

A DIGITAL INSTITUTIONAL MODEL FOR MANAGING SOCIAL AND LABOUR RELATIONS IN REGIONAL TOURISM CLUSTERS: THE CASE OF UZBEKISTAN'S REGIONS

<https://doi.org/10.5281/zenodo.20786175>

Dr. Ishankhodjaeva Dildora Aleksandrovna
Researcher

Abstract

This article develops a digital institutional model for managing social and labour relations in regional tourism clusters in Uzbekistan, with particular reference to the emerging clusters in Samarkand and Bukhara. It builds on national regulations on tourism clusters and recent reforms promoting project-based, cluster-oriented tourism development, and explores how digital tools can support more transparent, inclusive and efficient governance of employment and working conditions. Drawing on concepts of smart tourism and digital governance, the paper outlines a multi-level model that integrates national institutions, regional tourism authorities, cluster management bodies, businesses, workers and digital platforms. Using Samarkand and Bukhara as illustrative cases, the model shows how integrated information systems, e-contracting, digital monitoring and feedback mechanisms can improve regulation of labour standards, skills development and social dialogue within tourism clusters. The article concludes with recommendations for piloting the model in these two regions and then extending it to other parts of Uzbekistan.

Keywords

tourism clusters, digital governance, social and labour relations, institutional model, Samarkand, Bukhara, smart tourism.

Introduction

In Uzbekistan, tourism clusters have been formally defined in the Law "On Tourism" and subsequent government resolutions as complexes of independent organisations and entrepreneurs providing tourism-related and supplementary services within a territorially integrated system. Regulations adopted in 2025 specify that tourism clusters bring together accommodation, catering, transport, cultural and entertainment services, infrastructure and management within a single development framework, and establish procedures for businesses to apply for cluster status.

Regional centres such as Samarkand and Bukhara are at the forefront of this cluster-based approach. Samarkand has been positioned as a flagship tourism hub, with large-scale investments in accommodation, new tourism zones and smart tourism solutions, while Bukhara's cluster is more strongly rooted in its historic urban fabric and traditional guesthouse-based hospitality model. Recent analyses show that tourism has contributed significantly to local employment: for example, one study estimates that Samarkand region created around 1,800 new tourism-related jobs in local enterprises, while Bukhara created around 1,600 jobs over a recent period. At the same time, national statistics indicate rapid growth in the number of hotels and similar accommodation facilities across the country, with thousands of jobs concentrated in major tourism cities.

Parallel to these structural changes, digital technologies are being introduced in both regions. Samarkand has seen the rollout of QR codes, digital audio guides and mobile applications to support smart tourism, while Bukhara has also been included in initiatives introducing smart tourism technologies to key heritage cities. Yet, despite this progress, the governance of social and labour relations within these emerging clusters – including employment, working conditions, skills, and social dialogue – remains only partially integrated into digital tourism governance and regional planning.

The central research question of this article is therefore: **How can digital tools and institutional arrangements be combined to govern employment and working conditions within regional tourism clusters in Uzbekistan, taking into account the specific characteristics of regions such as Samarkand and Bukhara?**

The article pursues three objectives:

- to map the main institutional actors and policy frameworks relevant for tourism clusters and social–labour relations in Uzbekistan;
- to develop a digital institutional model for managing social and labour relations in regional tourism clusters;
- to illustrate the application of this model in Samarkand and Bukhara, highlighting similarities and differences that matter for digital governance.

Methods

The study adopts a conceptual and institutional design approach. Rather than collecting primary survey data, it synthesises existing policy documents, academic literature and statistical information. The methodology consists of three main steps:

1. Institutional and policy mapping.

- The first step identifies key legal and policy documents defining tourism clusters and regional tourism governance in Uzbekistan, including regulations on cluster status and regional strategies for tourism development. It also considers

broader tourism policy discussions that emphasise tourism's contribution to GDP and employment.

2. Review of smart tourism and digital governance literature.

- The second step draws on research on smart tourism theory, smart destinations and digital governance in tourism, focusing on how digital tools can support stakeholder coordination, transparency and participation. Literature on cluster policy and institution-sensitive tourism development provides additional insights into how cluster governance can be aligned with regional development goals.

3. Model building and regional illustration.

- The third step constructs a digital institutional model for managing social and labour relations in regional tourism clusters. The model is then illustrated using the cases of Samarkand and Bukhara, drawing on available regional information about tourism development, employment and smart tourism initiatives.

This approach allows the article to propose a structured framework that can guide future pilot projects and empirical assessments in Samarkand, Bukhara and other regions.

Results: Digital Institutional Model for Regional Tourism Clusters

1. Tourism cluster definition and regional context

Under Uzbek legislation, a tourism cluster is defined as a network (complex) of independent organisations and entrepreneurs providing tourism-related and supplementary services within a specific territory, ensuring integrated infrastructure and services for travellers. This legal definition emphasises spatial concentration, functional interdependence and coordinated management.

In practical terms, regional tourism clusters in Uzbekistan typically include:

- cultural and natural attractions;
- accommodation and catering facilities;
- transport and mobility services;
- cultural, entertainment and creative industries;
- support services (banking, telecommunications, retail).

Samarkand and Bukhara share these generic features but differ in their development patterns:

❖ **Samarkand** is characterised by large-scale investments, newly created 24/7 tourism zones ("Samarkand-City"), significant hotel capacity expansion and a strong focus on international events and smart tourism technologies.

❖ **Bukhara** combines its historic old town, traditional guesthouses, craft markets and religious heritage, with more incremental digitalisation and a stronger reliance on small and medium-sized tourism enterprises.

Both regions have experienced substantial tourism-driven job creation, but they face different challenges regarding seasonality, informality, skills gaps and pressure on heritage sites.

2. Key actors in regional tourism cluster governance

The digital institutional model assumes the following main actor groups at national and regional level:

• National level:

- Ministry of Tourism and Cultural Heritage (policy, cluster regulations, smart tourism programmes).

- Ministry of Employment and Labour Relations, labour inspectorates and social protection agencies (labour law, inspections, social insurance).

• Regional and local level:

- Regional tourism departments in Samarkand and Bukhara, and dedicated project offices overseeing cluster development and investment packages.

- Local governments (hokimiyat), responsible for urban planning, local regulations and community engagement.

• Cluster-level and societal actors:

- Tourism businesses (hotels, guesthouses, tour operators, guides, transport, catering, cultural institutions) in Samarkand and Bukhara.

- Workers in tourism and related services (permanent, seasonal, platform-based, self-employed).

- Educational and training institutions (regional universities, colleges, vocational centres).

- Employer and worker organisations, professional associations and, where present, trade unions.

The central question is how to connect these actors through digital systems that simultaneously promote competitiveness and decent work.

3. Core elements of the digital institutional model

The proposed model consists of four interrelated digital components that can be implemented in any regional tourism cluster, but whose concrete content will vary in Samarkand and Bukhara:

1. Regional Cluster Labour Information System (R-CLIS)

- A digital platform that collects and integrates data on employment, job types (permanent, seasonal, platform-based), working conditions and training needs for each regional cluster.

- In Samarkand, R-CLIS would capture data from large hotels, Samarkand-City facilities and smart tourism projects. In Bukhara, it would also need to cover numerous small guesthouses and craft-related tourism enterprises.

2. E-contracting and seasonal work registry

- Standardised digital templates and registration procedures for employment contracts and seasonal work agreements in cluster areas.

- In Samarkand, this is crucial for large-scale event staffing and high-volume seasonal jobs. In Bukhara, it can help formalise employment in small guesthouses and guided tours, reducing informality.

3. Digital skills and training hub

- An online portal connecting workers and enterprises in each region with training providers, focusing on digital literacy, smart tourism tools and tourism-specific competences.

- In Samarkand, training priorities might include managing smart tourism apps, digital audio guides and large hotel systems; in Bukhara, priorities could include online marketing for small enterprises, digital booking tools and heritage-sensitive guiding practices.

4. Social dialogue and feedback interface

- A digital interface for complaints, surveys and consultations on working conditions and cluster development, managed at regional or cluster level.

- In both Samarkand and Bukhara, this can support early identification of labour issues, such as excessive working hours during peak seasons, inadequate OSH measures or lack of training opportunities.

4. Comparative illustration: Samarkand and Bukhara

Table 1. Samarkand and Bukhara tourism clusters: selected features and social-labour governance needs

Dimension	Samarkand cluster	Bukhara cluster	Implications for digital institutional model
Cluster profile	Large-scale investments, new 24/7 tourism zones, strong focus on international events and smart tourism	Historic city core, traditional guesthouses, craft markets, incremental digitalisation	R-CLIS must integrate data from big projects in Samarkand and many small enterprises in Bukhara
Employment dynamics	Rapid job creation (approx. 1,800 new jobs in recent period), strong seasonal peaks, large hotels and complexes	Significant job creation (approx. 1,600 new jobs), high share of SMEs and family businesses, seasonality	E-contracting crucial for large seasonal workforce in Samarkand and formalisation of small-scale employment in Bukhara
Digitalisation	QR codes, digital guides,	Some smart technologies	Skills hub should emphasise

level	mobile apps, smart tourism pilots already in place	introduced, but digitalisation of small firms more limited	advanced smart tools in Samarkand, basic digital skills and online marketing in Bukhara
Heritage and community context	Balancing new construction and modern tourism zones with heritage preservation concerns	High sensitivity around old city preservation, tourism pressure on residential areas	Feedback interface needed to capture worker and community concerns about working conditions and heritage impacts
Institutional capacity	Strong national and regional focus; major reform and project packages	Important but slightly smaller scale; strong identity as cultural heritage city	Pilot R-CLIS and social dialogue interface in both regions, with tailored design and phased rollout

Discussion

The comparative analysis of Samarkand and Bukhara demonstrates that a single digital institutional model can be applied across regions, but its concrete configuration must reflect local cluster characteristics. In Samarkand, the scale of investments, presence of large integrated tourism zones and advanced smart tourism initiatives create both opportunities and challenges for labour governance: digital tools can be deployed relatively quickly, but the volume and complexity of operations require robust data management and coordination. In Bukhara, the dominance of small and medium-sized enterprises and the high sensitivity of the historic urban environment mean that digital tools must be designed to be accessible, low-cost and respectful of local contexts.

The model implies several cross-cutting considerations for both regions:

✚ **Digitalisation of labour governance must be gradual and inclusive.** R-CLIS, e-contracting and online feedback tools should be piloted with selected enterprises and then scaled up, providing support to smaller firms and workers who may lack digital skills or infrastructure.

✚ **Data quality and protection are critical.** Regional authorities and cluster managers must ensure that employment and working-condition data are reliable, used ethically and protected against misuse, in order to build trust among businesses and workers.

✚ **Integration with existing smart tourism initiatives can reduce costs and fragmentation.** In both Samarkand and Bukhara, digital tools already used for visitor information and marketing can be linked with labour-related modules, for example by using the same platforms to disseminate training materials and rights information.

More broadly, the comparative perspective underscores that social and labour relations should be seen as integral to cluster governance, not as a separate or

secondary concern. By embedding labour indicators, training information and feedback channels into regional tourism information systems, Samarkand and Bukhara can align tourism growth with national objectives related to decent work, social inclusion and regional development.

Conclusion

This article has presented a digital institutional model for managing social and labour relations in regional tourism clusters in Uzbekistan and illustrated its application in the Samarkand and Bukhara clusters. The model identifies four core digital components – a Regional Cluster Labour Information System, e-contracting and seasonal work registry, digital skills and training hub, and social dialogue and feedback interface – and situates them within a multi-actor governance framework involving national, regional and cluster-level institutions.

The comparison between Samarkand and Bukhara shows that while both regions share a cluster-based development logic and face similar challenges related to seasonality and heritage preservation, their different scales, digitalisation levels and business structures require tailored implementations of the digital model. Future research should focus on designing pilot versions of the proposed tools in both regions, engaging local stakeholders in co-design processes, and evaluating the impact of digital governance on employment, working conditions and stakeholder trust. Lessons learned from these pilots could then inform the rollout of digital institutional models in other tourism regions of Uzbekistan, contributing to a more sustainable, inclusive and digitally supported tourism sector.

REFERENCES:

1. Dredge, D. et al. (2018) *Digitalisation in tourism: In-depth analysis of challenges and opportunities*. Aalborg: Aalborg University for the European Commission EASME.
2. Haxton, P. (2021) *Preparing the tourism workforce for the digital future*. OECD Tourism Papers, No. 2021/02. Paris: OECD Publishing.
3. Ibragimov, S. (2025) 'Assessing the economic impact of tourism on local employment in Uzbekistan's regions', in *Proceedings of the International Scientific Conference on Economic Development*. Tashkent: Ilmiy Anjumanlar, pp. 145–156.
4. Marino, V. (2022) 'Digital platforms and entrepreneurship in the tourism sector', *Entrepreneurship and Sustainability Issues*, 9(4), pp. 72–89.
5. Nobile, M. and Režnáková, M. (2017) 'Tourism in institution-sensitive regional development: From clusters to smart specialization', *Journal of Economic and Management Issues*, 5(3), p. 26.

6. Rahimova, D. (2023) 'Smart tourism theory and a new conceptual model for destination governance', *American Journal of Economics and Business Management*, 8(2), pp. 55–63.
7. Said, N., Jamaludin, M. and Abdullah, R. (2025) 'Navigating tourism governance in the digital age', *Journal of Governance and Integrity*, 5(4), pp. 1–22.
8. Samarkand Regional Hokimiyat (2025) *Information on current and planned tourism work in Samarkand region, 2017–2024*. Samarkand: Regional Tourism Department.
9. Tourism Committee of the Republic of Uzbekistan (2019) *The Law of the Republic of Uzbekistan "On Tourism"*. Tashkent: Ministry of Justice.
10. Tourism Committee of the Republic of Uzbekistan (2024) *Regulation on the organisation of tourism clusters*. Resolution of the Cabinet of Ministers No. 915, 30 December.
11. UzDaily (2025) 'Uzbekistan approves regulations on tourism clusters: New opportunities for industry growth', *UzDaily.com*, 31 January. Available at: <https://www.uzdaily.uz/en/uzbekistan-approves-regulations-on-tourism-clusters-new-opportunities-for-industry-growth/>
12. Kursiv Media (2025) 'Uzbekistan approves regulations for creating tourism clusters', *Kursiv Media*, 8 January. Available at: <https://uz.kursiv.media/en/2025-01-09/uzbekistan-approves-regulations-for-creating-tourism-clusters/>
13. Bright Uzbekistan (2023) 'Smart tourism technologies are being introduced in Uzbekistan', *Bright Uzbekistan*, 12 September.
14. Uzbekistan.org (2024) 'The development of Uzbekistan's tourism contributes to the growth of the people's welfare', *Uzbekistan.org*,
15. State Committee on Statistics of the Republic of Uzbekistan (2025) *Development of tourism and recreation in the Republic of Uzbekistan, 2024*. Tashkent: UzStat.
16. Journal of Economy, Tourism and Service (2025) 'Opportunities for developing the volume of tourist services in Samarkand and Bukhara regions', *Journal of Economy, Tourism and Service*, 3(2), pp. 40–52.