

## Analysing the spatial organization of Indian temple towns through a classification framework

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This study develops a typological framework for Indian temple towns, addressing the gap in understanding their spatial organization and urban growth patterns. By analysing key spatial elements, including temple placement, street grids, and zoning of residential and commercial areas, this research explores the complex interplay between religious, cultural, and urban factors. A distinction is made between intrinsic characteristics—such as geography, history, and architecture—and extrinsic factors—like social structure, religious significance, and broader socio-economic influences. The framework reveals the challenges faced by temple towns, such as infrastructure strain, urban sprawl, and the pressures of tourism and commercialization. It emphasizes the need for nuanced urban planning that integrates cultural heritage with modern development, proposing a balanced approach to maintain the spiritual and socio-economic vitality of these towns. The study's findings underscore the critical role of temples as catalysts for urban development and social cohesion, while also highlighting their vulnerability to rapid urbanization. The research contributes to the field by offering actionable insights for urban planners, policymakers, and cultural historians aiming to preserve the unique identity of temple towns amidst contemporary challenges. The study's reliance on secondary sources is acknowledged, and future empirical research is recommended to refine the framework and inform policy decisions for sustainable temple town development, ensuring the preservation of both heritage and modern urban functionality.

**Keywords:** Cultural heritage, Religious influence, Spatial organization, Temple towns, Temple-induced urbanism

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India's rich civilization, characterized by its deep spiritual and cultural aspects, is evident in the timeless rituals and traditions that have flourished for thousands of years. This convergence of existence is exemplified by the countless temples that dot the Indian landscape<sup>1</sup>. These temples, as cultural hubs, foster communal cohesion while also serving as centres for deeply personalized spiritual experiences, blending vast communal gatherings with individual practices<sup>2</sup>. These temples are not merely architectural feats but are pivotal in nurturing communal solidarity and facilitating deeply individualistic spiritual engagements. Consequently, the emergence of "temple towns" across India illustrates their profound influence on society and individual lives, signifying the intricate connection between social norms and urban growth<sup>3</sup>. Temple towns, unlike cities focused on economic or civic centres, are structured around a central religious edifice, with the temple serving as the epicentre of

urban expansion, engendering growth that radiates outward from this core<sup>4,5</sup>.

The role of temple towns in shaping urbanization and development is profound, weaving spirituality into the fabric of daily life—a defining feature of Indian culture for millennia<sup>6</sup>. In ancient India, these centres performed pivotal societal functions, intertwining spiritual significance with economic and social vigour. Strategically positioned, they served as beacons of spiritual guidance and community leadership, epitomizing the harmonious blend of sacred and secular activities and symbolizing religious, cultural, and architectural ingenuity. The academic dialogue concerning temple towns in India has engendered a multiplicity of definitions, each contributing to a collective understanding of their quintessential characteristics. James Heitzman<sup>5</sup> defines temple towns as nucleated settlements centred around temples, which serve as the core of urban activities and social life. Building upon this foundation, George Michell<sup>7</sup> describes how Indian temples evolve into significant urban ensembles, playing a dominant role

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in the city's life In India, it was Geddes who coined the term 'temple-city' after seeing the towns of Madras Presidency<sup>8</sup>. Similarly, W. R. Lethaby's conception of the city as a metaphysical center elevates urban design to a sacred art, imbuing space with symbolic and spiritual resonance beyond utilitarian function<sup>9</sup>.

Pratyush Shankar elaborates on the concept, highlighting that temple towns exhibit not just a central religious structure but also incorporate crucial urban elements like residential areas, markets, and water features, thus establishing a self-sufficient urban environment. This perspective finds resonance in T. Fujimoto's analogy of temple towns to the Japanese notion of "*monzenmachi*," wherein pilgrims' necessities are catered to through amenities like lodging, dining establishments, and commercial establishments, thereby evolving these locales into bustling commercial hubs<sup>10</sup>. R. Champakalakshmi depicts temple towns as urban nuclei serving dual roles: sacred precincts and administrative-political cores, thereby epitomizing a spectrum spanning rural to urban environments<sup>4</sup>. Ancient Indian texts reveal that the religious experience in India has been intricately woven into urban organization and architecture, mandating that principal sanctuaries safeguard the deities revered by the ruling dynasty, ensuring the town's prosperity and protection<sup>11,12</sup>. A city without a protective framework remains vulnerable to threats, whereas planned temple placement in Indian towns fosters harmony between religious and urban life, reinforcing spatial and cultural coherence. This study examines the evolution of Indian temple towns from agrarian settlements to complex urban forms, highlighting how temples have shaped spatial organization, socio-political life, and architectural development, blending sacred and secular functions to sustain cultural continuity and inform contemporary urban planning.

This paper specifically responds to the gap in the literature by framing temple towns not merely as religious enclaves but as dynamic urban typologies shaped by an enduring sacred logic. It addresses the research problem of how historically rooted temple-centric spatial systems interact with evolving socio-political and economic contexts. The key objectives guiding the study are: (1) to trace the spatial evolution of Indian temple towns, (2) to identify and classify their defining urban features, and (3) to develop a structured framework that explains their resilience and transformation across time. By situating the study

within the broader discourse of urban cultural studies and sacred geography, it contributes to emerging debates on heritage-led development, spatial justice, and the preservation of intangible urban values in rapidly transforming Indian cities.

## Materials and Methods

Temple towns in India uniquely blend sacred and communal spaces, serving as spiritual and vibrant social-economic centres. These settlements remain central to India's spiritual and cultural landscape, attracting pilgrims and tourists alike<sup>13</sup>. Eck and R.P.B. Singh highlight the sacred symbiosis between temple and terrain, underscoring its significance for spatial planning and communal cohesion<sup>2,14</sup>. Meister foregrounds the architectural-ritual nexus, while Grimes' concept of "rituals cape" captures the integrative socio-spatial logic that temples embed within the cultural ecology<sup>15,16</sup>.

### Evolution of temple towns in ancient India

The evolution of temple towns in ancient India reflects the intersection of spiritual cosmology, urban morphology, and socio-economic function. Rooted in *Vastu Vidya*, as described in the *Shilpa Shastras* and *Vastu Shastra*, these towns were meticulously planned to channel cosmic energies, with temples strategically sited at the core of urban life<sup>17</sup>. Ancient urban centres were diverse, encompassing royal, maritime, trade, and educational hubs, each playing interconnected roles in governance, commerce, and intellectual growth<sup>18</sup>. Temple towns, however, were unique in blending these functions, evolving into resilient entities that integrated political, economic, and cultural roles. Over time, they transcended mere religious sites, becoming centres of power, trade, and cultural production. The concept of cities as embodiments of cosmic order, symbolized through sacred geometry like the Mandala, influenced their spatial layout. Terms such as *mandira* (temple) and *nakar* (encompassing house, palace, temple, and city) reflect the deep integration of religious structures in urban formation, illustrating the vital role of temples in shaping ancient urban identity and functionality<sup>11,19,20</sup>.

Ancient texts like the *Manasara* and *Mayamata* emphasize the deliberate relationship between *dhara* (ground) and *harmya* (building), highlighting the strategic placement of temples (*prasada*) within the urban fabric to harness divine and cosmic energies<sup>21</sup>. This placement was fundamental in shaping the

physical and social landscapes of the town as illustrated in (Fig. 1). The resilience of temple towns lies in their adaptability to shifting political and economic contexts, while preserving their spiritual significance<sup>22,23</sup>. Serving as pilgrimage hubs, they stimulated local economies and facilitated cultural exchange. The evolution of these towns represents a unique urban phenomenon where religious, political, economic, and cultural forces converged, demonstrating a sophisticated urban planning approach that integrated cosmic symbolism with practical functionality, offering critical insights into the interplay of religion, power, and urban development in pre-modern societies.

**Temple-induced urbanism**

The phenomenon of “*Temple Induced Urbanism*” in Hindu temple towns is a complex interplay of religious, cultural, social, and urban development factors. The typical establishment of temples or churches within pre-existing urban centers is a common pattern observed globally. However, India presents a unique exception where temples have often served as nuclei for urban development, catalyzing the emergence of cities around their peripheries. Indian town-planning encompasses a broad range of elements, including markets (*apana*), thoroughfares and alleyways, drainage systems, temples (*devalaya*), royal residences, and civilian dwellings (*sarvvajana-grhavasa*), adorned gateways bearing flags, water stations (*prapa*), recreational gardens (*aramagyha*) & reservoirs<sup>24</sup>. In the design of early Indian urban settlements temples played a decisive role in shaping urban morphology. For instance, in *Angkor*, the strategic placement of major temples within the urban fabric demonstrates their critical influence on urban design and development<sup>25</sup>. Similarly, the morphological characteristics of medieval temple towns in Tamil Nadu reveal a unique urban pattern that revolves around these sacred

structures, serving as a blueprint for spatial organization and community integration<sup>26</sup>.

Temple towns, shaped by a constant influx of pilgrims, rapidly transformed as spiritual growth spurred urban expansion. These towns were typically organized in concentric layouts, with pradakshina paths and complex street networks converging towards temples, symbolizing pilgrimage and spiritual awakening<sup>27,28</sup>. This spatial structure facilitated religious practices while reflecting the towns’ evolving morphology as they expanded outward from their sacred centres. Smaller shrines and mandapas, established by saints and their followers, added layers of spiritual and social significance. Over time, towns like Benares evolved from religious sites into bustling urban centres, supported by civic amenities such as markets and rest houses, often backed by royal patronage. These towns, thriving on both religious devotion and commerce, functioned as catalysts for local economic activity, where temples invigorated markets through aggregation effect’s strategic locations, often at key trade routes or near waterways, and the presence of royal or administrative hubs, facilitated the growth of these towns<sup>29</sup>. During the early medieval period, temples within royal precincts served dual functions, fostering economic growth while serving religious purposes<sup>30</sup>. The patronage of royal deities and their worshippers spurred economic vitality, prompting the spread of urbanization as lesser nobles, or Samanta, emulated these practices, shaping the social, economic, and political landscape<sup>26</sup>.

**Contemporary challenges and urban development in temple towns**

Indian temple towns, navigating the modern urban paradigm, face threats to their cultural foundations amid urbanization and commercialization. The rapid growth of modern infrastructure around temples—once

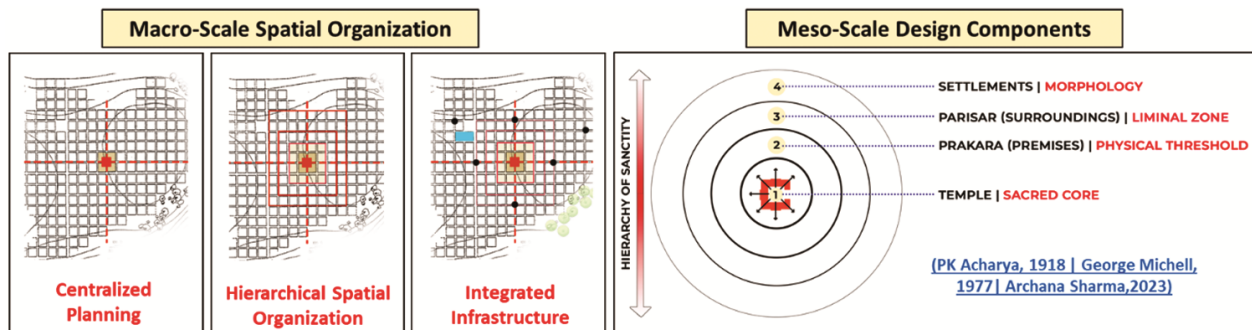


Fig. 1 — Meso- and Micro-Level Structure of the Spatial Organization of a Temple Town, (Source: Author’s own work)

the heart of traditional life-endangers both architectural integrity and spiritual significance, risking the loss of their unique cultural identity<sup>31</sup>. Once sanctuaries of spiritual tranquillity, these towns now struggle with the pressures of tourism and urban expansion, which strain fragile infrastructures, exacerbating issues like waste management, water scarcity, and pollution, especially during pilgrimages<sup>32</sup>. Socially, the rise of commercial activities for tourists overshadows religious practices, escalating living costs and displacing traditional communities. Politically, conflicts between heritage preservation and economic development intensify, with disputes over governance and property rights among religious entities, government bodies, and developers<sup>33</sup>. These challenges provide a framework for classifying temple towns, balancing the preservation of historical essence with the integration of modern infrastructure, defining them as either heritage cities or burgeoning urban centers<sup>23</sup>.

#### **Defining the factors influencing the categorization of Indian temple towns**

This section builds upon the established theoretical framework to delineate the factors that form a classification criterion for Indian temple towns, reflecting their diverse attributes. These following factors encompass geographical, historical, architectural, and cultural dimensions, carefully integrating multiple key aspects:

#### **Geographical context**

Indian temple towns exhibit a profound synthesis of geography and culture, where urban form is intricately shaped by regional landscapes<sup>24</sup>. In northern towns like Kedarnath and Badrinath, compact, winding settlements, constrained by the terrain, converge around temples, employing indigenous materials that resonate with the natural environment and spiritual purpose<sup>34</sup>. Similarly, Northeast towns like Tawang harmonize with hilly landscapes, crafting resilient, culturally adaptive structures that support both ritual and community life, with temple architecture reflecting Hindu spiritual iconography. In contrast, Southern towns such as Madurai and Thanjavur exhibit a distinct urban morphology, where large temples dominate concentric layouts and radial street patterns, managing pilgrim flows while reinforcing caste-based divisions, thus illustrating the interplay between urban design and cultural identity<sup>4,26</sup>. Coastal towns like Gokarna

and Rameswaram integrate their urban form with maritime vistas, positioning temples to engage with the sea while facilitating pilgrim movement and economic activity, exemplifying a sustainable fusion of heritage and modernity. These towns reveal an intentional, culturally enriched approach to urban planning, where spatial arrangements not only serve religious functions but also respond to environmental and socio-economic imperatives<sup>3</sup>.

#### **Historical classification of temple town evolution**

The evolution of Indian temple towns is marked by significant religious, social, and architectural transformations, catalysed by shifts in religious worship, political dynamics, and economic forces. The emergence of idolatry and the establishment of grand temples during the Gupta period (320-550 AD) heralded a pivotal phase in Hinduism, wherein temples became central to both spiritual and socio-economic life, fostering urban growth. Initially, during the Vedic period, religious practices centered on Brahmanical sacrificial rites, with temples evolving from simple agrarian structures to complex urban centres during the Maurya and Gupta periods<sup>35</sup>. The Gupta era, defined by 'mature Hinduism,' saw temples transform into hubs of education, commerce, and administration, closely integrated with urban life and local landscapes<sup>36</sup>. In South India, the rise of the *Chola* dynasty further accelerated temple town development, with the *Bhakti* movement fostering a synthesis of local traditions and Brahminic practices, resulting in a variety of temple town forms, including ceremonial centres, multi-temple complexes, and single-cult towns<sup>30</sup>. The Chola and *Vijayanagara* empires brought monumental temple constructions, such as *Brihadeshvara* and *Gangaikondacholapuram*, which spurred urbanization and the integration of temples into the economic and social fabric of cities<sup>37</sup>. The Islamic period, particularly under Mughal rule, introduced architectural changes and urban transformations, as seen in *Vrindavan* and *Banaras*, where the synthesis of Indo-Saracenic architecture reshaped temple town layouts<sup>38</sup>. The colonial period further altered these towns through the introduction of European architectural styles and urban planning, which, coupled with merchant patronage, led to a more segmented urban layout. Post-independence, rapid urbanization and modernization have significantly reshaped temple towns, with the rise of religious tourism and urban expansion threatening their cultural and historical essence, necessitating preservation efforts and adaptive governance reforms<sup>39</sup>.

The dynamic evolution of these towns reflects the interplay of religion, politics, and economics, and underscores the complexity of maintaining heritage while accommodating modern needs.

#### Architectural and urban features

Indian temple towns are classified into three predominant architectural styles: Dravidian, Nagara, and Vesara, each shaping urban layouts and reflecting distinct historical and cultural legacies. These styles, explored in works by Acharya, Hardy, Michell, and Sharma highlight the continuity of Southern architectural traditions versus the more fragmented styles in the North<sup>3,19,40</sup>. Southern towns, influenced by the Vijayanagara and Nayaka periods, maintain a unified architectural tradition. In contrast, northern towns, shaped by the Chandella, Kalinga, and Solanki dynasties, exhibit greater variation.

Dravidian architecture, seen in cities like Chennai, Madurai, and Kanchipuram, features temples as central urban landmarks, creating distinct separations between sacred and secular spaces<sup>4,41</sup>. The *Nagara* style, exemplified in Varanasi, Khajuraho, and Bhubaneswar, integrates temples with surrounding residential and commercial areas, fostering a blend of sacred and everyday life. The *Vesara* style, with square enclosures and central shrines, thrives in regions producing high-quality religious artifacts, thus enhancing local economies.

Temple town street layouts follow traditional patterns such as *Dandaka*, *Svastika*, *Prastara*, *Nandyavarta*, *Karmuka*, *Padmaka*, and *Chaturmukh*, as described in *Manasara*. The *Dandaka* layout, with straight intersecting streets, places temples at the outskirts, emphasizing a long, narrow town<sup>19</sup>. The *Sarvatobhadra* layout forms a square with central open spaces, featuring monasteries or guest houses at the corners. The *Nandyavarta* layout, resembling overlapping petals, has a central open area and a length twice its breadth. The *Padmaka* layout, like a lotus, arranges diagonal streets with an octagonal shape for residential areas. The *Svastika* layout forms a symmetrical swastika pattern, while the *Prastara* layout divides the town into 16 square blocks. *Chaturmukh* and *Karamuka* layouts integrate central gates and curving street patterns, with *Karamuka* layouts suited for riverbanks or coasts<sup>11</sup>.

An example of the *Karamuka* layout is seen in Ganj Golai, Latur, where the bow-shaped design integrates a central female deity temple, balancing aesthetic and functional urban planning Madurai,

adhering to Shilpasatra principles, follows the *Nandyavarta* layout with its quadrilateral design centered around the Meenakshi Amman temple, embodying social hierarchy<sup>19</sup>. Thanjavur follows the *Sarvatobhadra* layout with the palace centrally located and temples at the cardinal points, integrating cultural and social elements. Varanasi's radial design structures urban hierarchies, while Haridwar and Rishikesh use linear layouts along rivers to optimize land and economic potential. Indian temple towns can be classified based on their spatial configurations and growth patterns, shaped by the strategic and cultural placement of temples<sup>42</sup>. Central temple towns, such as Varanasi and Puri, exhibit concentric or radial layouts, with a dominant temple at the core, fostering dense urban development that supports both cultural and administrative functions<sup>42,43</sup>. Conversely, peripheral temple towns, like Trimbak, expand outward, integrating with natural landscapes to form a blend of dense urban centers and dispersed suburbs. Mono-centric towns, such as Puri, concentrate social and economic activities around a central temple, promoting cultural cohesion, while multi-centric towns like Kancheepuram feature multiple nodes of activity, enriching the urban environment with diverse cultural expressions<sup>17</sup>. This interplay of religious significance and urban planning reflects a nuanced understanding of spatial organization, where the configuration of temple sites influences community dynamics and urban morphology, revealing a complex relationship between religious spaces and the socio-cultural fabric of temple towns. (Fig. 2) illustrates the plan of temple cities showing multi-centric and mono-centric temple town development.

#### Religious and cultural significance

The classification of Indian temple towns hinges on the intricate interplay of religious, cultural, and urban elements that shape their identities. Pilgrimage centers like Varanasi and Tirupati are designed to accommodate mass gatherings, with radial layouts centring around the temple, surrounded by markets and narrow lanes that direct pilgrim flows<sup>17,42,44</sup>. Landscape pilgrimages, such as Haridwar, integrate natural elements like sacred groves and rivers into the spiritual experience, while mythology pilgrimages, exemplified by Ayodhya, embed mythological symbols in the urban fabric, imbuing the town with rich narrative significance<sup>45</sup>. Cultural and festival hubs, like Thrissur, prioritize expansive spaces for communal events, fostering cultural unity, while heritage sites like



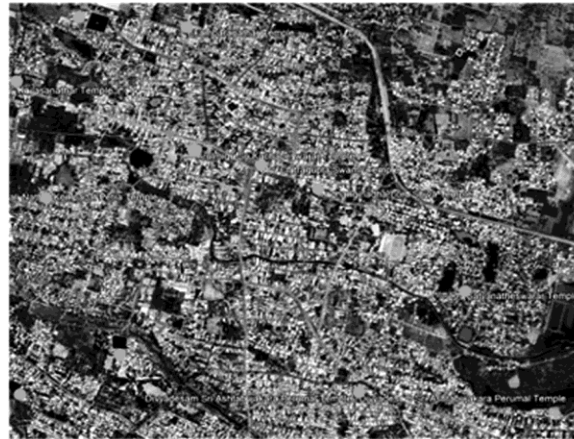
Plan of Varanasi, showing a cluster of centrally located temples. The temples are grouped together in one region, surrounded by the bustling town streets.



Urban layout of Trimbak - settlement pattern around the temple is more dispersed, resembling suburban or rural settings, with lower density and expansive surroundings.



Map of Puri, showcasing the architectural plan of a mono-centric temple town. In the center, a large, dominant temple stands as the focal point.



Map of Kancheepuram highlighting its multi-centric temple towns, showcasing clusters dispersed around each significant temple.

Fig. 2 — Plan of temple cities showing multi-centric and mono-centric temple town development, (Base imagery: Google Earth; Analysis and overlay: Author)

Konark emphasize historical architecture and the preservation of cultural continuity. Esoteric sites, such as those in Mayong Village and Kamakhya Temple, are designed for secluded, intimate spiritual practices, reinforcing the connection between sacred space and ritual. This classification reveals how religious and cultural significance deeply influences the urban form, street layout, and social structures of temple towns, reflecting the dynamic relationship between religious practices and urban design across history<sup>24</sup>.

#### **Economic, political, and global influences**

Temple towns in India are critical hubs for cultural and religious interaction, blending sacred, political, and economic spheres within their urban designs. These

towns, such as Coimbatore and Thrissur, are meticulously planned to accommodate diverse religious festivities and interfaith exchanges, fostering multicultural inclusivity and economic vitality through strategically designed street layouts that facilitate large gatherings and processions. This urban form extends beyond religious functions, intersecting with political aspirations and historical conflicts, particularly in towns like Ayodhya, where temples serve as both sacred and political centers, often mediating conflicts and promoting community cohesion. Temple-led initiatives in towns such as Tirupati and Vaishnodevi illustrate how religious institutions can drive urban development, with temples using their lands for commercial zones and social welfare projects, thereby

influencing local economies and governance. Temple-centric urbanization is also evident in towns like Vrindavan, where commercial and residential areas are strategically located around temples, creating a dynamic urban ecosystem that integrates religious, commercial, and residential functions, enhancing the towns' socio-economic and spiritual significance<sup>31</sup>. This integration of religious and secular functions underlines the unique role of temple towns in shaping regional socio-economic landscapes<sup>46</sup>.

### Methodology

The methodology of this study is rooted in a comprehensive secondary data analysis, emphasizing a rigorous literature review and archival research to construct a robust classification framework for Indian temple towns. The literature review synthesizes key theoretical and empirical works across urban planning, architectural history, cultural studies, and religious studies, offering a multi-disciplinary approach to understanding the spatial, social, and cultural dimensions of these towns. Archival research involves a thorough examination of historical texts, urban planning records, architectural manuals, and regional documents to uncover the evolution of temple-centered urban forms. This methodological approach ensures the research is deeply grounded in historical contexts, allowing for the identification of recurring spatial patterns and cultural motifs that have shaped these towns over time. By relying solely on secondary sources, the study guarantees a broad, scholarly foundation while maintaining objectivity and avoiding potential biases from primary data collection. However, this method also limits the study's capacity to capture contemporary, lived experiences within these towns, focusing instead on historical and theoretical perspectives. Nonetheless, the integration of diverse secondary sources enriches the analysis, providing a nuanced understanding of temple towns as both historical and evolving urban entities.

### Results

The results of this study present a structured framework for categorizing Indian temple towns, emphasizing the distinction between intrinsic and extrinsic factors that influence their spatial and cultural development. As outlined in Table 1, the intrinsic characteristics and features include geographical, historical, and architectural elements, which together define the physical and cultural identity of the town.

These factors are crucial in shaping the town's core structure, with the temple complex often serving as the central organizing feature. In contrast, Table 2 highlights the extrinsic characteristics and features, encompassing the social structure, religious and cultural significance, and broader economic, political, and global influences that interact with and impact the intrinsic qualities. This dual classification approach underscores the complexity of temple towns, illustrating how internal architectural and historical factors are continually influenced by external socio-economic and political dynamics. While this framework offers valuable insights for urban planners and cultural historians, its general categorization might overlook the specificities and regional variations that define the unique characteristics of individual temple towns. Nonetheless, the framework provides a comprehensive lens through which to examine the multifaceted development of these culturally rich urban centres.

### Discussion

This study reveals the complex interplay between religion, culture, and urban development in Indian temple towns. The radial development around central temples in towns like Thanjavur, Madurai, and Puri integrates religious, cultural, and economic functions, attracting pilgrims and driving local commerce<sup>5,47-49</sup>. However, this centralization often strains infrastructure and limits peripheral growth, hindering balanced urban expansion. In contrast, multi-temple towns such as Kanchipuram and Tiruchirapalli foster distributed urban growth, alleviating over-concentration and encouraging diversified economic activity. Yet, managing multiple temple zones presents challenges in infrastructure coordination and resource allocation, often leading to inefficiencies.

Linear pilgrimage corridors, seen in Vaishnodevi and Trimbak, enhance connectivity and support economic activity but also contribute to urban sprawl, neglecting surrounding areas and creating an uneven distribution of resources. These towns may become overly dependent on pilgrimage tourism, limiting their broader economic potential. Cities like Varanasi, Mathura, and Allahabad, rooted in religious significance, face ongoing tensions between preserving cultural heritage and accommodating modern urban needs. The influx of pilgrims often overwhelms infrastructure, necessitating a delicate balance between spiritual preservation and urban growth.

Table 1 — Intrinsic Characteristics and Features - comprises the Geographical Context, Historical Context, and Architectural and Urban Features, (Source: Author)

Broad Category	Sub Category	Category	Urban Form Characteristics	Street Layout Characteristics	Settlement Characteristics	
Geographical Context	Northern India	Northern Hilly Region	Terrain-adapted, temple-centric	Narrow, contour-following, foot pilgrimage	Compact, clustered around temples on limited flat land.	
		Indo-Gangetic Plains	Riverfront-oriented, Large gathering spaces	Streets lead to or run alongside Ghats linked to the temples	Dense, community-centered	
	Central India	Western India (Rajasthan & Gujarat)	Water-conserving, fortified towns, and temple complexes.	Organic, narrow & winding streets, hierarchical, pilgrim-supporting	Compact, landscape-integrated	
		Central India (Central Highlands & Deccan Plateau)	Features fortifications, natural topography, temple-centric	Irregular, temple-ghat	Temple-clustered, religious practice-intertwined	
Southern India	Southern Peninsula (Southern India)	Temple-dominated, concentric	Radial-grid hybrid, processional	Temple-clustered, pilgrim-supporting		
		Coastal Areas (Eastern and Western)	Coast-aligned, expansive complexes	Temple-sea connecting, ritual-facilitating	Density-varied, resilient materials	
Historical Context	Classical	Early Historic Period (circa 200 BCE to 1100 CE)	Organized, surrounded by agrarian fields, Central temple, walled	Layouts planned as per ancient texts, radiating outward from the central temple.	Residential areas clustered around the central temple complex	
	Medieval Period	Late Medieval Period (circa 1100 CE to 1526 CE)	Central focus on temple complex, hierarchical spatial organization	Organic street patterns, lined with bazaars and markets	Fortified, mixed-use	
		Late Medieval to Early Modern Period (1526 CE to 1857 CE)	Further expansion and development,	Streets lined with bazaars, Islamic influence in settlement patterns	Settlement patterns revolving around water sources	
	Colonial Period	Colonial and Post-Colonial Period (1857 CE to mid-20th century)	Traditional + modern integration with new infrastructure	Procession-oriented Major Disconnected with colonial urban network	Expansion and modernization, preservation efforts	
Modern Period	Modern and Contemporary Period (mid-20th century to present)	Hybrid architecture, expansion beyond historical cores	Commercialization of surrounding areas, efforts to pedestrianize streets	Urban sprawl, Urban sprawl, tourism		
Architectural and Urban Features	Architectural styles	Dravidian	Temple-anchored development	Gopuram-framing, ceremonial	Sacred-secular hierarchy	
		Nagara	Temple-integrated urban fabric	Organic, temple-oriented	Mixed-use, temple-centric, deep integration of the temple within daily life.	
		Vesara Style	Blended, circular/star-shaped plans	Curvilinear, style-fusion emphasizing	Synthesized traditions-shaped by the socio-economic and cultural dynamics of the time: Ritual-adaptive, community-fostering	
	Urban form & street layouts	Organic or Irregular Layouts	Contour-following, complex subdivisions	Nandyavarta/ Padmaka/Swastika patterns	Sarvatobhadra/Prastara patterns	Symmetrical, zoned
		Grid-Iron Layout	Uniform blocks, central focal point	Chathumukha pattern		Concentric, symbolic and cosmological significance.
		Radial Layouts	Central hub, hierarchical structure	Karmuka pattern		Waterfront-utilizing, trade-oriented
		Linear Layout	Natural feature-aligned			High density around the temple; compact urban core;
	Settlement Patterns	Central Temple Towns	Radial; temple at the sacred core.	Converging, narrow, organic streets; temple-centered hierarchy.		Dispersed, lower density around the temple;
		Peripheral Temple Towns	Linear or grid-like; temple on the edge or outskirts.	Streets leading to the temple; suburban or rural character.		
		Mono-Centric Temple Towns	Radial or concentric; temple as central focal point.	Streets radiate from the temple; strong visual and physical connection.		Dense, compact core; vibrant central activity hub;
Multi-Centric Temple Towns		Dispersed, polycentric; multiple temples as focal points.	Complex inter-temple network, procession-adaptive		Varied density; clusters around each temple.	

Table 2 — Extrinsic characteristics and features - comprises the social dynamism, religious and cultural significance, and economic, political, and global influences, (Source: Author)

Broad Category	Sub Category	Category	Urban Form Characteristics	Street Layout Characteristics	Settlement Characteristics
Religious and Cultural Significance	Pilgrimage Centres	Pilgrimage Centres	Concentric, radiating from central temple	Processional routes, hierarchical streets	Dense core, decreasing density outwards
	Cultural & Festival Hubs	Festival Capitals	Multiple focal points, expandable spaces	Wide avenues, convergence points	Temporary structures, flexible boundaries
		Cultural Tourism Destinations	Preserved historic core, modern periphery	Interpretive pathways for tourists	Layered historical development, limited growth
	Esoteric & Spiritual Sites	Mythic Cities	Organic growth, landscape integration	Symbolic pathways, mythical landmark	Narrative-driven development, evolving sacred spaces
Economic, Political, and Global Influences		Occult & Tantric Sites	Isolated, hidden enclaves	Restricted access, Meditative paths, sacred geometries	Secretive, limited permanent structures
	Religious & Cultural Crossroads	Religious and Cultural Crossroads	Usually commercialized	Designed to accommodate interfaith activities and celebrations.	Multi-cultural communities
	Conflict and Cohesion	Conflict and Cohesion	Prominent temple complexes at the core.	Symbolic and functional roles of political and religious activities.	Evolution from political centers to prominent religious cities.
	Economic & Developmental Roles	Temple-Led Community Initiatives	Temple lands used for community growth	Markets on temple-owned lands	Temples driving urban development and welfare.
Temple-Centric Urbanization		Commercial centers near temples	Planned streets leveraging temple traffic	Mixed-use areas integrating religious and commercial functions.	

The flexible infrastructure in festival-centered towns such as Puri and Thrissur, while economically beneficial, strains resources and raises sustainability concerns due to seasonal population surges. Lastly, heritage tourism in cities like Khajuraho, Hampi, and Konark faces the challenge of preserving cultural authenticity while promoting tourism. Controlled development around heritage cores restricts broader urban expansion, limiting economic opportunities and threatening the towns' authenticity.

In conclusion, the study's framework for understanding the spatial and cultural dynamics of temple towns highlights the need for nuanced urban planning. A balanced approach that addresses both historical and contemporary needs is essential for preserving the cultural and spiritual integrity of these urban spaces.

## Conclusion

This study's classification framework offers a nuanced understanding of Indian temple towns, categorizing them based on their unique spatial and cultural characteristics. It highlights the significant role temples play in shaping urban growth, economic dynamics, and governance, blending spiritual and

secular elements. The research reveals that while temple towns have historically functioned as centers of religious, social, and economic life, the pressures of modern urbanization and tourism pose significant risks to their cultural integrity. Future urban planning must balance heritage preservation with contemporary development needs, integrating sustainability and community participation. A major limitation of this study lies in its reliance on secondary sources, which may overlook contemporary realities. Thus, further empirical research, including on-site investigations, is essential to validate and refine the classification framework. This will ensure a more comprehensive understanding and provide actionable insights for policy development, helping to address the ongoing challenges faced by temple towns in maintaining their spiritual and cultural significance in the face of rapid urban expansion.

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### Conflict of Interest

The authors declare that there are no conflicts of interest regarding the publication of this research.

### Author Contributions

All authors contributed significantly to the conception, design, analysis, and writing of this paper, with responsibilities including the coordination of the study, manuscript drafting, and review. They collectively provided critical input throughout the research process, including the theoretical framework, literature review, and empirical data analysis.

### Data Availability

The authors affirm that the data supporting the findings of this study is available and can be obtained from the corresponding author upon reasonable request.

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