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**Editorial**

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## **The Impact Of Covid-19 And The Way Ahead For Kerala In Medical Value Tourism**

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Review

### **Abstract**

Medical tourism is a rapidly expanding industry with a market value of more than USD 4.0 billion. Covid-19 had a negative impact on the tourism industry, particularly medical tourism. With the economy returning to normal, the sector is reviving at an even faster rate. India is in a unique position because of its diverse culture, demography, and traditional techniques. India has carved out a prominent position in low-cost medical tourism, catering to patients who cannot afford to wait in long lines for state-of-the-art medical care. India has carved out a prominent position in low-cost medical tourism, catering to patients who cannot afford to wait in long lines for state-of-the-art medical care. The quantum of human resources, technological

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development, and active government intervention, create colossal possibilities to harness this sector. Kerala among other states uses a unique combination of modern and traditional medicine. Foreign-trained medical staff and numerous leisure spots help the state carve out a niche in this highly competitive segment. This paper discusses the boost that medical value tourism could grant Kerala and why this sector could be a significant revenue generator. Based on published data, the study discusses factors that make Kerala a hub for medical tourism, and trends and inflow of medical tourists. The number of tourists arriving for medical reasons accounted for 182,945 of the total number of foreign tourist arrivals. Despite a 75-80% drop in Foreign Tourist Arrivals during the first two years of the pandemic (2019-2021), Kerala hospitals are making a comeback. Kerala's path to recovery is being paved with new marketing strategies and innovation to attract more tourists. The article also discusses the concept and potential of Tourism 4.0, specifically AI-powered telemedicine. The article's conclusion demonstrates the impressive rate at which the sector is making a comeback and its positive impact on developing economies.

**Keywords:** Medical Value Tourism, Covid-19 Pandemic, Foreign Patient Arrivals, Telemedicine, Tourism 4.0, Telehealth.

## INTRODUCTION

Medical Value Tourism is among one of the fastest-growing sectors of the Indian economy. Known as a medical tourism hub or destination, the country stood tall throughout the pandemic. The land is home to some of the top specialists in the fields of modern medicine, ayurveda, homeopathy, Unani, and so on, with an infusion of traditional and modern medicine. The presence of diverse cultures, demographics, and related travel and tourism destinations only adds to the factors that benefit the industry. With increased awareness and demand for health and well-being, the sector is expected to grow at a rapid pace. Medical tourism is a nice segment of tourism that combines the nation's medical facilities with the beauty of its tourist destinations. Because of affordability, expert care, and travel attractiveness, India's medical value tourism sector is recognized globally. In the face of Covid-19, and the slump of the sector, it was brought to light the paramount importance of this area. With restrictions now slowly being lifted, the sector is trying to make a comeback.

The pretext of the pandemic has pushed the country to embrace technology and artificial intelligence to compete in the global market. With most patients fearful of leaving their homes for fear of infection and governments around the world encouraging social distancing,

telemedicine was seen in a new light and as a potentially lucrative new market. Telemedicine and telehealth have enormous potential in the medical sector, particularly in medical value tourism. Telemedicine is defined by The World Health Organization (WHO) as, “The delivery of healthcare services, where distance is a critical factor, by all healthcare professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment, and prevention of disease and injuries, research and evaluation and for the continuing education of healthcare providers, all in the interests of advancing the health of individuals and their communities”, and telehealth is the use of electronic information and telecommunications technologies to support long-distance clinical healthcare, patient and professional health-related education and training, public health and health administration (Dasgupta & Deb, 2008). This empirical study illustrates the trends and patterns in Kerala's medical value tourism sector using secondary data from IBEF, RBI, MoT, and GoI. To understand the current trend of medical value tourism in Kerala, the effects of COVID-19, and the implications of telemedicine on MVT, data from a variety of publications is consulted.

People's innate desire to travel has enhanced Kerala's reputation as a medical tourism destination, and India as a whole has benefited from this. The government's allocation of Rs: 2970 crores to the Ministry of Ayush in the union budget 2021–22, up from only Rs: 1069 crores in 2014–15, demonstrates the growth of this niche industry as a significant source of revenue. Therefore, it is essential to assess the flow of medical tourists and keep an eye on the pandemic's effects. The adoption of tourism 4.0, particularly through telemedicine, is the context in which the future of MVT is discussed in this paper.

This research can act as a starting point for further studies on the effects of medical value tourism on the country's economy and other sectors. New insights can be obtained from research on the growing potential of telemedicine or telehealth as a digital supplement to tourism 4.0. The study aims to investigate the impact of pandemics on the medical value tourism market in India, the growing medical tourism sector in Kerala, and how tourism 4.0, particularly telemedicine, is influencing medical value tourism.

## Literature Review

Kerala's strengths in Ayurveda and modern medicine, combined with marketing strategies and skilled professionals, have aided in the growth and recognition of the sector. Kerala's strengths

in Ayurveda and modern medicine, combined with marketing strategies and skilled professionals, have contributed to the MVT's growth and recognition. The government had little or no involvement in the development of this promising industry. The public-private partnership is a growing model of medical value tourism in Kerala (Joseph, S., 2012). The current state of medical tourism in India demonstrates the numerous advantages and factors that draw tourists to the country. Being an emerging economy, its focus on technological and infrastructural development is driven by the need to draw in foreign tourists. Other factors contributing to this growth include limited or nonexistent health insurance coverage abroad, a lack of technological advancement, challenges associated with travel, and lengthy wait times (Geetha & Karthika, 2015).

Peng, J., Yang, X., Fu, S., & Huan, T. C. T. (2023) explore the influencing mechanism of tourists' happiness on revisiting intention for traditional Chinese medicine (TCM) cultural tourism destinations based on three dimensions of tourists' happiness: positive emotions, engagement, and meaning. Contentment among tourists fosters special travel moments and a connection to the destination, both of which foster the desire to go back. the study finds that health consciousness significantly moderates the relationship between happiness, place attachment, and revisit intention.

According to research by Mason, A., Spencer, E., Barnett, K., & Bouchie, J. (2023), 22% of MTP websites included CSR content. The MTPs and the CSR had a very high degree of congruence, or "fit." Additionally, the average number of CSR engagements per MTP was three to six, indicating a dedication to the communities and stakeholders that benefit from CSR as well as the practice itself.

Heinz, Eidmann, Jakuscheit, Laux, Rudert, & Stratos (2023) looked into how the COVID-19 pandemic outbreak of 2020 affected Germany's medical tourism sector. Six codes associated with elective orthopedic surgery—bone biopsy, knee arthroplasty, foot surgery, osteotomy, hardware removal, and arthrodesis—were identified and analyzed in the study as crucial service indicators for medical tourism. Males made up the bulk of medical visitors, and they were generally younger than the nation's citizens.

Thelen, S. T., and Yoo, B. (2023) look into the effects that cosmopolitanism, insurance satisfaction, and affective/cognitive country image have on a patient's willingness to travel abroad for surgery. Patients can choose between receiving free knee replacement surgery at a

hospital with JCI certification in Mexico, India, or Israel, or receiving the procedure in the United States, where they would be responsible for all co-pays and deductibles. This study suggests that cosmopolitanism affects patients' views of medical tourism and that affective and cognitive country images have varying degrees of significance.

Abdul-Rahman, M. N., Hassan, T. H., Abdou, A. H., Abdelmoaty, M. A., Saleh, M. I., & Salem, A. E. (2023) assess the impact of clinical trust and well-being on patients' intentions to return to a destination using an online survey on a sample of patients who visited three medical tourism establishments in Egypt. Within the proposed framework, they also looked into a potential mediation relationship between three institutional variables: the availability of reasonable prices, the quality of the services, and the infrastructure. The study's conclusions showed that aspects of participants' intentions to return, apart from service quality, were significantly predicted by low costs, medical tourism infrastructure, clinical trust, and general well-being. participants' well-being acted as a full mediator in the relationship between service quality and intentions to return, whereas clinical trust and well-being played a partial role in the relationship between psychological intentions and affordable expenses.

Telehealth and telemedicine may improve medical travel behavior because they assist patients in determining whether they are ill and require treatment quickly, making them more likely to seek treatment from their doctor sooner than when traditional medical practices are followed. Communication and information quality are critical components of medical value tourism. As a result, according to the study, client satisfaction with telemedicine and telehealth services is a major factor that can induce the client to forego medical travel to the destination (Gu, D., et al, 2021). Rapid medical tourism advancement implies rapid globalization. Internet access has enabled potential patients all over the world to search for and contact the best medical care. Telemedicine and telehealth are creating portals to ensure that the medical tourism process runs more smoothly (Hong, Y. A, 2016).

The onset of the pandemic has had a significant impact on the country, and when analyzed in the context of Tourism 4.0, a gap is evident. The impact of telemedicine services in the country is being studied in order to determine how far Tourism 4.0 can go to improve the sector. These are the research gaps that are being addressed in this paper. The travel and tourism industry in India has a large market. With centuries of tradition and modernity intertwined, India has much to offer in terms of niche tourism products such as adventure, medical, MICE, eco-

tourism, and others, in addition to other mainstream tourism products. India is well-known around the world for spiritual tourism, wellness, and rejuvenation. The tourism industry is an important component of the country's 'Make in India' initiative. The sector's significant multiplier effect on revenue generation and employment is difficult to overlook. The study seeks to understand the impact of India's tourism industry on revenue generation, job creation, and foreign exchange earnings.

### **Why This Study is Important**

Medical tourism is a subset of tourism that combines the medical facilities of a country with the natural beauty of its tourist destination. India's medical value tourism sector is well-known around the world for its affordability, expert care, and travel appeal. In light of COVID-19 and the industry's decline, the area's crucial importance was emphasized. This study is significant because medical value-tourism in India is growing as a result of the country's affordable healthcare, top-notch healthcare infrastructure, qualified medical personnel, a wide range of medical services, holistic approach to healthcare, travel opportunities, reduced wait times, fluency in multiple languages, and government support. When taken as a whole, these elements establish India as a top choice for people looking for overseas medical care.

It is vital to comprehend the pattern of patient flow into the nation over time to evaluate the effects of COVID-19 and the Tourism 4.0 project's future growth. Additionally, as part of Tourism 4.0, this study aims to comprehend India's current standing in telemedicine and telehealth.

### **Significance of the Study**

The rise of the Internet age resulted in significant advances in the practice of medicine. The inherent desire of people to travel has boosted India's image as a medical tourism hub, with Kerala attracting a sizable proportion of visitors. The rise of this niche sector as a major revenue generator can be seen in the government's allocation of Rs: 2970 crores to the Ministry of Ayush in the union budget 2021-22, up from only Rs: 1069 crores in 2014-15. As a result, it is necessary to analyze the flow of medical tourists and monitor the impact of the pandemic. In this paper, the future is discussed in the context of the adoption of tourism 4.0, specifically through telemedicine. According to the World Travel and Tourism Council, India ranks seventh in terms of travel and tourism contribution to GDP and 54th in the World Economic Forum Travel and Tourism Index for 2021. While India is already one of the top medical tourism destinations, there

is still plenty of room for growth. The pandemic slowed the industry, but as borders reopen to tourists with a new and improved awareness of health and cautious living, the potentials of medical value tourism are numerous. As the world saw India fight the pandemic on an impressive scale by implementing telehealth services for better reach, faith in the nation as a medical hub has only advanced. This study can provide groundwork for further research as to how medical value tourism can affect other industries in the country, as it does the economy. Studies regarding the growing potential of telemedicine or telehealth as a digital enhancer of tourism 4.0 can provide new knowledge.

### **Objectives of the Study**

1. To investigate the pandemic situational trend in India's medical value tourism industry.
2. To investigate the growing trend of medical tourism in Kerala.
3. To investigate the impact of tourism 4.0, particularly telemedicine, on medical value tourism.

## **1. RESEARCH METHODOLOGY**

This is an empirical study that uses secondary data to highlight the trend and pattern of the medical value tourism industry in Kerala. Data from various publications is used to comprehend the current trend of medical value tourism in Kerala, as well as the impact of COVID-19 and the implications of telemedicine on MVT.

## **2. FINDINGS AND DISCUSSION**

The travel and tourism industry in India has a large market. With centuries of tradition and modernity intertwined, India has much to offer in terms of niche tourism products such as adventure, medical, MICE, eco-tourism, and others, in addition to other mainstream tourism products. India is well-known internationally for spiritual tourism, wellness, and rejuvenation. The tourism industry is a cornerstone of the country's 'Make in India' initiative. The sector's significant multiplier effect on revenue generation and employment is difficult to overlook. Based on secondary data, the analysis is based on three factors: revenue generation, job creation, and foreign exchange earnings.

## Revenue Generation

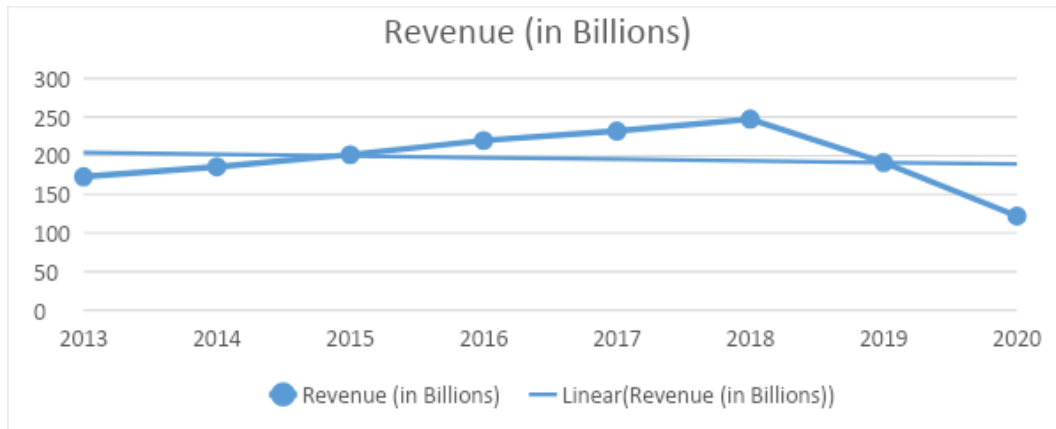
**Table 1: Revenue generated from tourism businesses in India from 2013 to 2020**

Year	Revenue (in Billions)
2013	172.91
2014	185.63
2015	201.43
2016	219.72
2017	232.01
2018	247.37
2019	191.3
2020	121.9

(Source: <http://www.ibef.org>)

## Revenue Generation

**Figure 1: Revenue generated from tourism business in India from 2013 to 2020**



(Source: Based on data from IBEF)

The table and chart show the increasing rate at which the tourism industry catered to revenue generation before the pandemic. Tourism was a promising industry before the pandemic. The most expensive was 247.37 billion USD in 2018. The pandemic had a significant economic impact the following year, and closing borders had a cost. By 2020, revenue had fallen to 191.3 billion USD, then to 121.9 billion USD. The industry's contribution to GDP is expected to reach 512 billion USD by 2028, representing a 10.35% annual growth rate.



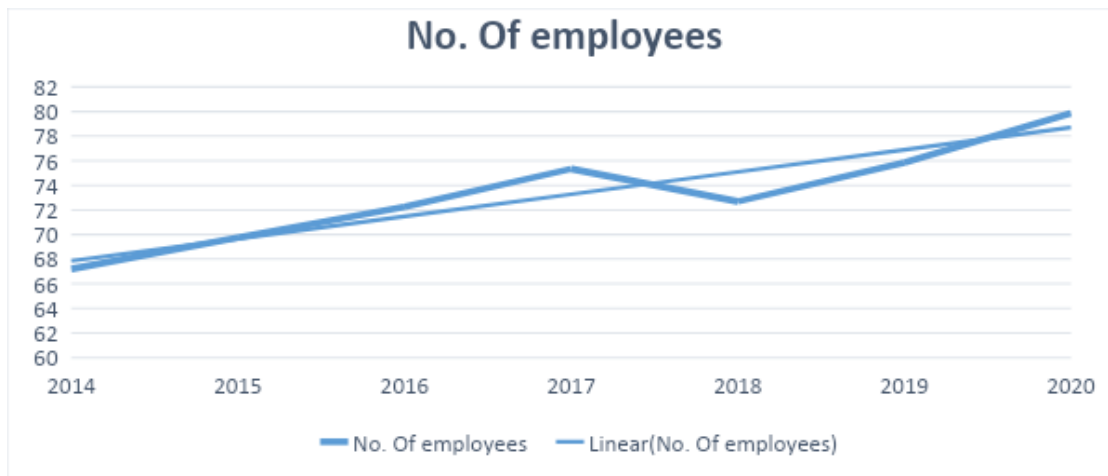
## Job Creation

**Table 2: Number of direct and indirect jobs created in the travel and tourism sector across India from financial year 2014 to 2020**

Year	No. Of employees (in millions)
2014	67.2
2015	69.75
2016	72.26
2017	75.34
2018	72.69
2019	75.85
2020	79.86

(Source: <http://www.statista.com>)

**Figure 2: Number of direct and indirect jobs in the travel and tourism sector across India from financial year 2014 to 2020 (in millions)**



(Source: based on data from Statista)

The above table and chart contradict the coronavirus's incapacitating effects. As can be seen, the number of jobs directly or indirectly related to travel and tourism has been steadily increasing in 2020. The tourism industry employs over 39 million people, accounting for roughly 8% of all jobs in the country. According to reports, India is expected to create 53 million jobs by 2029.

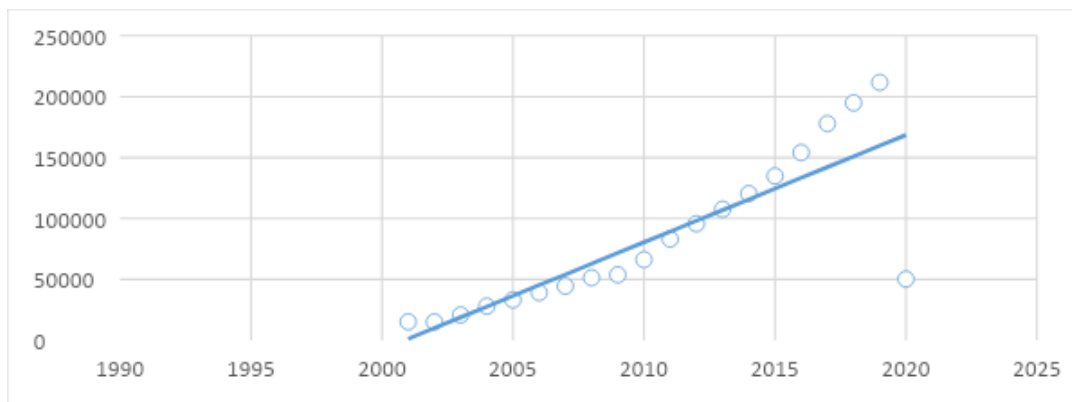
### Foreign Exchange Earnings

**Table 3: Estimates of Foreign Exchange Earnings (FEEs) in Rs. Crore from Tourism Industry**

Year	FEE from Tourism in India (cr)	Percentage(%) change
2001	15083	-3.5
2002	15064	-0.1
2003	20729	37.6
2004	27944	34.8
2005	33123	18.5
2006	39025	17.8
2007	44362	13.7
2008	51294	15.6
2009	53754	4.8
2010	66172	23.1
2011	83036	25.5
2012	95607	15.1
2013	107563	12.5
2014	120367	11.9
2015	134844	12.0
2016	154146	14.3
2017	177874	15.4
2018	194881	9.6
2019	211661	8.6
2020	50136	-76.3

(Source: Reserve Bank of India, for 2000 -2015, Ministry of Tourism, Govt. of India)

**Figure- 3: Estimates of Foreign Exchange Earnings (FEEs) in Rs. Crore from Tourism**



(Source: Reserve Bank of India, for 2000 -2015, Ministry of Tourism, Govt. of India, for 2016-2020)

The trend of foreign exchange flow into the country from tourism has increased over the years. With the onset of COVID-19 and a decrease in tourist arrivals, there is also a decrease in foreign exchange earnings, as seen in 2020. The lifting of restrictions and the resumption of normal tourism would pave the way for a revival in foreign exchange flow into the country.

### **MEDICAL VALUE TOURISM PERSPECTIVE IN KERALA**

Indian demography, culture, and traditions--whether in lifestyle or medicine--all provide a strategic advantage that has helped attract tourists from all over the world. Medical tourism has been a major focus in the niche tourism sector, and Kerala is well-equipped to capitalize on this segment. The term "medical tourism" is associated with high potential and opportunity among those involved in the government, practitioners, media, and facilitators. According to BBC World News (2013), Kerala is now a global brand and destination with the highest brand recall (Ramesh & Joseph, 2011) and one of the most popular tourist destinations.

**Table 4: Purpose wise Foreign Tourist Arrivals during 2020**

<b>Purpose</b>	<b>FTA</b>	<b>Percentage share</b>
Leisure holiday and recreation	1597753	58.2
Indian diaspora	381460	13.9
Business and Professional	320582	11.7
Others	262026	9.5
Medical	182945	6.7
Total	2744766	100

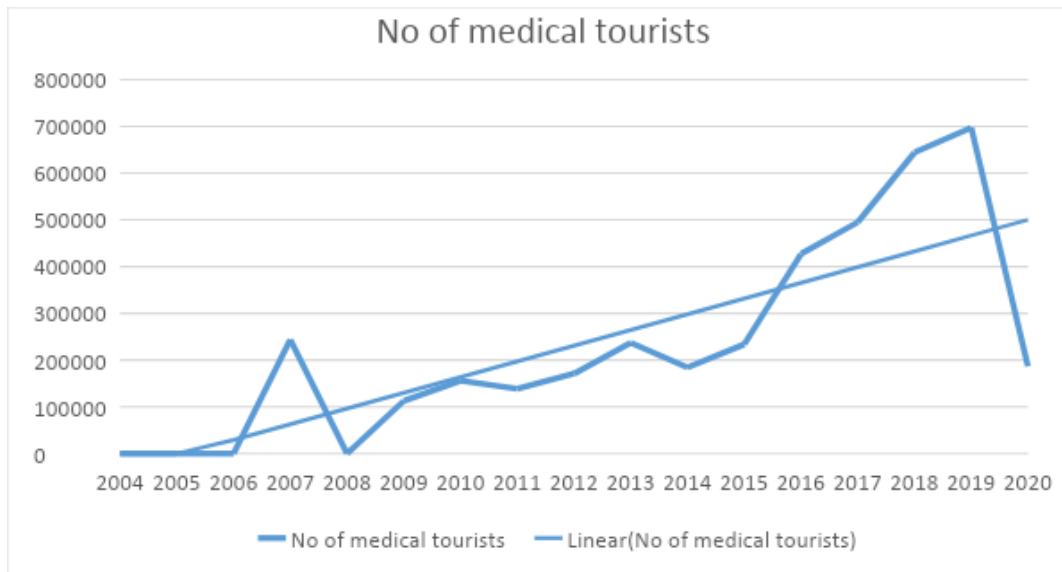
(Source: Indian tourism statistics at a Glance 2021)

The Department of Tourism reports that foreign visitors primarily came to the country for vacation, leisure, and recreation. The Indian diaspora, business, medicine, and other fields come next. Six percent (182,945) of all FTAs were made up of tourists traveling for medical reasons. There has been an increase in the number of visitors receiving various medical treatments in India. Cost-advantages, experience, technology, cultural sensitivity, quick wait times, and the availability of amenities that are otherwise unavailable in their home countries are the main causes. India continues to be one of the chosen destinations for medical treatment. There has been a decline in foreign visitors coming for medical treatment as a result of the pandemic. With improved infrastructure, more accredited hospitals, and the introduction of e-medical and e-medical attendant visas, the government hopes to attract more tourists.

**Table 5: Number of Foreign Tourists Arriving in India for Medical Tourism**

Year	No medical tourists	Percentage increase
2004	1,00,000	-
2005	1,50,000	50
2006	-	-
2007	243397	-
2008	-	-
2009	112689	-
2010	155944	38.38
2011	138803	-10.99
2012	171021	23.21
2013	236898	38.51
2014	184298	-22.20
2015	233918	26.92
2016	427014	82.54
2017	495056	15.93
2018	644036	30.09
2019	697453	7.65
2020	186644	-73.24

(Source: Bureau of Immigration)

**Figure 4: Number of Foreign Tourist Arrived in India for Medical Tourism**

(Source: based on Bureau of Immigration)

## A SUCCESS KERALA MODEL OF MEDICAL VALUE TOURISM

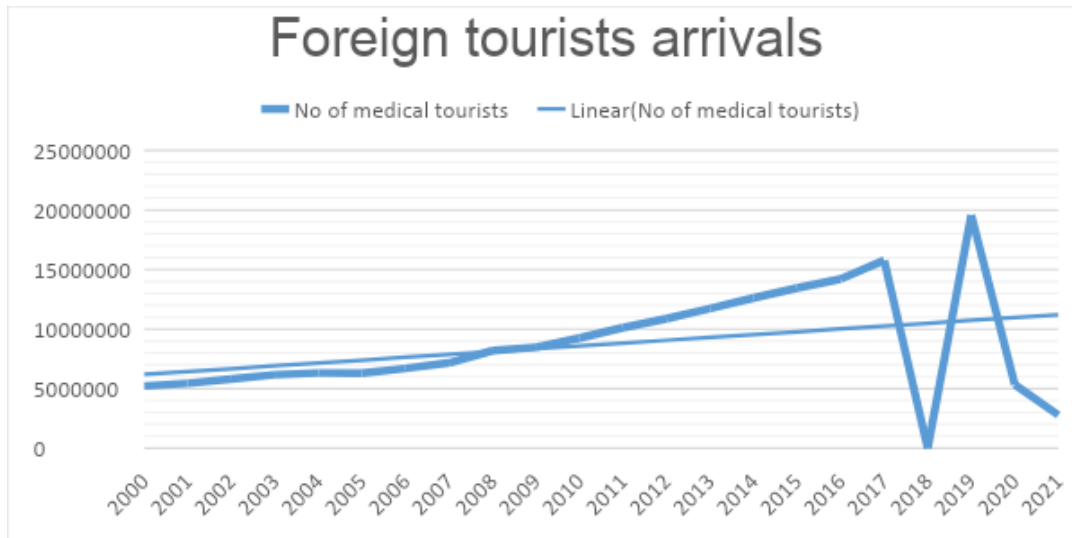
Kerala was among the first states to offer medical tourism. Age old tradition of Ayurveda has been a strong driver for medical tourism in the state. Specifically for Kerala, the medical tourism

sector is an area of unbound potential. Besides Ayurveda, the state is also abundant in modern medicine and technically advanced hospitals, quality professionals, tourist attractions, and low-cost advantages. Besides Ayurveda, an influx of patients are opting for heart surgery, knee replacement, spine and brain surgery, bone-marrow transplant, and dental and eye care.

**Table 6: Number of Foreign Tourist Arrivals in Kerala**

Year	Foreign Tourist	Percentage increase
2000	5223154	2.61
2001	5448522	4.31
2002	5800820	6.47
2003	6165849	6.29
2004	6317728	2.46
2005	6292872	-0.39
2006	6700258	6.47
2007	7158749	6.84
2008	8190179	14.41
2009	8470795	3.43
2010	9254340	9.25
2011	10114441	9.29
2012	10870550	7.48
2013	11715954	7.78
2014	12618777	7.71
2015	13443050	6.53
2016	14210954	5.71
2017	15765390	10.94
2018	-	-
2019	19574004	-
2020	5329727	-72.77
2021	2776607	-47.9

*(Source: Department of Tourism, Government of Kerala)*

**Figure 5: Number of Foreign Tourist Arrivals in Kerala**

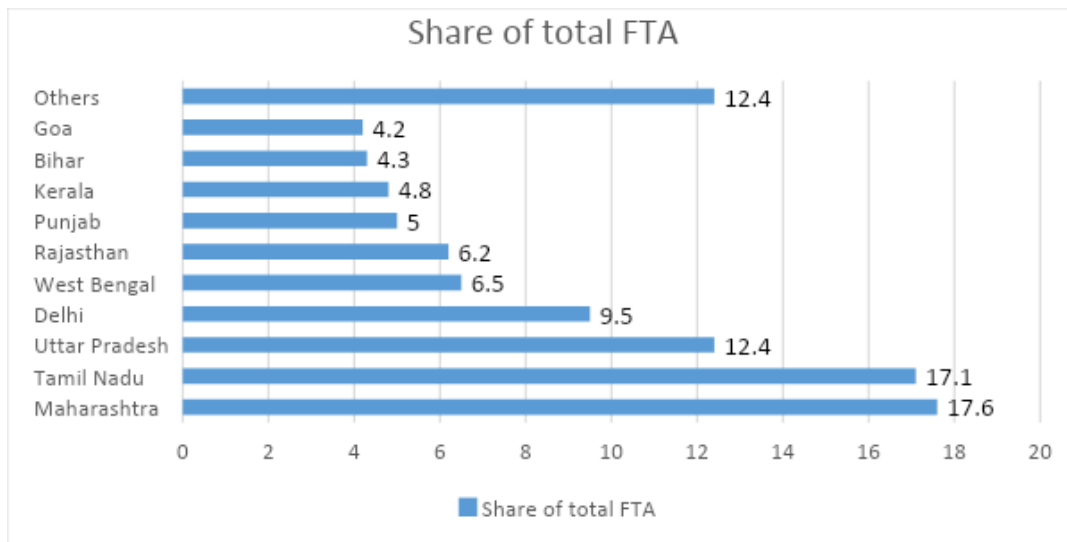
(Source: based on Department of Tourism, Government of Kerala)

The table and figure portray a rather reviving tourist economy in the state. 2020 saw a dip of 72.77% in overall tourist arrivals to the state. This has not shown a positive rise but at any rate, the fall is reduced in 2021 as can be observed from the graph. The trend line shows a positive slope which means the overall number shows gradual growth over the years. There is a lack of ready availability of data regarding the number of medical tourists to the state, which may be attributed to the fact that most tourists tend to travel on tourist visas rather than medical visas to avoid the hassle. Generalizing the total foreign tourists to the state, an assumption was made that part of it was for medical reasons, we can say that 2021 saw a comparatively lower dip in the number, which could mean a faster revival for the medical tourism sector in the country.

Despite a fall of 75 - 80% in FTA during the first two years of the pandemic, hospitals in the state are now making a comeback. For Kerala, the path of recovery is being made possible with changed marketing strategies and innovation to bring in more tourists. Hospitals in the district of Ernakulam are making strong strides, followed by Thiruvananthapuram. Kerala has over 33 NABH-accredited hospitals, which is the highest in the country. Ayurveda is a game changer for the state. Strategically located, with state-of-the-art technology and equipped specialty and multi-specialty hospital, Kerala has grounds to be a hotspot of medical tourism. Despite this, Kerala

only has 4.8% of the total FTA share of the country. The most favored state was Maharashtra holding a share of 17.6%, closely followed by Tamil Nadu with 17.1% and Uttar Pradesh with a 12.4% share of the total FTAs in the country. A lack of visibility and marketing campaigns about the availability of medical facilities can be accounted as one of the drawbacks of Kerala

**Figure 6: Share of FTA in India in 2021 by leading state**



(Source: based on Statista)

This necessitates the need for better strategies and initiatives to improve the game. Initiatives such as the introduction of medical visas and medical attendant visas and increased publicity at international platforms. The campaign 'Heal in India' was conceptualized to take India's value proposition of holistic health to the entire world. Enhancing insurance coverage, special zones dedicated to medical and wellness tourism, and a user-friendly online MVT portal are a few steps that could make changes in the sector. The advent of technology needs to be explored. To ensure the continued survival and growth of the sector, and as the world dives into Industry 4.0, tourism takes a step into Tourism 4.0.

### 3. CONCLUSION

The study shows that the tourism sector was steadily expanding, generating jobs in the industry, bringing in much-needed foreign exchange, and adding to the GDP overall. With the start of the COVID-19 pandemic, the sector as a whole suffered enormous losses, which had a cascading effect on many other related aspects of the country and slowed down the sector's steady rise.

Kerala only has 4.8% of the total FTA share of the country. The most favored state was Maharashtra holding a share of 17.6%, closely followed by Tamil Nadu with 17.1% and Uttar Pradesh with a 12.4% share of the total FTAs in the country. A lack of visibility and marketing campaigns about the availability of medical facilities can be accounted as one of the drawbacks of Kerala.

Prior to the pandemic, tourism was a lucrative sector. The following year saw a major economic impact from the pandemic, and border closures came at a price. Revenue dropped to 191.3 billion USD by 2020 and then to 121.9 billion USD. By 2028, the industry is predicted to contribute 512 billion USD to the GDP, indicating an annual growth rate of 10.35%. In 2020, the number of jobs in travel and tourism, whether directly or indirectly, has been rising steadily. Over 39 million people are employed in the tourism sector, which makes up 8% of all jobs in the nation. By 2029, 53 million jobs are predicted to be created in India, according to reports. The emergence of the Internet era has resulted in notable progress in the field of medicine. As demonstrated in 2020, there is a decline in foreign exchange earnings along with the onset of COVID-19 and a decline in tourist arrivals.

As a result, monitoring the flow of medical tourists and the pandemic's effects are crucial. In this paper, the future is discussed within the framework of the adoption of tourism 4.0, specifically through telemedicine. Further research on the impact of medical value tourism on the nation's economy and other sectors can build upon the findings of this study. Research on the expanding possibilities of telemedicine or telehealth as a digital addition to tourism 4.0 can yield new insights. The study aims to explore the ways in which Kerala's medical tourism industry is expanding, the effects of pandemics on the medical value tourism market in India, and the ways in which tourism 4.0—particularly telemedicine—is influencing medical value tourism. We are witnessing a surge in tourists, many of whom are even more cognizant of the need for wellness and medical products and remedies now that the virus is mainly under control and travel restrictions are being lifted. Kerala, India, stands to benefit greatly from the world's trend toward the east thanks to its affordable cost of living, wealth of tourist attractions, and first-rate healthcare system. The pandemic and the increased emphasis on MVT have only served to change the global conversation about healthy living. Therefore, it is anticipated that demand for high-quality medical services will increase as more people look for the best medical care



possible. With the arrival of Tourism 4.0, also known as the digital era, Kerala's medical sector witnessed an explosion in AI-powered digital tools that enabled cross-sector collaboration between public and private entities. In the future, there will be a lot of opportunities for healthcare delivery in India, thanks to digital technology and artificial intelligence.

**Conflict of Interest:** The authors have no conflicts of interest to declare.

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