



PROBLEMS AND PROSPECTS OF MEDICAL TOURISM IN KERALA: AN ANALYSIS

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Abstract

Given the huge growth potential of tourism in Kerala State in India, the case of Medical Tourism (MT) in particular is focused in this paper so as to suggest strategies for its sustained growth. The unique strengths of Kerala State as an emerging medical tourism hub, the weaknesses of the State, the vast opportunities that are open before the State, and also the threats are analysed using SWOT analysis. Accordingly, the paper suggests strategies for the sustained growth of MT in Kerala based on its major findings.

Keywords: *Medical Tourism, Ayurveda, Tourism Earnings, Economic Growth, Linkages, ICT.*

Introduction

Medical tourism (MT) has arisen as a fast-emerging segment within tourism and healthcare industries globally, driven by growing healthcare costs in developed nations, long queues for procedures, and the mounting desire of patients to seek quality healthcare abroad at affordable costs. Internationally, this phenomenon includes clinical treatments and also wellness and traditional health services that cater to global travellers seeking healing, rehabilitation, and holistic wellbeing. MT generally involves patients crossing international borders to access medical, surgical, or therapeutic care along with an inbuilt travel experience. This trend has been growing steadily over the past two decades. In this broader global context, the Indian state of Kerala can position itself as a unique MT destination, combining modern medical services with traditional and wellness-oriented systems like Ayurveda, Yoga, and allied therapies. Kerala's reputation as the "Land of Ayurveda" and its high health literacy have contributed significantly to its attractiveness to both domestic and international health tourists. Early studies on Kerala's MT reveal that service quality, destination attractiveness, and the benefits associated with traditional therapies form core factors driving inbound health tourists to Kerala - especially for Ayurvedic treatments that are deeply rooted in Kerala's socio-cultural environment (Padmasani & Remya, 2015). Kerala's MT sector has grown substantially over recent years, with coordinated efforts by industry associations, government agencies, and private healthcare providers. Recent industry data indicates that traditional medicine and medical value tourism contributed significant revenue to the state's tourism economy, with tens of thousands of foreign visitors choosing Kerala each year for therapeutic stays that combine treatment with leisure and cultural experiences. For example, the Ayurvedic medical value tourism segment generated noteworthy economic benefits, reflecting consistent growth in arrivals and service offerings from wellness centres and accredited hospitals. Despite the promising growth trajectory, scholarly literature also underscores several challenges facing MT in Kerala. Studies on the institutional profile of Ayurveda MT units have noted many key barriers like regulatory deficiencies, labour constraints, non-availability of vital herbal resources, etc. that affect service delivery and institutional preparedness. These challenges indicate the need for stronger policy support and systemic reforms to ensure sustainable development of Kerala's MT sector. Also, service quality studies in Ayurvedic wellness centres have stressed the key influence of service delivery factors



like reliability, cultural sensitivity, infrastructure, and hygiene on customer satisfaction, thus showing areas that need improvements so as to enhance Kerala's competitive edge.

Besides the operational challenges noted earlier, broader socio-economic and policy issues (like, standardization of service quality, infrastructure development, international marketing, accreditation frameworks, and integrated healthcare delivery models etc.) remain key focal points in the literature. These issues reflect the complexity of managing an MT ecosystem that demands high standards of clinical care, cultural competence, and seamless integration of tourism and healthcare services. Given the interplay of these strengths and weaknesses, there is a compelling need for a focused SWOT analysis so as to identify systemic gaps, explore the sector's prospects, and suggest strategies for sustained growth of MT. This paper addresses this need as it seeks to analyse the current state of MT in Kerala, identify structural constraints as well as growth opportunities, and suggest strategies that can help policymakers, industry stakeholders, and practitioners to harness the full potential of MT in Kerala.

Objectives

- (i) To study in general as to how development of tourism and allied sectors promotes economic growth of nations with a focus on India, a typical developing nation;
- (ii) To study the prospects of Medical Tourism (MT) in the State of Kerala in India and also its problems and threats by way of a systematic SWOT analysis; and
- (iii) To suggest strategies for the sustained growth of MT in India, based on the findings of this study.

Methodology

This paper is structured into an exploratory and also descriptive-analytical study that seeks to use authentic data from secondary sources, so as to arrive at meaningful growth strategies based on a systematic SWOT analysis. Being primarily an exploratory study no hypothesis has been formulated. Basic statistical tools have been used for data analysis and interpretation.

Literature Review

Developmental Role of Tourism, especially MT, and also Allied Sectors like Housing, Hospitality etc.: Globally, tourism represents a significant share of GDP and employment. García-García et al. (2023) emphasize that sustainable tourism is essential for long-term sectoral resilience, particularly in the face of shocks such as pandemics, climate change, and geopolitical uncertainties, like Covid-19 pandemic. Bookman and Bookman (2007) have given one of the earliest accounts on MT in developing countries, suggesting how countries like India leverage comparative advantages in cost, skilled medical manpower, and supportive tourism infrastructure; citing that MT is not just a healthcare activity but a wise economic strategy, given backward and forward linkages of tourism with hospitality, transport, and allied services. Kerala-specific studies give key contextual evidence for this paper. Manoj (2008) 'Sustainable tourism in India: a study from a global perspective with focus on tourism prospects of Kerala' studied tourism in India from a sustainability perspective with a focus on Kerala, pointing out Kerala's strengths in human development, literacy, social infrastructure, etc. Later studies by Manoj (2015, 2016, 2017, 2019) on rural tourism, ecotourism, and RT in destinations like Kumbalangi, Kumarakam, and Thenmala amply prove Kerala's capacity to integrate tourism growth with community development, environmental sustainability, and employment generation. These findings are directly relevant to MT, as sustainable practices and community linkages are essential for long-term sectoral growth. As Covid-19 pandemic greatly affected global tourism dynamics, scholars seek to reassess conventional tourism practices and models. Besides Covid-19, flood havoc warrants aggressive



promotion of tourism for economic growth in respect of Kerala, notes Manoj (2019), “Tourism Sector in Kerala in the Post-Flood Scenario: Strategies for Its Sustainable Growth with a Focus on Responsible Tourism”. Mandal et. al. (2021) “Eco-Tourism Industry In Arunachal Pradesh: An Empirical Study” shares similar view on boosting RT in Arunachal Pradesh.

Discourses on MT, Kerala’s MT Advantage in Ayurveda and Some Niche Segments like CBT, CBET etc. Connell (2006) further expanded the discourse on tourism by adding MT into core tourism studies, famously describing it as a mix of “sea, sun, sand and... surgery”, also underscoring the key roles of destination attractiveness and tourism amenities while taking MT travel decisions. Later, Connell (2013) deepened this analysis by examining the cultural and ethical dimensions of MT, including commodification of healthcare, patient–provider relationships, and the socio-cultural implications for host destinations. These conceptual contributions are particularly relevant to Kerala, where healthcare services—especially Ayurveda—are closely embedded in cultural traditions and place-based identities. Many studies reveal the underperformance of Kerala tourism, citing reasons like tourists often prefer more affordable tourism destinations. Manoj (2016), “Determinants of sustainability of rural tourism: a study of tourists at Kumbalangi in Kerala, India” identifies infrastructure gaps, limited ICT integration, and inadequate product diversification as key barriers to sustainable rural tourism growth. The study underscores the role of digital platforms, community participation, and infrastructure development in enhancing domestic tourist satisfaction and repeat visitation. Now, Kerala is widely regarded as a pioneer in RT and CBT (Community-Based Tourism) especially CBET (Community-Based Ecotourism). Many studies point out the positive socio-economic effects of tourism, like, employment, empowerment of women, preserving cultural heritage, etc. Manoj (2016), ‘Impact of Rural Tourism on the Environment and Society: Evidence from Kumbalangi in Kerala, India’ notes benefits like livelihoods and social cohesion. Padeep et. al. (2016), “Community based tourism for the sustained economic development of Kerala: A study with a focus on ecotourism” observe similar facts. Baral et al. (2025) analyse domestic tourists’ perceptions of Responsible Tourism (RT) initiatives in Kerala and find mixed outcomes.

Emergence of India as a Major Destination for MT and Allied Types of Tourism – Kerala’s Prospects: India’s rise as a prominent MT destination has been well documented. Chinai and Goswami (2007) examined the introduction of medical visas as an institutional mechanism facilitating the growth of Indian medical tourism, pointing to proactive policy support as a critical enabler. Horowitz, Rosensweig, and Jones (2007) framed MT as a manifestation of the globalization of healthcare markets, arguing that countries like India could capture international demand by offering internationally accredited services at competitive prices. Lunt and Carrera (2010) and Johnston et al. (2010) provided balanced assessments by reviewing evidence on both benefits and risks of MT, including equity concerns, impacts on domestic health systems, and regulatory issues. Crooks et al. (2010) did a scoping review on patients’ experiences of MT, identifying motivations like affordability, quality, and reduced waiting times, and concerns about continuity of care and post-treatment follow-up. Reddy, York, and Brannon (2010) explored students’ perceptions of MT, highlighting the growing normalization of overseas treatment in youngsters. Snyder et al. (2011) extended this analysis by examining Canadian involvement in MT, thereby illustrating the global nature of patient flows and the policy implications for receiving and sending nations. Recent study by Ye et al. (2020) stresses motivational heterogeneity, suggesting that medical tourists are influenced by clinical factors and factors like destination image, cultural familiarity, wellness-oriented experiences etc. This insight is very pertinent to position Kerala before the whole world as an attractive MT destination.



Integration of ICT in MT and other Types of Tourism:

ICT integration in tourism, especially in MT has attracted scholarly interest. George and Henthorne (2009) studied the role of telemedicine in MT, stating that ICT-enabled pre- and post-treatment consultations can greatly improve patient confidence and destination competitiveness. This view resonates with studies by Manoj (2010, 2014, 2016, 2019, 2023), which, although focused largely on banking, ICT, and development issues in Kerala, consistently assert how ICT improve service efficiency, risk management, and customer satisfaction. These insights are transferable to the MT sector, where ICT can support hospital management, international marketing, tele-consultations, and integrated patient care pathways.

Destination competitiveness and policy frameworks constitute another major theme. Pocock and Phua (2011) developed a comparative conceptual framework based on Thailand, Singapore, and Malaysia, highlighting the importance of governance, regulation, and alignment between health and tourism policies. Ganguli and Ebrahim (2017), in their qualitative study of Singapore, showed that accreditation, international branding, and strong public-private coordination are crucial for sustaining competitiveness. Similarly, Heung, Kucukusta, and Song (2011) identified barriers to MT development in Hong Kong, including regulatory constraints and infrastructure limitations, offering lessons for emerging destinations like Kerala. At the global policy level, WHO (2017) asserts the growing role of traditional medicine in national health systems, lending legitimacy to Ayurveda-based MT. UNWTO (2018) has viewed MT tourism as a key segment with high growth potential, if sustainability and quality standards are ensured. Within the specific domain of Ayurveda tourism and MT, Padmasani and Remya (2015) provided one of the most influential empirical studies, identifying service quality dimensions—such as reliability, assurance, empathy, hygiene, and cultural authenticity—as key determinants of tourist satisfaction in Ayurveda MT centres in Kerala. Their work confirms that Kerala's competitive advantage lies not only in clinical outcomes but also in culturally rooted, holistic service delivery. Smith and Puczkó (2014) similarly emphasized wellness, spas, and holistic health experiences as integral components of contemporary health tourism, reinforcing Kerala's positioning as a wellness-oriented MT destination. In India, tourism has largely been recognised as an engine of economic growth and regional development. Its products range from heritage and pilgrimage tourism to wellness, eco-tourism, and adventure tourism. Women empowerment is noted as one of its outcome by Manoj (2020) "Empowering the tribal women in Kerala: Role of community based eco-tourism initiatives through Kudumbashree Mission". Simon and Ramzan (2022) note that domestic tourism is the backbone of Indian tourism as its share is 85–90 percent.

Economic and developmental linkages have also been discussed in the broader literature. Manoj's extensive body of work on cost management, competitiveness, ESG, affordable healthcare, and digital economy (2005–2025) provides a macroeconomic and policy-oriented lens for understanding MT as part of Kerala's broader development strategy. His recent studies (2023) explicitly argue for integrating affordable healthcare with housing, digital infrastructure, and ESG principles, suggesting a holistic framework within which MT can be sustainably embedded. The Government of India (2022) National Strategy and Roadmap for Medical and Wellness Tourism further supports this approach by emphasizing quality standards, accreditation, digital platforms, and international promotion. Complementary state-level evidence from Government of Kerala tourism statistics and economic reviews highlights the growing contribution of health and wellness tourism to Kerala's service economy.



MT and Allied Sectors, Linkage Effects, ICT, Innovation and Overall Economic Development:

Several research studies have dealt the vital need for facilitating sustained economic growth through diverse kinds of innovations, interventions, and ICT adoption etc.; from export promotion through SEZs to aiding ecotourism. Cost competitiveness is noted as a key for economic growth is noted by Manoj (2008), 'Cost Competitiveness and Indian Economy: Significance of Mandatory Cost Audit in the Globalized Regime'. Manoj (2013) "Prospects and Challenges of Green Buildings and Green Affordable Homes: A Study with Reference to Ernakulam, Kerala" has noted the high growth prospects for green homes and that green homes could create huge employment opportunities and sustainable economic growth. Manoj, P.K. (2015) "International Container Transshipment Terminal (ICTT) and its impact on coffee exports from India: An analysis" noted the key role that ICTT played in exports and thus economic growth. Manoj, P.K.(2009), *Special economic zones in India: financial inclusion: challenges and opportunities* noted the role of SEZs in rapid economic growth. Manoj, P.K.(2017) "Segmentation Strategy for Promotion of Ecotourism Products: Evidence from Thenmala Ecotourism" observed that careful analysis, planning and segmentation of tourists resulting in fast economic growth ecotourism route.

Rajesh and Manoj (2015) "Women Employees work life and challenges to Industrial Relations: Evidence from North Kerala" found that trade-off between work and life (work life balance) is vital for women for better industrial relations. Manoj (2015) "Employment Generation from Rural Tourism: A Field Study of the Local Community at Kumbalangi, Kerala" pointed out tourism's vast potential for employment generation and suggested for providing greater ICT resources as well as online services. Manoj (2016) "Real Estate Investment Trusts (REITs) for Faster Housing Development in India: An Analysis in the Context of the New Regulatory Policies of SEBI" pointed out innovative products (e.g. REITs) are vital for fast housing development in the Indian context and hence the rapid economic development. Manoj (2016) "Bank marketing in India in the current ICT era: Strategies for effective promotion of bank products" pointed out the crucial necessity for ICT-integrated marketing by the banking institutions in this ICT era. Lakshmi and Manoj (2017) "Service quality in rural banking in north Kerala: A comparative study of Kannur district co-operative bank and Kerala Gramin bank" pointed out that greater ICT-adoption by KGB could make its performance better than that of a Co-operative bank like Kannur District Co-operative Bank (KDCB). Lakshmi and Manoj (2017) "Rural Customers and ICT-based Bank Products A Study with a Focus on Kannur District Co-operative Bank and Kerala Gramin Bank" observed that greater customer acceptance for ICT-integrated products of Kerala Gramin Bank (KGB) than the traditional type products of KDCB. Joju, Vasantha, and Manoj (2017) "Future of brick and mortar banking in Kerala: Relevance of branch banking in the digital era" has pointed out that though ICT-adoption is vital in modern banking 'human touch' as in 'brick and mortar' (traditional) banking is vital too. Joju, Vasantha, and Manoj (2017) "Financial technology and service quality in banks: Some empirical evidence from the old private sector banks based in Kerala, India" have noted that fin-techs can really improve service quality and are essential for success in modern banking. Manoj (2017) "Construction costs in affordable housing in Kerala: Relative significance of the various elements of costs of affordable housing projects" seeks to prioritize the cost elements so as to enable selective cost control through ICT adoption. Manoj (2017) "Cost management in the construction of affordable housing units in Kerala: A case study of the relevance of earned value analysis (EVA) approach" demonstrates how EVA's strategic optimizes the construction costs. Joju, Vasantha, and Manoj (2017) "Electronic CRM & ICT-based banking services: An empirical study of the attitude of customers in Kerala, India" has pointed out the vital significance of e-CRM for competitiveness in banking, and better customer service. Another banking study by Manoj (2018)



“CRM in old private sector banks and new generation private sector banks in Kerala: A comparison” has noted that NPBs (New Private sector Banks) in Kerala performed better than OPBs (Old Private sector Banks) in CRM.

Tourism and Environmental Concerns, ICT for Sustainability in Tourism and Allied Sectors:

Huybers and Bennet (2003) have noted environment management as the cornerstone of success in tourism. Joju and Manoj (2019) “Digital Kerala: A study of the ICT Initiatives in Kerala state” have studied in detail the ICT initiatives in Kerala, and have suggested steps to better utilize ICT’s potential in Kerala. Joju and Manoj (2019) “Banking Technology and Service Quality: Evidence from Private Sector Banks in Kerala” observed that ICT in banking improves quality and thus it should be encouraged. Manoj (2019) “Social banking in India in the reforms era and the case of financial inclusion: Relevance of ICT-based policy options” has made suggestions about ICT-driven policies to improve social control in the ongoing digital banking era. Manoj (2019) “Dynamics of human resource management in banks in the ICT era: A study with a focus on Kerala based old private sector banks” has pointed out that ICT-integrated HRM policies results in banking competitiveness. Manoj (2019) “Competitiveness of manufacturing industry in India: need for flexible manufacturing systems” has observed the key need for ICT-integrated production using modern technologies like FMS in India to attain greater manufacturing competitiveness.

Ali and Manoj (2020) “Impact of Falling Price of Rubber-A Case Study of Kothamangalam Taluk in Ernakulam District” have noted that frequent price falls affects the livelihood of rubber cultivators and thus governmental interventions like MSP are vital. Manoj (2015) “Prospects of Responsible Tourism in Kerala: Evidence from Kumarakam in Kottayam District” has noted the vast scope of RT to support economic growth. Manoj (2016) “Determinants of sustainability of rural tourism: a study of tourists at Kumbalangi in Kerala, India” has noted the major factors influencing the sustainability of rural tourism. Manoj (2015) “Impact of Rural Tourism on the Environment and Society: Evidence from Kumbalangi in Kerala, India” has observed the adverse environmental effects of rural tourism and the need to curb them. Manoj (2019) “Tourism Sector in Kerala in the Post-Flood Scenario: Strategies for its Sustainable Growth With a Focus on Responsible Tourism” has noted the key role of RT in reviving flood-hit Kerala. Manoj, P.K. (2015) “Housing Microfinance: A Study on Quality, Cost and Default Rate with Respect to Bhavanashree in Kerala has noted lower quality and higher operating costs of HMF. Saritha and Manoj (2023), “Social inequalities in IT sector: Evidence from Kerala State in India” have noted the prevalence of inequality in Kerala’s IT sector and the need to eliminate this, for fast and equitable economic growth. Manoj (2023) “Affordable Healthcare and Affordable Housing: Need for an Integrative Approach for the Holistic Growth of the Digital Economy of Kerala, India” has noted that a knowledge society like Kerala should duly promote housing and healthcare sectors in a integrative and holistic way through ICT-integration. The need for sustained housing development is noted by Manoj, P. K. (2024) “Housing finance by banks and housing finance companies in India: A review” for faster economic growth in this digital era. Manoj (2023) “Health Expenditure in Covid-19 Times and the Need for Affordable Houses that Nurture Healthy Citizens: A Roadmap for Digital Economy of Kerala” has pointed out that by learning from Kerala’s Covid19 experience, the State should concentrate on homes that really consider the ‘health’ aspect since this aspect enhances the social value to houses. Manoj, P.K.(2023) “ICT for Sustained Community Development in India in the 5G Era” has pointed out the vital need for high-tech ICT infrastructure for faster economic growth. Manoj (2023) “Health Aspect in Housing Development for Attaining Greater Social Value: The Case of ‘Affordable Housing For All’ Goal in Digital India” has noted the need for integrating the health aspect in housing development for



attaining social value. The sustainability imperative via ESG route is asserted by Manoj (2023), 'Housing Sector in India: An ESG Route into a Greener Future' citing the need for environmental protection. The relevance of ICT-enabled techniques in healthcare is noted by Sarojkumari et. al. (2023), "Health Monitoring Based Cognitive Iot Using Fast Machine Learning Technique" in scientific monitoring of health using IOT and machine learning (ML). A holistic growth of tourism and allied sectors is noted in many studies, including the need for ICT adoption. For better performance of the HFCs Manoj (2010) "Benchmarking housing finance companies in India: Strategies for enhanced operational efficiency and competitiveness" offers competitive strategies. Also, better training and ICT skills for the bank staff is suggested by Manoj (2019), "Dynamics of human resource management in banks in the ICT era: A study with a focus on Kerala based old private sector banks" so as to compete effectively in this ICT era. The development potential of ICT is researched by many national and global scholars. Manoj (2007) "ICT industry in India: a SWOT analysis" in his macro analysis has looked into India's ICT industry and its key role in economic growth. Manoj (2010) "Impact of technology on the efficiency and risk management of old private sector banks in India: Evidence from banks based in Kerala" proved that ICT use markedly raised the operational efficiency of banks. Nasar and Manoj (2013) "Real Estate Development In India And The Behavior of Investors to Invest In The Real Estate Market: An Empirical Investigation" noted that expert advice received by real estate investors from developers and brokers affected their investments. ICT adoption in tourism is suggested by Manoj & Aithal (2025) "Technology Integration and Eco-tourism Promotion for Tribal Welfare: The Case of Kerala Knowledge Economy in Digital India" for tribal welfare.

SWOT Analysis of MT in Kerala

SWOT analysis is a widely used strategic planning tool that enables the systematic evaluation of Strengths, Weaknesses, Opportunities, and Threats influencing a sector or industry. In the context of MT, SWOT analysis helps to assess both internal capabilities (strengths and weaknesses) and external environmental factors (opportunities and threats) that shape competitiveness and sustainability. Given the multi-dimensional nature of MT – encompassing healthcare delivery, tourism infrastructure, policy frameworks, and global mobility – SWOT analysis is particularly useful in identifying strategic pathways for long-term growth. Kerala's MT sector has evolved at the intersection of modern medicine, traditional healthcare systems (especially Ayurveda), and tourism services. The following SWOT analysis is based on academic literature, Government's policy documents, industry reports, institutional studies, etc.

Strengths of Medical Tourism in Kerala

- (1) *Strong Reputation in Ayurveda and Wellness Tourism:* One of Kerala's most significant strengths lies in its global reputation as the "Land of Ayurveda." Ayurvedic treatments in Kerala are deeply rooted in local ecology, culture, and traditional knowledge systems. Studies by Padmasani & Remya (2015) and George & Varghese (2017) highlight that international tourists associate Kerala with authenticity, holistic healing, and preventive healthcare, which differentiates it from other MT destinations focused mainly on invasive procedures. The presence of well-established Ayurvedic hospitals, wellness resorts, and treatment centres, many of which follow classical treatment protocols, enhances credibility and repeat visitation.
- (2) *High Human Development and Health Indicators:* Kerala's long-standing investments in education, public health, and social development have resulted in high health literacy, skilled healthcare professionals, and patient-friendly care practices. Compared to many competing MT destinations, Kerala offers: (i) A large pool of English-speaking doctors and nurses, (ii) Strong doctor-patient



communication, (iii) Ethical treatment practices and patient-centred care. These attributes significantly improve patient trust and satisfaction, that are key determinants in MT decision-making.

- (3) *Integration of Tourism and Healthcare Infrastructure:* Kerala's tourism infrastructure—comprising international airports, hotels, resorts, transport services, and destination management services—supports seamless integration of treatment and leisure. Studies by the Ministry of Tourism (GOI) emphasize that Kerala is among the few Indian states where healthcare and tourism value chains are closely linked. Natural attractions (like, backwaters, beaches, hill stations, and cultural heritage sites) raise the recuperative and therapeutic feeling, making Kerala an attractive post-treatment destination.
- (4) *Government Support and Institutional Promotion:* State-led initiatives such as Responsible Tourism Mission, Ayurveda accreditation schemes, and participation in international tourism fairs have strengthened Kerala's MT visibility. Institutions like the Department of Tourism, GOK, and industry bodies have promoted medical value tourism (MVT) through branding, policy support, and PPPs. For any initiative, including MT, active participation and encouragement by the Government is a vital pre-requisite for its success and long-term sustainability. This is because of the requirement of various resources, financial and non-financial, and also diverse kinds of permissions, sanctions, etc. from the Governmental and regulatory authorities for the smooth functioning of MT destinations. Regarding MT, government possess a vital role in respect of the following: (i) National Health Policy, (ii) Kerala Medical Value Travel Society, (iii) Heal in India Initiative, (iv) Medical Visa and Medical Attendant Visa, (v) India Healthcare Federation (IHF), and Market Development Assistance (MDA) Scheme. Figure I depicts these vital elements wherein governmental support is vital for the development of MT, and these need to be duly ensured through suitable actions at the right timings. In respect of the State of Kerala in India, the governmental approach towards tourism in general and MT in particular has been positive over the years, and this is definitely a clear strength of this State. (Figure I).

Figure I: Governmental Role in MT Development



Source: Adapted from Seena et. al. (2022), p. h.894.



By way of proper governmental sanctions and approvals, the vast advantages emanating from MT such as huge inflows in foreign exchange earnings (FEEs) from foreign medical tourists can be realised through the development of MT in Kerala, especially the unique products like Ayurveda based medical treatments at more attractive rates in this State than elsewhere in the world. (Figure I).

- (5) The cost of major medical treatments in India is much lower in India in general and Kerala State in particular. It may be noted that India has got the highest (upto 95 percent) cost savings vis-à-vis other nations of the world. These savings are particularly relevant in Kerala State in India. (Table I).

Table I: Cost savings in medical treatments in India and other nations of the world vis-à-vis US.

	Percentage Savings in Other Countries Vs. United States						
Sample treatments	India	Thailand	Singapore	Malaysia	Mexico	Costa Rica	South Korea
Hip Replacement	84%	73%	73%	78%	69%	74%	77%
Knee Replacement	79%	76%	69%	80%	64%	74%	71%
Spiral Fusion	77%	61%	32%	56%	45%	58%	56%
Heart Valve Replacement	94%	93%	91%	94%	80%	80%	72%
Gastric Bypass	62%	33%	25%	56%	39%	39%	31%
Face-lift	72%	57%	30%	57%	58%	64%	52%
Rhinoplasty	53%	31%	23%	44%	55%	44%	23%
Heart Bypass	95%	92%	86%	93%	80%	82%	77%

Source: Grant Thornton (2015). Transformative Evolution: From ‘wellness’ to ‘medical wellness’ tourism in Kerala. Oct. p.15.

- (6) The medical infrastructure in India in general Kerala State in particular is quite ahead globally. The number of JCI hospitals stands at 25 of which the one of the smallest Indian States viz. Kerala has got 2 hospitals. Besides, Kerala has as high as 23 NABH hospitals one of the highest among the various States in India. (Table II).



Table II: Medical Infrastructure – Relative Advantage of Kerala State in India.

Countries	Number of JCI accredited facilities	States	NABH hospitals
India/Kerala	25/2	NCR	>70
Thailand	45	AP	45
Singapore	21	MH	33
Malaysia	13	KA	28
Indonesia	20	TN	27
Israel	20	GJ	23
South Korea	26	KL	23
Sri Lanka	2	PJ	23
Taiwan	16	RJ	10
Costa Rica	2	WB	9
Mexico	9	OR	5

Source: Grant Thornton (2015). Transformative Evolution: From ‘wellness’ to ‘medical wellness’ tourism in Kerala. Oct. p.15.

Weaknesses of Medical Tourism in Kerala

- Regulatory Gaps and Lack of Standardization:* Despite growth, Kerala’s MT sector faces inconsistent regulatory frameworks, particularly in Ayurveda and wellness tourism. Several earlier studies on MT (Nair & Thankappan, 2014; KPMG, 2019) point to: (i) Absence of uniform treatment protocols, (ii) Inadequate enforcement of accreditation standards, (iii) Variation in service quality across providers. This weakens international confidence and exposes the sector to credibility risks.
- Infrastructure Constraints:* Although major cities like Thiruvananthapuram, Kochi, and Kozhikode are well connected, secondary destinations face limitations in road connectivity, emergency services, waste management, and digital infrastructure. Poor last-mile connectivity affects patient mobility and comfort, particularly for elderly and post-operative patients.
- Human Resource and Skill Shortages:* The MT sector also experiences shortages of trained therapists, nurses, and support staff, especially in Ayurveda. Migration of skilled healthcare professionals to other countries and states has aggravated workforce constraints. Moreover, lack of formal training in intercultural competence and international patient handling affects service delivery.
- Limited Use of ICT and Data Systems:* Kerala’s MT providers have not fully leveraged ICT tools such as telemedicine, integrated hospital information systems, multilingual digital platforms, and online patient engagement systems. Weak data collection and absence of centralized MT databases limit evidence-based policymaking and targeted marketing.

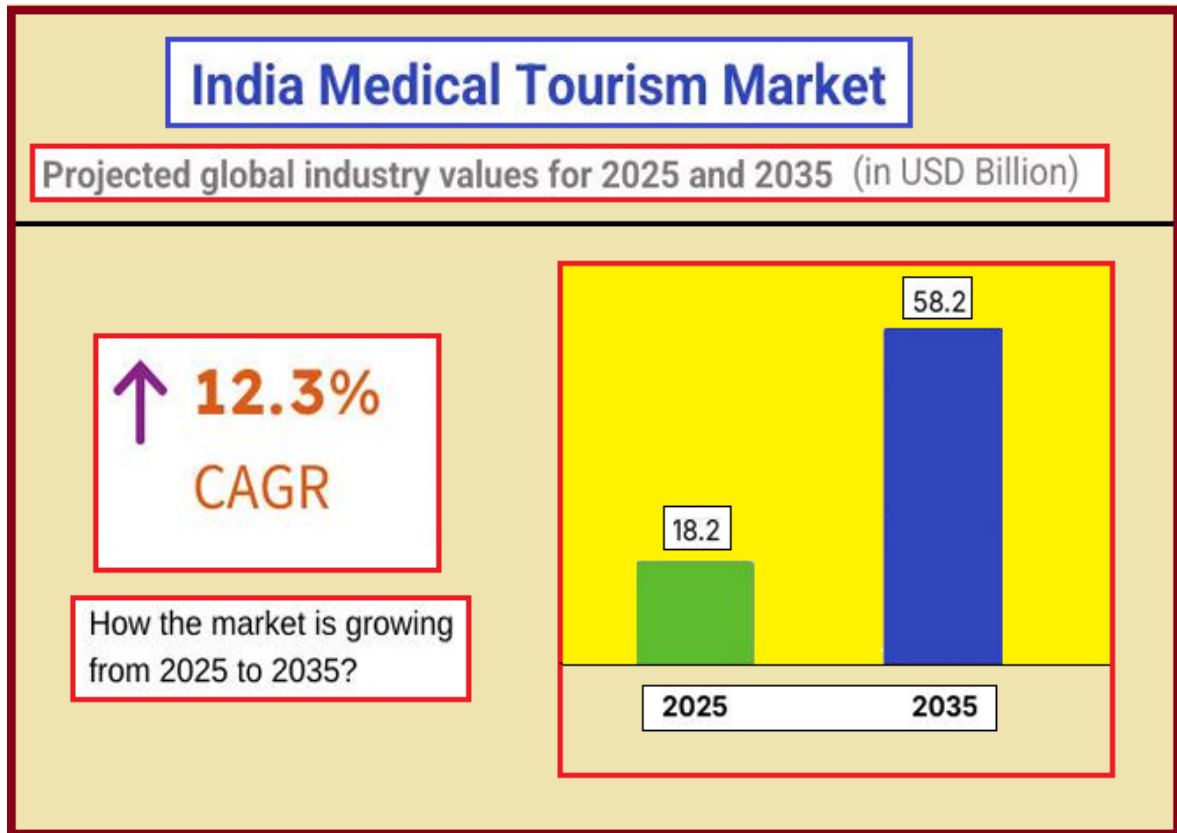
Opportunities for Medical Tourism in Kerala

- Rising Global Demand for Affordable and Holistic Healthcare:* Escalating healthcare costs and long waiting periods in developed countries have increased demand for cost-effective medical and wellness treatments abroad. Kerala is well positioned to tap into this market by offering: (i) Affordable elective procedures, (ii) Long-duration wellness and rehabilitation programs, (iii) Preventive and lifestyle disease management. This trend has been widely discussed in global MT literature (Connell, 2013; OECD, 2018). It is expected that MT market in India would grow at about



12.3 percent over the next one decade (2025 to 2035 period). Within India, the State of Kerala is the one with the highest growth prospects given the unique advantages of the State like its rich Ayurveda tradition, excellent natural environment that is conducive for tourism, medical infrastructure, higher air connectivity backed by three international airports (Kochi, Thiruvananthapuram and Calicut), etc. Given its excellent growth prospects, Kerala has great scope for reaping the benefits. (Figure II).

Figure II: Growth Prospects of MT in India



Source: Futuremarketinsights, and Bose & Mitra (2025).

- (2) *Expansion of Medical Value Tourism Markets:* Emerging markets in West Asia, Africa, Eastern Europe, and Southeast Asia present new growth avenues for Kerala. Cultural affinity, geographical proximity, and strong diaspora networks provide Kerala with strategic advantages in these regions.
- (3) *Public-Private Partnerships (PPP) and Investment Potential:* There is great scope for PPP models in hospital infrastructure, training institutes, research centres, and international marketing. Investment in integrated MT zones and wellness clusters can boost economies of scale and service quality.
- (4) *Technological Integration and Digital Health:* The expansion of telemedicine, AI-assisted diagnostics, and digital health records offers opportunities to improve pre-treatment consultation, post-treatment follow-up, and continuity of care, thereby enhancing Kerala's MT competitiveness.
- (5) *Ayurveda Treatments is a Key Trend in MT at the Global Level – A Boon to Kerala:* Of late, Ayurveda based treatments has become a key trend in the global MT market and this would be advantageous to India in general and Kerala State in particular. (Table III).

Table III: India's MT Industry in the Asian Context – Salient Features and Emerging Trends.



Category	Details
Market Value	Industry reports estimate that India's medical tourism market was valued at \$7.69 billion in 2024, with approximately 7.3 million foreign patients travelling to India for medical treatment. The Indian medical tourism industry is expected to generate USD 10.2 billion in 2025, capturing 25% of Asia's medical tourism market.
Domestic Market Share	Domestic patients account for 45% of the market, with key destinations like Delhi, Chennai, Bangalore, and Mumbai offering specialized treatments.
International Market Share	International patients make up 55%, with major source countries including the Middle East, Africa, the US, and Europe. They seek a wide range of services including orthopaedic surgery, dental work, and cosmetic treatments.
Key Destinations	Popular destinations include Delhi's AIM's Hospital and Chennai's Apollo Hospital, Mumbai's Nanavati Hospital, Hyderabad's Asian Institute of Gastroenterology, Vellore's CMC, and Bangalore's Sakra Premium Clinic.
Economic Impact	The medical tourism sector generates billions annually, benefiting hospitals, clinics, and medical facilities.
Key Trends	Surge in the adoption of minimally invasive surgeries, rapid advancements in robotic surgery, and the rise of wellness tourism with Ayurvedic treatments.
Top Treatment Seasons	Winter and spring are peak seasons, especially for patients seeking cosmetic procedures, fertility treatments, and dental surgeries.

Source: Futuremarketinsights, and Bose & Mitra (2025).

Threats to Medical Tourism in Kerala

- (1) *Rising Competition from Other Destinations:* Kerala faces intense competition from domestic destinations such as Tamil Nadu and Karnataka, as well as international MT hubs like Thailand, Malaysia, and Sri Lanka. These destinations offer aggressive pricing, streamlined visa regimes, and strong global branding.
- (2) *Environmental and Resource Sustainability Issues:* Overdependence on natural resources for Ayurveda—especially medicinal plants—raises concerns about environmental degradation and sustainability. Climate change, biodiversity loss, and unregulated harvesting pose long-term threats to Kerala's traditional healthcare base.
- (3) *Global Health Crises and Travel Disruptions:* Events such as pandemics, geopolitical tensions, and economic downturns can severely disrupt international travel and medical tourism flows, as observed during COVID-19. Kerala's MT sector remains vulnerable to such external shocks.
- (4) *Ethical and Legal Risks:* Malpractice claims, lack of international insurance portability, and medico-legal disputes involving foreign patients can negatively impact Kerala's reputation if not addressed through robust legal frameworks and patient protection mechanisms.
- (5) *Frequent instances of disease outbreaks (like, Nipah virus):* Of late, Kerala is experiencing frequent outbreaks of virus attacks (like, Nipah virus). This discourages the foreign tourists to Kerala, including medical tourists. Unless such disease outbreaks are duly curbed, Kerala may face decline in tourists' footprints in the future, including the medical tourists visiting this State.

The SWOT analysis reveals that Kerala possesses strong intrinsic advantages in MT, particularly in Ayurveda, human development, and integrated tourism – healthcare experiences. However, regulatory inconsistencies, infrastructure gaps, and skill shortages constrain its full potential. By addressing weaknesses and leveraging opportunities – especially through policy reforms, accreditation, ICT integration, and sustainable resource management – Kerala can strengthen its position as a globally competitive and sustainable MT destination.

Strategies for Promoting Medical Tourism in Kerala

The sustained growth of medical tourism (MT) in Kerala requires a multi-dimensional and policy-driven strategic approach that simultaneously addresses structural weaknesses and capitalizes on the state's



inherent strengths. Based on the SWOT analysis, the following strategies are proposed to enhance Kerala's competitiveness as a global MT destination.

- (i) *Strengthening Regulatory Frameworks and Accreditation*: One of the foremost strategies is the establishment of robust regulatory mechanisms and standardized accreditation systems for medical tourism service providers. Previous studies have highlighted the lack of uniform treatment protocols and quality assurance mechanisms, particularly in Ayurveda and wellness centres, which can undermine international confidence (Nair & Thankappan, 2014; KPMG, 2019). Strengthening accreditation through national and internationally recognized agencies would enhance service credibility, transparency, and patient safety, thereby improving Kerala's global positioning.
- (ii) *Infrastructure Development and Integrated MT Clusters*
Improving healthcare and tourism infrastructure is critical to sustaining MT growth. While major cities in Kerala are relatively well developed, secondary destinations continue to face connectivity and service constraints (Ministry of Tourism, GOI). The development of integrated MT clusters, combining hospitals, wellness centres, accommodation, and transport facilities, has been suggested as a cost-effective model for improving service efficiency and patient experience (KPMG, 2019).
- (iii) *Human Resource Development (HRD) and Capacity Building*: HR constraints pose a key challenge in Kerala's MT sector. Studies on Ayurveda-based MT indicate shortages of trained therapists and skilled nursing personnel, exacerbated by outward migration (Padmasani & Remya, 2015). Strategic interventions should therefore focus on capacity-building programmes, including training in intercultural communication, international patient handling, and foreign languages. Retention strategies like improved working conditions and career progression pathways are equally vital.
- (iv) *Leveraging ICT and Digital Health Platforms*: The integration of ICT and digital health solutions can greatly improve Kerala's MT value proposition. Telemedicine and digital consultation platforms can support pre-treatment evaluations and post-treatment follow-ups, improving continuity of care and patient satisfaction (OECD, 2018). The development of centralized, multilingual MT portals exhibiting accredited providers and treatment packages strengthen global outreach and transparency.
- (v) *Market Diversification and Targeted Promotion*: Kerala should adopt market-specific promotion strategies, focusing on regions with rising demand for affordable and holistic healthcare, like West Asia, Africa, and parts of Europe (Connell, 2013). Participation in global healthcare exhibitions, collaboration with overseas insurance providers, and engagement with diaspora networks can further enhance Kerala's MT visibility. Branding Kerala as a destination for preventive, wellness-oriented, and long-stay therapeutic care would help differentiate it from procedure-focused competitors.
- (vi) *Sustainability and Responsible Medical Tourism*: Long-term MT promotion must be aligned with environmental sustainability and responsible tourism principles. Overexploitation of medicinal plants and ecological resources has been identified as a potential risk to Ayurveda-based MT (Government of Kerala, AYUSH policy documents). Sustainable resource management, ethical treatment practices, and community participation in MT value chains are essential for inclusive and resilient growth.

Concluding Remarks

The present study demonstrates that medical tourism in Kerala represents a strategically important growth sector, driven by the convergence of healthcare excellence, traditional medicine, and tourism infrastructure. Kerala's strengths—particularly its global reputation in Ayurveda, high human development indicators, and integrated tourism ecosystem—offer strong competitive advantages



(Padmasani & Remya, 2015; Ministry of Tourism, Government of India). However, regulatory gaps, infrastructure limitations, workforce shortages, and rising global competition necessitate sustained policy attention and institutional reforms. The SWOT-based assessment indicates that Kerala's MT sector is at a critical juncture, where future growth must transition from expansion-led strategies to sustainability-oriented development models. As emphasized in earlier studies, quality standardization, accreditation, digital integration, and responsible resource management are essential to ensure long-term competitiveness and resilience (Connell, 2013; KPMG, 2019).

The study also identifies several areas for further research and exploration. First, there is a need for empirical studies examining patient satisfaction, treatment outcomes, and repeat visitation behaviour, particularly among international medical tourists. Second, comparative analyses between Kerala and leading MT destinations such as Thailand or Malaysia could yield valuable insights into best practices and policy innovations (OECD, 2018). Third, future research could examine the economic linkages and multiplier effects of MT on local livelihoods, small enterprises, and traditional knowledge systems. Fourth, the role of digital health technologies, telemedicine, and artificial intelligence in transforming medical tourism service delivery remains an underexplored area. Finally, sustainability-focused studies on medicinal plant conservation, ecological impacts, and ethical governance of Ayurveda-based MT would significantly enrich the existing literature. In sum, while Kerala possesses strong foundations for MT development, realizing its full potential will depend on coordinated stakeholder engagement, continuous research, and adaptive policy frameworks in a growingly competitive global healthcare setting.

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