co-symbiotic pathway encompassing culture, economy, society, and governance.

1. Cultural Symbiosis: Rebalancing Digital Spectacle and Historical Authenticity

Given the shallowing and spectacularization of heritage values driven by digital communication, there is an urgent need to rebuild cultural symbiosis. The core task is to break the purely visual bias of algorithms by embedding hard constraints of historical authenticity into digital commercial narratives. Uzbekistan's cultural tourism authorities, together with academic institutions, should develop an official interpretive repository of Samarkand's digital cultural heritage. Using digital twins and augmented reality, the deep historical layers and multicultural intersections of core sites like Registan Square can be turned into high-quality digital metadata. When promoting content on global platforms, authorities should require or incentivize the inclusion of "deep narrative" algorithmic weights that favor historically and culturally substantive content. By steering the "check-in spectacle" toward deeper engagement with living cultural spaces, we can achieve a more positive symbiosis between digital symbolic consumption and heritage authenticity protection.

2. Economic Symbiosis: Algorithmic Redistribution Toward Technologically Weaker Actors

To reverse the winner-take-all polarization of platform capitalism, an economic redistribution mechanism targeting local long-tail micro-actors is essential. Digital heritage governance should carry a public redistributive function. Concretely, governments should guide or legislate to require smart tourism platforms and online giants to include "community inclusion metrics" in their traffic algorithms—offering institutionalized traffic preference and guaranteed minimum exposure for traditional craft workshops, family-run guesthouses, and small businesses in local mahalla (neighborhood) communities. At the same time, a "Samarkand Digital Heritage Dividend Development Fund" should be established, drawing a set percentage from commissions and ad revenues that large digital platforms earn from core sites, to be transferred to weaker local actors. This would ensure that the economic dividends of digital transformation genuinely trickle down to the community level.

3. Social Symbiosis: From Being Gazed Upon to Digital Empowerment

The rupture in social symbiosis stems from local residents' loss of agency in digital cultural production. Rebuilding social symbiosis requires shifting from "doing digitization for communities" to "communities doing digitization." A systematic "Digital Mahalla" empowerment program is needed, providing technical training and organizational support to bridge the digital divide. Local residents and traditional artisans should be encouraged and supported to create regular "first-person narratives" on modern social media, telling contemporary stories of Silk Road heritage in their own languages and from their own perspectives. This would counter the "external gaze" of geopolitical or commercial online actors. By equipping local communities with the tools, skills, and discursive power to produce digital content, they can move from being background scenery in algorithmic matrices to sovereign actors in digital heritage space.

4. Governance Symbiosis: Collaborative Networks of Government, Platforms, and Communities

The ultimate goal of digital heritage governance is to move beyond top-down administrative directives and unregulated commercial competition toward collaborative governance among multiple actors. Samarkand should pioneer a tripartite network of "government guidance, platform accountability, and deep community participation." Institutionally, digital platforms should be brought into the regular joint decision-making framework for World Heritage protection and tourism development, clarifying their responsibility for cultural conservation and community inclusive growth. At the same time, "digital governance workshops" should be established in traditional mahalla communities as institutional intermediaries between national policies and grassroots demands. Government's role should shift from direct technology development to rule-setting and oversight—using algorithmic audits, data-sharing agreements, and other public governance tools to steer platform algorithms toward public welfare and inclusion. The result would be a clear-boundary, shared-benefit, balanced-responsibility digital co-symbiotic governance structure.

Conclusion

Taking Samarkand as a case, this paper has explored the organizational and governance issues in cultural heritage tourism development under digitization, from the perspectives of digital governance and inclusive growth. Digitization has positive effects on enhancing the international reach of cultural heritage and improving tourism market efficiency, but it can also lead to platform concentration, limited community participation, and weakened cultural authenticity. Digital heritage governance is not just a technical matter; it is fundamentally about cultural governance and interest coordination. Hence, for the future of cultural heritage tourism in Uzbekistan, inclusive growth should be prioritized. Governance must strengthen community participation, promote digital empowerment, improve revenue-sharing mechanisms, and build collaborative structures among government, platforms, and communities.

Given data constraints, this is an exploratory study, and its conclusions await further empirical testing. Future research could combine community surveys, platform data, and longitudinal studies to deepen analysis of the relationship between digital heritage governance and inclusive growth.

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