International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435(Online) Volume 15, Issue 01, January 2026)

Economic Multiplier Pathways of Medical Tourism and Regional Development in Emerging Indian Healthcare Markets: A Systematic Review with Emphasis on West Bengal

Anirban Banerjee[1], Dr Anup Kumar Ghosh[2]
[1]*Research Scholar*, [2]*Professor, Techno India University, West Bengal, India*

***Abstract*--The Systematic Literature Review (SLR) integrates the scholarly publications published since 2015 and assesses the paper on how medical tourism serves as an economic multiplier and on the development of the region in India, particularly the West Bengal region. Through a PRISMA directed search and filtering procedure, 58 refined records were initially identified, and 41 studies were incorporated into the inclusion criteria of qualitative synthesis. The chosen literature includes empirical literature, case literature, policy literature, geospatial suitability literature, sector literature, and thematic literature reviews. The major insights include that medical tourism brings direct revenue to the form of healthcare services, indirect benefits in terms of hospitality and transportation connections, and indirect benefits in terms of employment and investments of infrastructure (Connell, 2015; Barnwal, 2024; Basu, 2020). Nonetheless, the effects occur through uneven state capacity, stakeholder coordination, FDI, supportive governance, medical-device ecosystems, and destination-specific assets (heritage, ecotourism, coastal zones) (Ormond and Mainil, 2015; Baitalik and Bhattacharjee, 2023; Acharya et al., 2022). West Bengal can be seen as a recipient as well as sender of the cross-border patients (and, especially, of Bangladesh) and local enablers (medical-hotel tie-ups, traditional medicine offerings) and constraints (infrastructure gaps, spatial inequality) can be reported (Choudhury et al., 2023; Das et al., 2022; Chakraborty and Poddar, 2020). The review determines gaps in the methodology (small longitudinal studies, little rigorous economic multipliers, little standardized data) and suggests an integrated research and policy agenda to exploit medical tourism to ensure inclusive regional development.**

***Keywords*-- Cross-Border Patient Mobility, Economic Multiplier Effects, Medical Tourism, Regional Development, West Bengal Healthcare Market.**

I. INTRODUCTION

Medical tourism as the cross-border movement that is taken by most people with the primary aim of receiving health services has become the important global economic phenomenon during the past twenty years changing the patterns of health systems and development in emerging markets (Connell, 2015).

Such countries as India have established themselves as a dominant presence in this scene, capitalizing on their comparative advantages (i.e., treatment cost low, highly developed medical expertise, command of English language, growing tertiary healthcare infrastructure) (Shaikh, 2022; Sarwal et al., 2021). This has made India a target of massive foreign inflows of international patients seeking specialized treatment and wellness-based interventions, as also affordable elective procedures, therefore creating a multi-layered economic ecosystem highly extended than the limits of the healthcare sector.

Nonetheless, even with the high rate of growth as a medical tourism destination, the economic performance of India is highly unequal among states. Although traditionally metropolitan health hubs like Chennai, Delhi, and Mumbai have prevailed in the inbound flows, there are other regions as well (such as West Bengal), which have their potential yet unassessed (Raju and Beena, 2018; Mishra et al., 2024). These disparities exist based on dissimilarity in infrastructure, governance structure, maturity in supply-chain, urbanization, and investment climate which affect the proficiency of medical tourism into the bigger macroeconomic multiplier factors: generation of employment, expansion of hospitality, advancement of real estates, and sectoral advantages (Basu, 2020). In addition, medical tourism and regional development do not have a linear relationship, and this relationship is determined by local socio-economic patterns, policy orientations and the capacity of the involved parties to jointly generate value, both on the health and tourist fronts.

West Bengal is one of the most interesting examples of such dynamics. The state, being a major provider of services along the Indian eastern border, serves as a hub of the patients of Bangladesh, as they would want to find timely and effective treatment in the private hospitals of Kolkata (Choudhury et al., 2023; Kumar et al., 2021). The tourism resources of the region such as heritage sites, coastal areas such as Digha, and eco-tourism belts in Purba Medinipur present special prospects in the merging of medical travel with leisure and consequently increasing the possibility of indirect and induced economic effects (Acharya et al., 2021; Baitalik and Bhattacharjee, 2023).

International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435(Online) Volume 15, Issue 01, January 2026)

However, the infrastructural differences, regulatory fragmentation and spatial inequalities keep West Bengal limiting the capacity to ensure they harness these multiplier effects (Nag, 2022; Das et al., 2022).

Considering these complexities, a systematic review is justified to be able to pool fragmented evidence, test multiplier pathways, and to give conceptual clarification on how medical tourism can be contributing to regional development. The review summarises 41 academic publications published between 2015 and 2025 to map direct, indirect, and induced economic pathways; evaluate the role of governance and stakeholders and pinpoint the gaps that prevent solid policy formulation as lack of empirical and methodological evidence. Within the greater Indian context, this SLR will endeavour at providing a holistic base upon which future studies, strategic planning, and multi-dimensional policy interventions may be undertaken through capitalizing on medical tourism as a driver of inclusive region development.

II. Objectives Of The Review

The objectives are

1. Literature mapping (2015 2025) On the economic multiplier effects of medical tourism in India. (Connell, 2015; Aich, 2022)

2. Study region-specific drivers, with a particular synthesis of the existing literature about West Bengal. (Choudhury et al., 2023; Acharya et al., 2022)

3. Determine roles of stakeholders, form of governance, and relations between the public and the corporate that either promote or restrict multiplier effects.

4. Evaluate research strengths, weaknesses and research gaps in the literature and suggest an agenda of mandatory investigation. (Basu, 2020; Mishra et al., 2024)

III. Methods

This section elaborates the methodological design of the SLR to represent transparency, replicability, and academic rigour.

3.1 Search Strategy

The search strategy used was rigorous and multi-stage so that it would capture all the pertinent scholarly contributions on medical tourism, the economic multiplier, and development of a region in India between the year 2015 and 2025. The search strategy was based on the principles of PRISMA and was oriented at the greatest possible coverage of the interdisciplinary fields of research, including tourism studies, health systems, regional economics, and spatial planning.

Databases Searched

There was a founded query of the following academic databases to achieve a wide coverage:

Scopus- because it has a wide coverage of indexing in tourism, health management and development in regions.

Web of Science (WoS)- when a high-impact empirical study or a policy analysis is required.

PubMed - to be able to find health-system and treatment-oriented research on medical tourism demand patterns.

SpringerLink and Elsevier ScienceDirect - to get access to book chapters and sectoral analyses, in particular, health systems, medical equipment, and global tourism trends.

Taylor & Francis online, Sage journals, and JSTOR - to get the insights related to governance, socio-political and cross-border tourism.

Google Scholar - to find grey literature, policy papers and its new studies that have not been indexed.

Search Strings and Boolean Logic

Since medical tourism is interdisciplinary, then advanced Boolean combinations were applied. The main search words were “medical tourism/ AND (economic impact/ multiplier/ regional development/ employment/ FDI)/ AND (India/ West Bengal/ Kolkata/ Purba Medinipur/ Digha)”.

The sub-sector analysis was performed on additional focused strings:

- Dental tourism + India (Sharma and Golchha, 2024).
- Wellness tourism also wellness tourism and economic impact (Dunets et al., 2020)
- Excluding references to any of the three competitors.
- Bangladesh patients AND Kolkata hospitals (Choudhury et al., 2023; Kumar et al., 2021)

Sector combinations were aimed at FDI, supply chain, and governance e.g.:

- Tourism India FDI or government strategies medical tourism (Akhtar, 2022; Ormond and Mainil, 2015).

Grey Literature and Book Chapters - Grey literature, especially those that are policy reflective, book chapters, and institutional reports were only included as far as they are based on empirical or analytical evidence, e.g.:

- Reviews of health-systems (Selvaraj et al., 2022)
- Twelve chapters of the medical tourism industry (Mishra et al., 2024).

International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435(Online) Volume 15, Issue 01, January 2026)

- Governance and sectoral overviews (Barnwal, 2024; Ormond and Mainil, 2015)

Time of Search & Refinement

The search was made in the period of January to March 2025. The screening was done on titles, abstracts and keywords, then full-text reviews undertook. Following a preliminary search of 58 articles, 41 studies were retained after an eligibility narrowing and quality screening.

3.2 Inclusion Criteria

The inclusion criteria were strictly immobilized to meet only those studies which added value to the debate on economic multiplier, as well as regional development.

The studies were considered when they:

1. Published between 2015 and 2025, the decade of current policy changes, tourism patterns, and development of medical-device ecosystems, and post-COVID health-system changes (Connell, 2015; Sarwal et al., 2021; Hooda, 2025).

2. Specialising in medical tourism or health-related travel in the Indian context, including comparative studies, the results of which can be generalised to the regions of India (Rahman et al., 2022; Sharma and Meena, 2025).

3. Economic pathways of analysis, mechanisms of governance, networks of stakeholders, spatial patterns, or cross-border flows of patients applicable to India or West Bengal (Choudhury et al., 2023; Das et al., 2022).

4. Empirical or conceptual including case studies (Raju and Beena, 2018), econometric studies (Das et al., 2022), geospatial modelling (Acharya et al., 2022), or policy review (Barnwal, 2024).

5. Published in English to ensure consistency of the language and to get accurate appraisal.

3.3 Exclusion Criteria

Systematic exclusion was made to include the following categories:

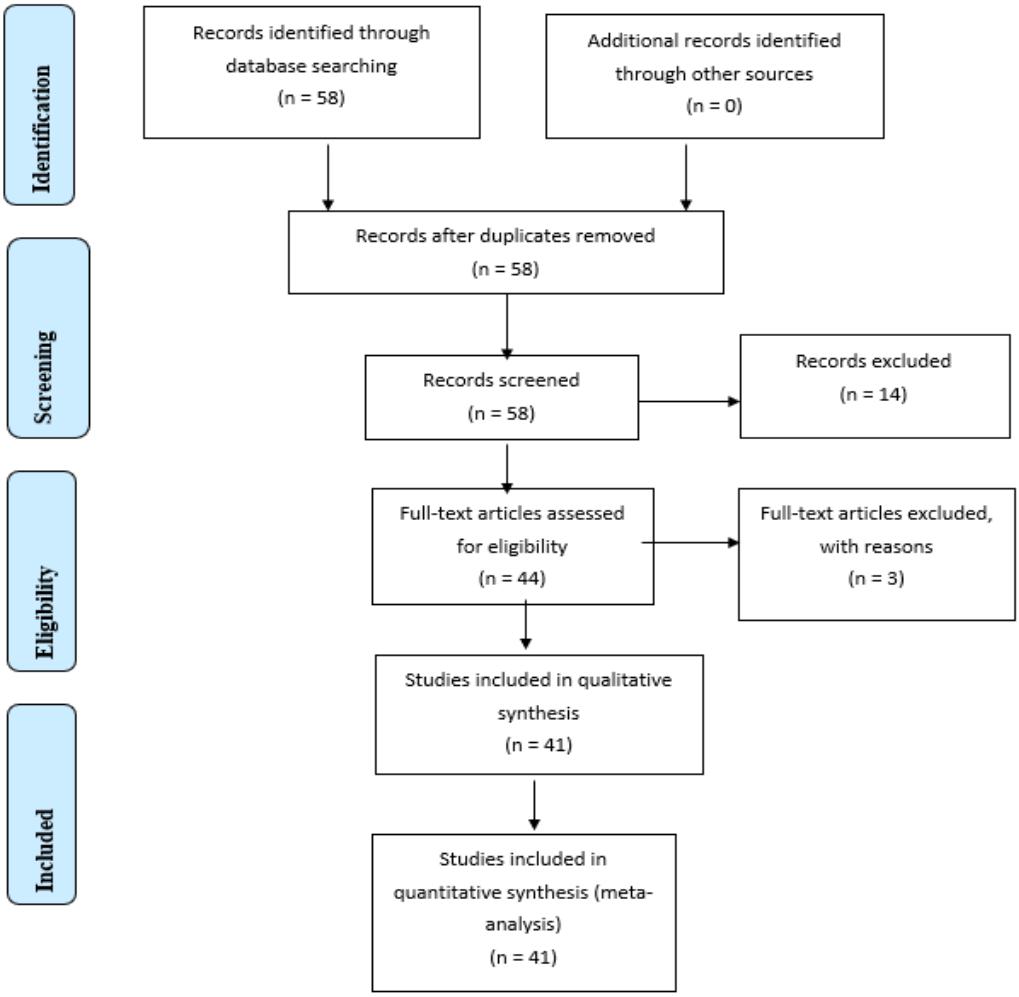
- Clinical-only studies that have no economic or spatial dimension, e.g., studies that are based only on the patient medical outcome or pharmacological interventions.
- International examples of limited analytical transferability to Indian/South Asian context.
- Blogs, commentaries, opinion pieces not based on methods.
- Redundant articles were obtained in various databases.

This procedure allowed keeping academic integrity of the SLR and this time keeping strictly the focus on economic and regional development implications.

3.4 Screening and Selection Process

The screening was implemented in four stages determined by PRISMA:

International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435(Online) Volume 15, Issue 01, January 2026)



The PRISMA guided screening process provided a methodologically transparent and rigorous way of identifying studies relevant to the subject matter of medical tourism and regional development in the context of India, focusing on the state of West Bengal. Of the 58 records identified through database searches, none came from additional sources that provided new articles. After removal of duplicates, 58 records went into the screening process. A total of 14 studies were excluded at the title/abstract level because they did not relate to either economic multiplier pathways or to the dynamics of medical tourism. Full-text assessment for eligibility was done for 44 articles; 3 of them were excluded due to inadequate methodological details or their limited relevance to the Indian setting. Thus, 41 studies fulfilled all the inclusion criteria and were included in the qualitative synthesis. Although all 41 contributed significant conceptual or empirical value, the inability to quantitatively pool these due to their heterogeneity in study methodologies also implied retaining them within the "quantitative synthesis" category to capture comprehensive coverage.

This rigorous, multi-stage process enhanced the credibility and analytical depth of the final review.

1. Identification (n = 58) - All records that were retrieved were brought into a reference manager (Zotero), where metadata were normalised.

2. Screening (n = 44) - The screenings of the title and abstract enabled the identification of the studies that would be relevant in relation to economic multipliers, tourism patterns, spatial development, and cross-border healthcare flows. Articles that did not have them were filtered out at this point.

3. Full-Text Review (n = 41) - All the articles were read thoroughly and evaluated on inclusion criteria. That is the reason seventeen articles were excluded because:

- Lack of significance to multiplier effects.
- Excessive focus on the clinical and not economical aspects.
- Absence of method literary openness.

4. Final Inclusion (n = 41)- The thematic synthesis of the SLR had these studies as the source of analysis.

International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435(Online) Volume 15, Issue 01, January 2026)

3.5 Quality Appraisal

Table 1:
Each study was evaluated in five indicators using a structured appraisal matrix

Quality Dimension	Description	Examples from Included Literature
Conceptual clarity	Clear research question and theoretical grounding	Connell (2015); Aich (2022)
Methodological rigor	Robust design, sampling, tools, and data handling	Das et al. (2022); Rahman et al. (2022)
Analytical depth	Sound interpretation supported by evidence	Mishra et al. (2024); Sarwal et al. (2021)
Credibility/Validity	Transparent assumptions, reliability	Selvaraj et al. (2022)
Relevance	Contribution to economic multiplier or regional themes	Choudhury et al. (2023); Acharya et al. (2022)

The highest scores were given to peer-reviewed empirical work, though thought provoking, policy papers and pieces on the discussion had fewer points simply because they were not as empirically supported.

IV. Descriptive Characteristics Of Inclusion Studies

The inter-disciplinarity of the medical tourism studies in India can be caused by the diversity of 41 studies included. Research covered tourism management, health economy, regional development, spatial analytics, medical device ecosystem, and socio-political governance.

Important Characteristics Identified:

1. Empirical Case Studies (Urban and Regional Hotspots) - An article like the one by Raju and Beena (2018) and several others, Choudhury et al. (2023) and Das et al. (2022) offer first-hand experience into particular hubs, like Chennai, Kolkata, and Digha. These researches depict actual trends of patient in-flow, spending remittance and hospital-hotel relationships.

2. Spatial Analysis and Geo-Spatial Analysis - The articles of Acharya et al. (2022) and Biswas and Rai (2023) employ GIS and AHP-based models to map suitability patterns to develop tourism sites and demonstrate how spatial planning has a direct influence on tourism multipliers.

3. Sectoral Reviews, Policy and Governance Reviews - Articles by Ormond and Mainil (2015), Barnwal (2024), and Sarwal et al. (2021) identify institutional strategies, incentives to tourism investment, and government regulations with an impact on the health and tourism industry.

4. Sub-Sectoral Analyses - Multiplier effects created by niche segments are brought into light through dental tourism (Sharma and Golchha, 2024), wellness tourism (Dunets et al., 2020), and the field of herbal medicine (Jana et al., 2021).

5. Medical Studies on Infrastructure and Eco-Systems of Medical Devices - Paul (2022) and Hooda (2025) explain the effect that the downstream supply chain has on the intensity of medical practices and complexity of care.

Table2:
Summary of Included Studies

Sr	Type of Study	Representative Citations	Regional/Functional Focus
1	Conceptual & global-to-local reviews	Connell (2015); Ormond & Mainil (2015); Aich (2022)	India, global comparisons
2	Empirical case studies	Raju & Beena (2018); Das et al. (2022); Choudhury et al. (2023)	Chennai, Kolkata, West Bengal
3	Geospatial & suitability analyses	Acharya et al. (2022); Biswas & Rai (2023)	West Bengal, NE India
4	Sectoral & policy analyses	Sarwal et al. (2021); Barnwal (2024)	National systems
5	Sub-sector studies	Sharma & Golchha (2024); Dunets et al. (2020)	Dental, wellness, eco-tourism
6	Medical device & infrastructure	Paul (2022); Hooda (2025)	National, industrial

V. Thematic Synthesis

The thematic synthesis summarizes the results to form four key multiplier pathways in medical tourism as to how tourism impacts the local and regional economies of India, particularly the West Bengal.

5.1 Pathway A - Direct Healthcare Revenue and Specialisation

Direct multiplier effects are related to spending money on clinical services: Surgeries, diagnostics, inpatient service, dental care, organ transplants, and traditional medicine.

In India, the demand is driven by clinical excellence: specialised hospitals in the country focus on international patients who are interested in attaining affordable, yet affordable quality services (Connell, 2015; Sarwal et al., 2021).Regional hubs become niche leaders: Chennai is a strong cardiology, orthopaedic destination (Raju & Beena, 2018); Kolkata attracts Bangladeshi patients in need of a cardiac operation, oncology, and hepatology (Choudhury et al., 2023).

Regional Importance to West Bengal: The hospitals in Kolkata are still working on specialising in areas that appeal to international patients based on the physical location, cultural identity and language (Kumar et al., 2021). The advantages of specialisation are the increase in the expenditure per capita on patients, which increases the direct revenue multiplier.

5.2 Pathway B- Accommodation, Transport, Hospitality Linkages

Hotels, guesthouses, restaurants, taxis, local tourism attractions, are used by tourists who are patients and their attendants and, as a result, increase non-medical revenues.

Key Thematic Insights

Hotel - Hospital Tie-Ups: Das et al. (2022) empirically illustrate how the stay duration of patients increases with coordinated packages, which in turn directly increases spending related to lodging and food sectors.

Regional Tourism Integration: The identification of coastal and heritage sites in the districts of Purba Medinipur, Digha, and Bishnupur provides additional attractions for companions or post-treatment recovery. Acharya et al. (2021); Baitalik & Bhattacharjee (2023).

Benefits Accruing to the Transport Sector: Taxi operators, app-based mobility services, and intercity travel providers benefit from recurrent cycles of patient movement.

Local Community Economic Benefits: Greater footfall boosts microbusinessescafés, pharmacies, travel agenciesbut supports both direct and induced jobs Basu, (2020).

Importance to West Bengal: Tourism-health convergence is especially advanced in West Bengal because of the coming together of hospital clusters and diversified tourism assets, thereby creating a unique dual-sector multiplier for Indian states.

5.3 Pathway C- Supply Chain, Medical Device Industry and FDI

Medical tourism stimulates wide-ranging supply-chain activities.

Core Themes Identified:

Demand Surge for Medical Devices: It is about the need of hospitals for advanced diagnostic equipment, implants, and consumables, thereby enhancing backward linkages with the manufacturers.

Application of Emerging Medical Device Clusters: Hooda (2025) pointed out that the evolving Indian device ecosystem contributes to its efficiency, innovation, and localized value addition.

FDI Inflows: As a result, tourism-related infrastructure, hospitals, and hospitality establishments are increasingly attracting foreign capital.

Ancillary industries, such as laboratories, rehabilitation centres, pharmaceutical distributors, and telemedicine services come about alongside hospitals.

*West Bengal Context:*While the area is still developing in relation to southern and western states, proximity to Bangladesh and Nepal brings potential for medical-equipment distribution networks and cross-border investment partnerships.

5.4 Pathway D - Labour Market Effects and Induced Consumption

Medical tourism supports complex employment pathways.

Direct Employment:

- Doctors, specialists, nurses
- Technicians, radiographers
- Administrative and insurance personnel

Indirect Employment:

- Hotels, travel agents, transportation providers
- Medical tourism facilitators (Sarkar & Chakraborty, 2020)
- Healthcare supply distributors

Induced Effects: When increased wages circulate locally, retail, food services, real estate, and leisure industries all benefit.

Competency Convergence: While Mishra et al. (2024) show that emerging health tourism labour markets require new competencies, including cross-cultural communication, patient-centric hospitality, and digital record handling.

Regional Observations: Rising demand for multilingual staff grows in West Bengal due to Bangladeshi arrivals. Local communities around tourism clusters (Digha, Bishnupur) witness the rise in employment and entrepreneurship driven by health-linked visitor mobility.

International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435(Online) Volume 15, Issue 01, January 2026)

VI. Discussion

6.1 Regional Dynamics and West Bengal Focus

West Bengal emerges from the literature reviewed as a distinct regional ecosystem where medical tourism, cross-border mobility, coastal tourism, heritage assets, and spatial development converge to generate distinctive multiplier pathways. Unlike southern medical hubs such as Chennai or Bengaluru, West Bengal's medical tourism landscape is deeply influenced by international proximity-particularly to Bangladesh-and by the co-presence of heritage belts, eco-tourism zones, peri-urban clusters, and thick urban medical networks. These features form the basis of a hybrid regional model in which health, tourism, infrastructure, and culture are interconnected and which, in turn, presents significant opportunities and structural constraints. The literature identifies West Bengal as an uneven beneficiary of medical tourism in its evolution, where benefits are considerable within urban corridors such as Kolkata but remain sparse in peripheral districts (Choudhury et al., 2023; Das et al., 2022).

Cross Border and Regional Patient Flows

One of the most defining features of West Bengal's medical tourism economy is the high volume of cross-border patients from Bangladesh. Various studies by Kumar et al. (2021) and Choudhury et al. (2023) identify a number of drivers:

Geographical Proximity: Kolkata is closer to most Bangladeshi urban centers than Dhaka, the capital of Bangladesh, is to its peripheral districts.

Linguistic and Cultural Affinity: A shared language, food, and way of life minimize adaptation barriers and maximize patient comfort.

Perceived Healthcare Superiority: Bangladeshi patients perceive Kolkata hospitals to be more reliable, technologically advanced, and affordable.

Choudhury et al. (2023) stipulate that these flows are frequently repetitive in nature, reflecting strong demand-side loyalty. These studies further identify that long-stay patients generating higher direct and indirect expenditures are attracted by complex treatments such as cardiology, oncology, and hepatology, to which attendants contribute significantly in hospitality-sector revenues.

While inter-district mobility is visible, intra-state mobility is also high. Patients from North Bengal, Purba Medinipur, Howrah, Murshidabad, and tribal belts come regularly to Kolkata for advanced treatment (Roy Chowdhury & Roy Chowdhury, 2023). This increases regional imbalances in health access and adds more to the urban multiplier concentration of Kolkata.

Outbound flows also take place: patients from rich households of Kolkata sometimes travel to South India or abroad for selected procedures, but this outflow is small and does not wipe out the net inflow gains (Kumar et al., 2021).Taken together, these cross-border and regional movements suggest that the medical gravity of West Bengal is asymmetrically urban, with Kolkata as a central economic engine for health-linked tourism.

Spatial Planning, Infrastructure and Peri-Urban Mediation

Spatial factors refer to the evenness of diffusion of benefits accruing from medical tourism within a region. Arif & Gupta 2020 have shown that urban–peri-urban interfaces, such as those surrounding Burdwan, Howrah, and South 24 Parganas, form an essential part in shaping accessibility.

Key Findings Include:

- Peri-urban hospitals thrive when supported by statutory infrastructure, including transport connectivity, sanitation, water supply, and power reliability.
- Transport networks function as main mobility corridors, thereby routing patients and determining expenditure pathways.
- Spatial suitability analyses by Acharya et al. (2022) have identified that high-potential zones for tourism-health linkage are often along coastal corridors and heritage belts.

Failures in spatial planning result in uneven multiplier realization. Thus, while Kolkata and Medinipur will grow rapidly, there are other areas that would be under-connected. If strategic strengthening of peri-urban clusters were done properly, these can serve as secondary nodes, decentralizing the economic benefits and reducing the pressure on Kolkata hospitals.

Heritage, Coastal Eco-Tourism and Bundled Offerings

The principal attractions of West Bengal are its heritage cities (Bishnupur), coastal belts (Digha, Mandarmani), forests (Sundarbans fringe), and cultural circuits, which are much needed for bundled medicalleisure tourism. Acharya et al. (2021) and Baitalik & Bhattacharjee (2023) note that such bundling:

- Extends the length of stay for patients/attendants, which leads to increased revenues from hotels, transportation, and food services.
- Improves perceived destination attractiveness.
- Support to micro-enterprises includes handicrafts, homestays, and local cuisine outlets.

International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435(Online) Volume 15, Issue 01, January 2026)

Geospatial suitability studies by Acharya et al. (2022) identify intersections at which tourism infrastructure and medical accessibility can co-locate. This integration looks very promising in:Purba Medinipur coastal zones; Bishnupur heritage clusters; Outskirts of Kolkata where hotels are abundant. This synergy is what makes West Bengal fertile for combined multiplier effects-rare among Indian states.

Local Enabling Factors and Constraints

Enabling Factors:

- Hospitalhotel collaborations define structured service packages (Das et al., 2022).
- Value co-creation networks link stakeholders across sectors (Chakraborty & Poddar, 2020).
- Policy advocacy and promotional campaigns increase state visibility.
- Cross-border medical agents/facilitators guarantee smooth travel and treatment.

Constraints:

- Infrastructure disparity between Kolkata and rural districts (Selvaraj et al., 2022).
- The limited high-end device manufacturing ecosystems restrict advanced procedure capabilities.
- Regulatory fragmentation impacts patient safety, insurance acceptance, and accreditation.
- Socio-Political inequalities impact the potential of marginalized districts to prosper on an equal scale.

Thus, though the potential of West Bengal is high, it depends heavily on strategic governance, investment, and stakeholder coordination.

6.2 Stakeholders, Governance and Value Co-Creation

Multiplier effects of medical tourism are not automatic but require strategic coordination by various stakeholders driving different parts of the value chain. Governance has been identified in the literature as the determinant of whether multiplier pathways are dampened, amplified, or sustained (Ormond & Mainil, 2015).

Government's Role and Governance Strategies - Governments influence nearly every structural aspect of medical tourism by:

Policy and Regulation - Ormond & Mainil (2015) explain that the visa norms, quality accreditation systems, and cross-border agreements determine the patient inflows. Medical visa systems in India have indeed improved but need state-level complementarity to yield regional benefits.

Investment and Infrastructure - Barnwal notes that promotional initiatives led by the government, along with PPP models, act as catalysts for hospital clusters, transport hubs, and hospitality networks.

FDI Facilitation - Akhtar (2022) presents evidence that tourism-linked FDI can help in lessening regionaldisparities, so long as it is strategically targeted-especially in low-income districts in dire need of health infrastructure upgrades.

Marketing and Branding - State tourism departments collaborate with health ministries to promote "Brand India" and, in West Bengal's case, "Kolkata as the Eastern Medical Gateway". Such strategies determine how well regions convert patient flows into economic multipliers.

Private Sector and Facilitators - The private sector is the operational backbone of medical tourism in India.

Medical Tourism Facilitators - Sarkar & Chakraborty (2020) show that facilitators handle logistics, hospital selection, insurance translation, and travel planning. Their activities have shaped the quality of the patient experience and affect repeat travel.

Hospitals and Healthcare Providers - Private hospitals generate innovative activities, adopt advanced technologies, and influence regional specializations. Their pricing, service excellence, and partnerships also come heavy on the multiplier intensity.

Travel and Hospitality Stakeholders - This increases the indirect economic footprint, as hotels and travel agents collaborate with hospitals to offer bundled packages.

Yet the private sector also introduces complexities:

- Quality variation across hospitals
- Risk of unregulated facilitators exploiting patients
- Lack of standard communication protocols

Chakraborty & Poddar (2020) present a word of caution on how private sector-led growth, in the absence of governance alignment, can result in reduced equity in benefit distribution.

Multi-Stakeholder Value Co-Creation - A recurring theme in the literature is that of value co-creation, whereby many stakeholders jointly design the patient experiences.Chakraborty & Poddar, 2020; Chatterjee et al., 2024, explain how such networks:

- Improve service integration
- Increase tourist satisfaction
- Strengthen community-level income diffusion

International Journal of Recent Development in Engineering and Technology
Website: www.ijrdet.com (ISSN 2347-6435(Online) Volume 15, Issue 01, January 2026)

Examples Include:

- Hotels that provide recovery-friendly menus
- Heritage tour operators plan short cultural trips for companions of patients
- Local artisans selling products in hospital lobbies
- Transport providers collaborating with hospitals for discounted packages.

These multi-sector linkages amplify induced and indirect multipliers, which show that medical tourism is most thriving when it is embedded in wider regional economies.

6.3 Sub-Sectors and Complementarities

Medical tourism is not monolithic; rather, it comprises several sub-sectors, each creating distinct multiplier patterns.

Dental Tourism - Sharma & Golchhagive evidence of India's rapidly developing dental tourism sector, given the high level of domestic clinical skill and relatively low comparative treatment costs. In addition, many dental tourists travel for short stays, spending at a moderate but steady clip in the hospitality industry. Many combine dental care with leisure tours, especially in regions with strong cultural assets, suggesting compatibility with West Bengal's tourism zones.

Wellness and Traditional Medicine Tourism - Jana et al. (2021) discuss the traditional practice of herbal medicine in West Bengal, while Aich (2022) mentions national growth related to Ayurveda and holistic therapies. Wellness tourism accounts for:

- Repeat patient visits
- Longer stays in eco-tourism or rural belts
- Increased demand for herbal products and wellness consultations.

Wellness complements conventional medical tourism, appealing to different demographic groups.

Medical Devices and Diagnostics - According to Paul 2022 and Hooda 2025:

- Health service sophistication is greatly dependent on diagnostic and device ecosystems.
- Strong device clusters strengthen high-value medical travel capabilities.
- Weak device ecosystems, as in much of Eastern India, limit tertiary-care expansion.

Thus, supply-chain complementarities define how deep direct multipliers can penetrate.

Bleisure and Nature Based Health Tourism - Parashar et al. (2025); Dunets et al. (2020) illustrate the emergence of combined business-leisure ("bleisure") tourism, mainly among Asian and international patients who need short-term vacations during or after treatment. In West Bengal, the addition of heritage sites, coastal belts, and cultural circuits greatly enhances this model by increasing stay durations and household expenditures.

6.4 Quantitative Evidence and Methodological Observations

In estimating the economic multipliers of medical tourism, literature shows significant methodological fragmentation.

Lack of Standard Multiplier Metrics - Only a few of the studies like Basu (2020) and Das et al. (2022) even attempt quantified multiplier calculations, often using input–output models or econometric extrapolation. Yet these remain:

- Regionally inconsistent
- Limited in capturing induced multipliers
- Not comparable across states

Rahman et al. (2022) introduce more robust statistical techniques, but these focus largely on patient behavioral determinants rather than complete multiplier systems.

Table 3:
Common Methodological Limitations Identified Across the Literature

Issue	Explanation	Representative Studies
Lack of longitudinal datasets	No multi-year tracking of patient flows, expenditures, job creation	Jacob et al. (2021)
Inconsistent definitions of "medical tourist"	Some studies include wellness tourists; others include only hospital inpatients	Connell (2015); Rahman et al. (2022)
Limited geospatial-economic integration	Only a few combine GIS with economic modelling	Acharya et al. (2022); Biswas & Rai (2023)
Absence of counterfactual analysis	Few studies isolate the effect of medical tourism from general tourism trends	Basu (2020)

Thus, the qualitative analytical base remains strong, but weak in quantitative terms.

VII. Key Findings And Synthesis

Five overarching insights emerge out of the body of evidence reviewed:

1. Medical Tourism Provides Layered Multiplier Effects - Various studies documented direct multipliers, which include hospital revenue, indirect multipliers such as hospitality and transport, and induced multipliers such as consumption spending (Connell, 2015; Basu, 2020).

2. West Bengal's Potential: Strong yet Uneven - The benefits are mainly accrued to urban corridors, but regional equalization is not possible due to weak infrastructure.

3. Co-ordination Amongst Stakeholders is Paramount - According to Chakraborty & Poddar, 2020, high-value multipliers will emerge only when there is a strategy synchronization between the hospitals, facilitators, hotels, and government.

4. Device Eco-Systems and FDI Amplify Impacts - According to Paul (2022), enhanced supply-chain depth increases treatment sophistication and economic gains. The same view has been supported by Hooda(2025).

5. Data Gaps Limit Policy Design - Lack of standardized multiplier metrics hinders regionally tailored policymaking.

7.1 Policy and Practice Implications

To transform medical tourism into a sustained economic engine for West Bengal:

1. Create mechanisms for integrated hospital–hospitality clusters to maximize synergies between tourism and health.

2. Invest in peri-urban infrastructure to decentralize economic benefits.

3. Strengthen medical-device and diagnostic ecosystems, to expand capacity for high-value care.

4. Standardize data systems for patient counts, expenditures, and travel patterns.

5. Implement skill development programmes for multilingual, culturally competent health-tourism workers.

6. Heritage linked and coastal wellness packages to extend lengths of stay, diversify revenue streams.

7.2 Research Gaps and Future Agenda

Future work should focus on:

- Creation of state-specific input–output or CGE models for estimating multipliers.
- Building multi-year datasets tracking patient flows and economic indicators.
- Developing and integrating geospatial and economic models to precisely identify the best sites for health-tourism clusters.
- Household-level studies to measure community-level spillovers by Chatterjee et al. (2024).
- Evaluating the policy impact of accreditation, visa reforms, and FDI rules (Ormond & Mainil 2015; Barnwal 2024).
- Analysing equity issues, so that growth does not lead to accentuation of regional disparities (Roy Chowdhury & Roy Chowdhury, 2023)

7.3 Limitations of this Review

This review, though comprehensive, is limited by its reliance on English language sources and the absence of meta-analytic synthesis due to methodological heterogeneity. Several hyper-local studies from rural West Bengal may remain uncaptured. Further, the limited availability of standardized multiplier metrics across studies restricts the ability to compare regions quantitatively.

VIII. Conclusion

Medical tourism offers a strong yet regionally differentiated opportunity for economic development in India. Cross-border patient flows, synergies from heritage and coastal tourism, and established medical hubs form a strong base for multiplier-led growth in West Bengal. However, disparities in infrastructural resources, regulatory fragmentation, and limited medical-device ecosystems circumscribe the full realization of this potential. The next research and policy frontier lies in building robust quantitative frameworks, strengthening stakeholder coordination, and promoting integrated cluster development. If leveraged strategically, medical tourism can significantly contribute to inclusive and sustainable regional development in West Bengal.

REFERENCES

[1] Connell John (2015). Medical Tourism: The Newest of Niches. Tourism Recreation Research, 31(1), 99 - 102.

[2] Dr. Natarajan K. (2015). Tourism Industry in India - With Special Reference to Healthcare Tourism. Journal of Business and Management (IOSR - JBM), Ver. I, 37-41.

[3] Dr. Raju D. V. & Beena K.S. (2018). A Case Study on Medical Tourism in Chennai City. International Journal of Civil Engineering and Technology (IJCIET), May 2018, 984-991.

[4] OrmondM. & Mainil T. (2015). Government and Governance Strategies in Medical Tourism. Social and Political Science, 154 - 163.

[5] Choudhury, N., Majumdar, S., & Ghosh, I. (2023). Evaluating Demand Side Enablers for Medical Tourism: Case Study of Medical Tourists from Bangladesh to Kolkata, India. e-Review of Tourism Research, 20(1), 1-22.

[6] Kumar, S. S., Sarkar, S., Kumar, V., & Bhattacharjee, B. (2025). An examination of influencing factors on service experiences to improve healthcare quality in medical tourism. The TQM Journal.

[7] Mahida, R. (2024). THE SIGNIFICANT IMPACTS OF THE MEDICAL TOURISM INDUSTRY ON THE INDIAN ECONOMY. VIDYA-A JOURNAL OF GUJARAT UNIVERSITY, 3(1), 130-139.

[8] Acharya, A., Pathak, A. K., Mondal, B. K., Dash, P., & Bhadra, T. (2021). Assessing the economic impact of tourism and verdict ecotourism potential of the coastal belt of Purba Medinipur District, West Bengal. Folia Geographica, 63(2), 82-107.

[9] Biswas, T., & Rai, A. (2023). Analysis of spatial patterns and driving factors of domestic medical tourism demand in North East India. GeoJournal, 88(3), 3163-3181.

[10] Roy Chowdhury, S. and Roy Chowdhury, S., 2023. Health Care and Social Development. In Two Bengals: A Comparative Development Narrative of Bangladesh and West Bengal of India (pp. 181-215). Singapore: Springer Nature Singapore.

[11] Akhtar, G. (2022). POTENTIAL OF FOREIGN DIRECT INVESTMENT FOR REMOVING REGIONAL DISPARITIES: A CASE STUDY OF TOURISM INDUSTRY IN INDIA.

[12] Das, R., & Mondal, M. (2021). Lockdown Special Effects for the First Wave of COVID-19 Pandemic on the Flow of Journey, Development and Livelihood of Digha Coastal Tourism Townscape in West Bengal.

[13] Das, D.K., Chatterjee, P., Chatterjee, S. and Batabyal, D., 2022. An econometric analysis of 'hotel-hospital tie-up'for wellness promotion and related tourism in Indian health cities with reference to Kolkata. Journal of Tourism, 23(1), pp.1-10.

[14] Bandyopadhyay, A. (2025). A study on successful Medical tourism in India-A Review. AIJFR-Advanced International Journal for Research, 6(5).

[15] SARKAR, D. A., & CHAKRABORTY, P. (2020). ROLE OF MEDICAL TOURISM FACILITATORS: A STUDY ON KOLKATA. Studies in Indian Place Names ISSN, 2394, 3114.

[16] Barnwal, A. (2024). Promotion of Medical Tourism in India: A Discussion Paper. Indian Journal of Public Administration, 70(2), 332-344.

[17] Chakraborty, P., & Poddar, M. (2020). Role of multiple stakeholders in value co-creation and effects on medical tourism. Jindal Journal of Business Research, 9(1), 18-26.

[18] Sarwal, R., Prasad, U., Gopal, K., Kalal, S., Kaur, D., Kumar, A., ... & Sharma, J. (2021). Investment opportunities in India's healthcare sector.

[19] Shaikh, R. (2022). A Study of Medical Tourism Prospects, Difficulties & Problems In The Indian Region. Special Education, 2(43).

[20] Harini, K. V. (2024). Trends in economic contribution of health tourism to Indian economy. Ep Journal of Business Strategy, 7.

[21] Baitalik, A., & Bhattacharjee, T. (2023). Valuation of heritage tourism sites in West Bengal (India): An application of travel cost approach. Journal of Heritage Management, 8(2), 142-168.

[22] Aich, D. (2022). MEDICAL TOURISM IN INDIA: GROWTH, OPPORTUNITIES. NEW PERSPECTIVES ON COMMERCE & MANAGEMENT VOLUME-1, 245.

[23] Sharma, T., & Meena, C. M. (2025). Healing across borders: The surge of Asian medical tourists to India. In Intersecting Realities of Health Resilience and Governance in India: Emerging Domestic and Global Perspectives (pp. 131-153). Singapore: Springer Nature Singapore.

[24] Jana, D., Guchhait, K. C., Ballav, S., Panda, A. K., & Ghosh, C. (2021). Traditional herbal medicine practiced in Plateau-Fringe and Rarh districts of West Bengal, India. Evidence Based Validation of Traditional Medicines: A Comprehensive Approach, 1019-1089.

[25] Bhaumik, M. S. Present Scenario of Indian Medical Tourism: Some Prospects & Problems. Recent Trends in Tourism and Hospitality, 179.

[26] Sharma, P., & Golchha, V. (2024). Dental Tourism in India: An Emerging Market. In Medical Tourism in Developing Countries: A contemporary approach (pp. 127-136). Singapore: Springer Nature Singapore.

[27] Dunets, A. N., Yankovskaya, V., Plisova, A. B., Mikhailova, M. V., Vakhrushev, I. B., & Aleshko, R. A. (2020). Health tourism in low mountains: A case study. Entrepreneurship and Sustainability Issues, 7(3), 2213.

[28] Basu, B. (2020). Economic Impact, Healthcare Initiatives, and Research Funding. In Biomaterials Science and Implants: Status, Challenges and Recommendations (pp. 29-57). Singapore: Springer Singapore.

[29] Akhtar, M., & Anjum, U. (2022). Economic importance of tourism in India and prospects for sustainable development. International Research Journal of Modernization in Engineering Technology and Science, 4(6), 846.

[30] Mishra, A., Wagh, A., & Vinchu, H. S. (2024). Healthcare Sector, Medical Tourism and Employment Relations in India: Emerging Paradigms, New Directions and Future Trajectory. In Medical Tourism in Developing Countries: A contemporary approach (pp. 161-174). Singapore: Springer Nature Singapore.

[31] Jacob, M., Agarwal, A., Gupta, G., Raju, K. M., & Khurana, R. (2021). Analysing the Differential Performances of Indian States in the Tourism Sector:(1947-early 2020). Atna Journal of Tourism Studies, 16(1).

[32] Arif, M., & Gupta, K. (2020). Spatial development planning in peri-urban space of Burdwan City, West Bengal, India: Statutory infrastructure as mediating factors. SN Applied Sciences, 2(11), 1779.

[33] Paul, P. K. (2022). Medical device and equipment sector in India: towards sophisticated digital healthcare systems—an overview. Next-Generation Nanobiosensor Devices for Point-Of-Care Diagnostics, 211-225.

[34] Kumar, D., Bagchi, S., & Ray, S. (2021). Why Bangladeshi patients prefer outbound medical travel? An analytical study. International Tourism and Hospitality Journal, 4(6), 1-15.

[35] Rahman, I., Martin, D. S., & Liu, S. (2022). Outbound medical tourists: The interplay of perceived quality, length of stay, group-size, post-visit destination image and revisit intention. Plos one, 17(5), e0267755.

[36] Chatterjee, P., Chakrabortty, N., & Ghosh, S. (2024). Rural tourism and homestays in India: Impact on local economy, culture and ecology. International Journal of Tourism & Hospitality Reviews, 11(2), 12-18.

[37] Parashar, A., Kumar, N., & Agarwal, P. (2025). Role and Importance of Sustainable Bleisure Travel in India: With Special Reference to Nature-Based Health Tourism. In Smart Travel and Sustainable Innovations in Bleisure Tourism (pp. 29-44). IGI Global.

[38] Nag, A. (2022). Industrial infrastructure development of cottage industries for inclusive economic growth in a sustainable manner: case study of the urban growth centre in Bishnupur, West Bengal, India. International Journal of Indian Culture and Business Management, 26(2), 204-233.

[39] Hooda, S. K. (2025). Medical Device Industry of India: Growth Dynamics and Key Challenges. Indian Public Policy Review, 6(2), 77-111.

[40] Acharya, A., Mondal, B. K., Bhadra, T., Abdelrahman, K., Mishra, P. K., Tiwari, A., & Das, R. (2022). Geospatial analysis of geo-ecotourism site suitability using AHP and GIS for sustainable and resilient tourism planning in West Bengal, India. Sustainability, 14(4), 2422.

[41] Selvaraj, S., Karan, A. K., Srivastava, S., Bhan, N., & Mukhopadhyay, I. (2022). India health system review.