

Role Of Medical Tourism In Economic Development Of Tamilnadu: An Overview

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Abstract

In the global travel industry, especially in medical tourism, India plays a vital role. It offers a lot of surgical experience, wellness treatments, at low costs, through the outstanding private healthcare facilities and government programs such as the "health care visa." The economy of Tamil Nadu is expeditiously industrialising, through the sectors such as textiles and chemicals, and its government's emphasis on infrastructure helped it come in third place nationally in the year of 2011. Tamil Nadu is a well-known place for medical tourists. Because it is inexpensive and has no waiting lists, it offers remarkably good personalised care, and combines advanced and traditional medicine. The state has a low inequality-adjusted Human Development Index (HDI) because of problems with malnutrition and sanitation, but it has great health indicators, such as a longer life expectancy and a much lower Infant Mortality rate (IMR) and Maternal Mortality Ratio (MMR), through its strong health system. Tamil Nadu is a good example to improve health rapidly. It has consistently led in core mortality indicators because it has invested in universal female literacy.

Keywords: Medical tourism, cost-effectiveness, high-quality personalized care, health indicators, community impartiality

1.1 Introduction

In developing countries like India, the travel industry plays a significant role in the economy[1]. Travel is a global activity. In the beginning, the tourist industry and the medical tourism industries faced many problems because they were so easy to attack. Nevertheless, the travel industry remains a significant component of the economy and possesses considerable potential for global expansion. Contemporary travelers has elevated expectations and consistently seek novel encounters, adventures, and lifestyles. This propels the evolution of tourist practices and perspectives. Medical tourism is a burgeoning notion that aligns with contemporary demands. India has emerged as a significant player in this business by providing a diverse array of specialized services and maintaining a competitive edge globally. The country offers several sorts of tourism, including excitement, wildlife, cultural and historical sites, nature, and pilgrimage.

India is well recognized for its wellness remedies and surgical expertise. Medical tourists seek high-quality healthcare facilities that frequently provide additional services or comprehensive care in a single location. The integrated services exclusive to the hotel business distinguish medical tourism from conventional travel. Travel facilitators generally

provide medical tourists with comprehensive packages encompassing transportation, accommodation, recreational activities, and the medical treatment itself. Profitable hospitals that provide high-quality medical care and collaborate well with the hospitality sector are crucial to the medical tourism business. Private healthcare institutions are vigorously marketing their advanced medical expertise and capabilities in the international arena. The public tourism sector, business organizations, and healthcare providers are diligently striving to expand this rapidly increasing global industry.

1.2 Tamil Nadu's Economy and Infrastructure

The economy of Tamil Nadu predominantly relies on agriculture, with about seventy-five percent of its population dependent on farming for their livelihood. Despite the significance of this industry, it constitutes merely about three percent of the state's total economic output. The original text does not specify the most major crop, referring to it merely as "crop." Tamil Nadu is also noted for cultivating other important cash crops, including sugarcane, peanuts, oilseeds, cotton, and bananas. The western region of the Ghats hills is recognized for cultivating lucrative plantation crops such as tea, cinnamon, black pepper,

ginger, and an array of other spices. Tamil Nadu has emerged as one of the more industrialized states in India, alongside its status as a significant agricultural state. It is a major national producer of essential industrial commodities, including cement, chemical fertilizers, and various chemicals. The textile and leather industries are crucial as they provide employment to thousands of educated individuals in the state.

The Tamil Nadu government consistently prioritizes the construction of industrial and external

infrastructures. It allocates sufficient funds in its annual budgets to maintain and enhance its infrastructure. Tamil Nadu is recognized as one of the few Indian states with a robust infrastructure foundation. A survey from the Comparative Infrastructure Development Index, published in March 2011 in Mumbai, indicated that Tamil Nadu has the third-best infrastructure among all Indian states.

Table 1.1 States with Infrastructure Growth Index Rank

Rank	State Name	Index Rank (Score)	Percentage (%)
1	Punjab	191.4	19.14%
2	Kerala	157.1	15.71%
3	Tamil Nadu	144.0	14.40%
4	Gujarat	141.3	14.13%
5	Haryana	133.3	13.33%
6	Maharashtra	123.4	12.34%
7	Karnataka	109.5	10.95%
	Total	1000.0	100.00%

Source: Annual Report of Ministry of Tourism

Table 1.1 illustrates the comparative analysis of seven Indian states based on a particular Development of Infrastructure Index. The maximum achievable rating for this cohort of states is 1000 (or 100%). The total score is the basis for the Index Rating and percentage (%) columns. Punjab is much ahead with an average of 191.4 (19.14%). It possesses a substantial advantage over Kerala, the state in second position (191.4 - 157.1 = 34.3 percent). Tamil Nadu (144.0) and Gujarat (141.3) are closely positioned in the second tier according to the rating. All of these states have made significant advancements in developing their infrastructure. Maharashtra (123.4) and Karnataka (109.5) are the two least successful states in this area. These states are significant for commerce; nonetheless, their infrastructure ratings are the lowest of those listed. The leading three states—Punjab, Kerala, and Tamil Nadu—constitute 492.5 points, or 49.25% of the total index score for this category. This indicates that about fifty percent of the infrastructure development assessed by this index is occurring in these three states.

1.3 Things That Make Tamil Nadu a Good Place for Medical Tourism

Tamil Nadu attracts international patients for medical treatment and tourism due to several significant factors:

Economic and logistical advantages: The primary motivation for individuals is the reduced cost of medical services and treatments. A multitude of technologically sophisticated hospitals in Tamil Nadu offer exceptional care from highly skilled physicians and state-of-the-art equipment at a significantly lower

cost than comparable institutions in developed nations. The total cost of medical care in India is typically lower than the out-of-pocket expenses incurred by patients in other countries, even in the absence of insurance coverage. Patients see immediate improvement upon receiving medical assistance. There are no protracted waiting lists or delays in administration due to health coverage or physician unavailability [5]. Private airlines have facilitated more efficient and expedited travel to Tamil Nadu. Affordable and dependable internet connectivity, along with reputable communication services, facilitates interpersonal contact. flight companies simplify the process by providing all-inclusive packages that encompass flight, accommodation, and services. In the state, specialized pharmaceuticals and drugs are readily available at reduced prices compared to other locations.

The quality of care and infrastructure: Indian physicians and medical professionals are globally recognized for their exceptional training and expertise. Individuals of all ages receive personalized treatment and monitoring. Corporate hospitals, particularly in Chennai, has cutting-edge technology and infrastructure to ensure optimal patient care and accurate diagnosis.

The Indian government fosters medical tourism by establishing a specialized "medical visa" category for patients and providing financial incentives to hospitals. This is due to their recognition of the economic possibilities inherent in this form of tourism. The state provides a unique combination of modern medical care and traditional therapies,

including Ayurveda, meditation, yoga, and naturopathy. Patients undergoing uncomplicated treatments may integrate their medical care with a holiday, provided they receive approval from their physician. They can investigate the region's intriguing history and varied topography.

1.4 Tamil Nadu's economic outlook and health indicators

The tourism sector in Tamil Nadu emphasizes several key areas, notably the preservation and maintenance of the region's rich cultural heritage. Utilizing innovative strategies to enhance the hospitality sector, stimulate international commerce, and foster growth within the hotel industry. Transforming tourism into a cohesive economic driver to enhance the state's GDP. Enhancing medical tourism by improving ancillary services such as travel websites, online booking systems, and hospitality services. Developing sophisticated communication networks to assist the industry. The value of medical tourism can be assessed by examining the influx of international and domestic travelers to the United States over time. The revenue generated by tourism. The portion of the budget allocated for tourism development in the state.

1.5 Health and Social Fairness

The Human Development Index (HDI) of Tamil Nadu is 0.544, which is contingent upon economic position, education, and cultural factors. Scores approaching 1 indicate a higher level of development in the area. However, when inequality is considered, the Human Development Index significantly decreases to 0.396 [6]. Issues indicative of inequality include diminished ratings in economic participation and control over economic resources, recorded at 0.480 and 0.404, respectively (Ministry of Women and Child Development, 2009). Many children are malnourished, with approximately one-third not receiving adequate nutrition. Poor sanitation persists, as over three-quarters of rural households lack access to latrines.

Tamil Nadu has made significant progress in healthcare and human development despite these challenges. The average life expectancy at birth in the state is 67 years for males and 69.75 years for females, surpassing the national averages of 63.87 and 66.91 years, respectively. This represents a significant advancement from the period between 1941 and 1951, during which men and women had a life expectancy of approximately 36 to 37 years. The infant mortality rate (IMR) is 44 per one thousand live births, significantly lower than India's average of 63 and a substantial decrease from the state's IMR of 113 in the early 1970s. The state reports that maternal care is commendable: 87.6% of deliveries occur in a facility, 98% of women receive prenatal care, and 90% have postpartum treatment. Tamil Nadu offers

an extensive array of immunizations, achieving one hundred percent coverage for polio, ninety-eight percent for tetanus in preterm infants, and ninety-two percent for measles. The incidence rates of primary diseases are 479 cases per individual for tuberculosis and 70 cases per 100,000 individuals for malaria. 1.35 percent of the populace is infected with HIV.

1.6 The Framework of Tamil Nadu's Health System

In India, public health care responsibilities are distributed among national, state, and municipal administrations. Nevertheless, the state predominantly oversees the provision of those services. The federal government finances around 25% of public health expenditures, and state and local governments cover the remaining 75%. Health is primarily the responsibility of the state. The Central Government oversees health care in Union Territories lacking legislatures. It establishes and monitors national health standards, secures external funding, and finances various programs administered by the states. The list of concurrent activities [11] indicates that both the federal government and the states are responsible for the programs included. The Central Council for the Welfare and Health of Families unites individuals from several government tiers to collaboratively establish objectives and strategies to enhance the public health sector.

The family benefits program in Tamil Nadu is implemented through a network of urban and rural centers, maternity clinics, and health posts. The organization's IEC (Information, Education, and Communication) division is responsible for promoting the modest family norm and various forms of contraception. Implements significant public health efforts, including: maternal and adolescent health services. Vaccinating youngsters against preventable diseases. Prevention of infectious diseases such as malaria, filariasis, and Japanese encephalitis. Eliminating leprosy and managing iodine deficiency disorders. Eliminating food adulteration, conducting health assessments for educational institutions, and providing health education for the entire community. Gathering essential data on births and deaths while maintaining environmental cleanliness. Preventing and managing waterborne diseases such as severe diarrhea, typhoid, and dysentery, along with sexually transmitted infections like HIV/AIDS.

The Department of Medical Care and Community Health Services operates a network comprising 32 District Headquarters Hospitals, 162 Taluk Medical Centers, 79 Non-Taluk Health Centers, and 12 Dispensaries that provide clinical services. The Non-Taluk and Taluk health centers serve as the primary referral points for patients, while the District Headquarters Medical centers act as secondary

referral points. This department is responsible for activities related to HIV, tuberculosis prevention, mental health, and blood banks [12].

Tamil Nadu Health Services Corporation. Limited (TNMSC) was established in January 1995. Its primary function is to ensure that all government medical facilities maintain a consistent supply of high-quality pharmaceuticals and medicines by optimizing the procurement, storage, and distribution processes. The Tamil Nadu Health and Transport Department (1959) is responsible for maintaining the condition and safety of Health Department Vehicles. The objective is to minimize vehicle downtime for maintenance and to maximize fleet utilization in support of health programs. The Directorate of Indian medicinal Sciences and Homeopathy oversees traditional medicinal disciplines such as Siddha, Ayurveda, Unani, Yoga, Naturopathy, and Homeopathy. The objectives are to provide public healthcare through these platforms and to monitor their research and educational

initiatives [13].

1.7 Transportation and Benchmarking in Healthcare

Individuals frequently assess the efficacy of the public healthcare system based on the accessibility of healthcare facilities (physical infrastructure). The total quantity of sub-centers (SCs), primary healthcare centers (PHCs), and community-based health centers (CHCs), together with the services they provide, are significant transportation facilities that were examined. The transportation and infrastructure services of Tamil Nadu are contrasted with those of four advanced states (Gujarat, Karnataka, Kerala, Maharashtra) and four developing states (Bihar, Odisha, Maharashtra, Uttar Pradesh) [14]. Table 1.2 juxtaposes the health indices of Tamil Nadu with the national average for All India. This illustrates the state of public health in Tamil Nadu during the year 2013 and its vicinity.

Table 1.2 Estimated Health Care Transportation Details and Benchmarking

Indicator Category	Tamil Nadu	All India	Performance Summary
Fertility & Population Growth			
Birth Rate (per 1000)	15.6	21.4	Much lower than the national average, which means that the population is growing more slowly.
Total Fertility Rate (TFR) (per woman)	1.7	2.4	Well below the substitute level of 2.1, which shows that the demographic transition was successful.
Mortality - Adult			
Death Rate (per 1000)	7.3	7.0	Slightly higher than the national average. This might be due to an older population structure (given the low birth rate).
Mortality - Child & Maternal			
Maternal Mortality Rate (MMR) (per lakh)	73	178	Drastically lower than the national average, indicating superior maternal healthcare and safety during childbirth.
Infant Mortality Rate (IMR) (per 1000)	21	40	Nearly half the national average, suggesting better postnatal and primary healthcare.
Under Five Mortality Rate (per 1000)	27	50	Nearly half the national average, confirming stronger child survival programs.
Neonatal Mortality Rate (NMR) (per 1000)	19 (2010)	33	Significantly lower, pointing to better care during and immediately after birth.
Longevity			
Life Expectancy at Birth (Overall)	68.9	65.8	Higher than the national average.
Female Life Expectancy	70.9	68.48	Females in Tamil Nadu live longer than the national female average.
Male Life Expectancy	67.1	64.16	Males in Tamil Nadu live longer than the national male average.

Table 1.4 Tamil Nadu vs. Kerala: Estimated Health Indicator Comparison

Health Indicator	Tamil Nadu	Kerala	Comparison Insight
Total Fertility Rate (TFR)	1.7	1.7	Equal: Both states had TFR well below the replacement level of 2.1, indicating advanced demographic transition.
Birth Rate (per 1000)	15.6	14	Kerala is Lower: Kerala generally has a slightly lower birth rate, reflecting a more mature demographic profile.
Infant Mortality Rate (IMR) (per 1000)	21	12	Kerala is Significantly Lower: Kerala's IMR is almost half of Tamil Nadu's, demonstrating a marginal but persistent lead in infant survival.
Under Five Mortality Rate (U5MR) (per 1000)	27	13	Kerala is Significantly Lower: Similar to IMR, Kerala maintains a substantial lead in child survival rates.
Maternal Mortality Rate (MMR) (per lakh)	73	53	Kerala is Lower: Kerala leads with a lower MMR, indicating superior maternal healthcare, though both are excellent compared to the All-India average (178).
Life Expectancy at Birth	68.9 (2010)	74.2	Kerala is Higher: Kerala's life expectancy is significantly higher for both males and females, a long-standing trend attributed to its excellent health and education systems.

The comparison indicates that both Tamil Nadu and Kerala are national leaders in health indices. In India, this is occasionally referred to as a "Health Outlier" group. They have attained fertility rates comparable to affluent nations and have markedly decreased maternal and child mortality rates well below the national average [15]. The comparison, conversely, illustrates that Kerala possesses a distinct and enduring advantage in critical mortality indicators such as IMR, U5MR, MMR, and Life Expectancy. Tamil Nadu has achieved success due to its effective implementation of public health initiatives. This encompasses elevated institutional delivery rates and strategic initiatives that effectively reduced the infant mortality rate (IMR) and maternal mortality rate (MMR) from their previously elevated levels. It is frequently asserted that Kerala excels because to its high literacy rates among women, a factor that preceded and contributed to the development of its healthcare system. This socio-educational foundation provides a modest yet statistically significant enhancement to health outcomes, including infant mortality rate and life expectancy. Tamil Nadu exemplifies rapid enhancements and effective execution, but Kerala serves as the premier model for human development in India, mostly due to its sustained investments in social initiatives.

1.8 Conclusion

Tamil Nadu and Kerala in India are recognized as "Health Outliers" due to their significant reductions in maternal and infant mortality rates and attainment of fertility levels comparable to those in developed nations. Both states perform admirably; nevertheless, Kerala possesses a consistent and significant advantage in critical mortality indicators such as the Infant Mortality Rate (IMR), the Under-Five Mortality Rate (U5MR), the Maternal Mortality Rate (MMR), and Life Expectancy. Tamil Nadu has achieved success due to its effective implementation of public health measures and a high rate of institutional deliveries. This enabled the state to rapidly reduce its elevated mortality rates. A significant factor contributing to Kerala's long-term success is its elevated female literacy rate, which serves as a social and educational asset that enhances its healthcare system and provides a statistically meaningful advantage in overall human development measures. Tamil Nadu exemplifies rapid advancement, while Kerala represents the pinnacle of human development in India due to its continuous investment in social initiatives.

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