INTERNATIONAL TOURISM OF KERALA:

A STUDY ON TOURISM DEMAND AND STAKEHOLDER PERCEPTIONS

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By

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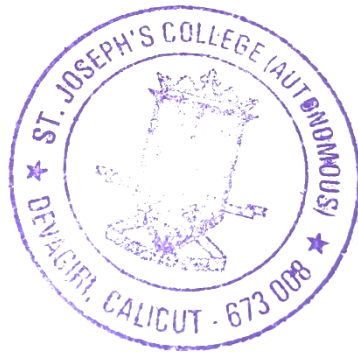
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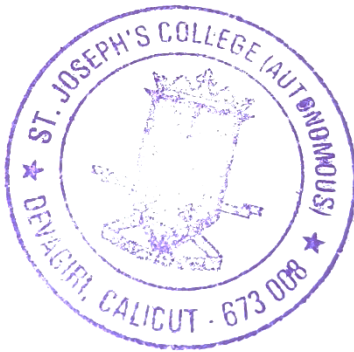+91 81570 55566; shibymthomas@gmail.com

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DECLARATION

I, Muhammed Salim. A.P, hereby declare that this Ph.D thesis entitled *"International Tourism of Kerala: A Study on Tourism Demand and Stakeholder Perceptions"* is a bonafide record of research work done by me for the fulfilment of the award of the degree of Doctor of Philosophy, under the guidance and supervision of Dr. Shiby M. Thomas, Associate Professor and Head, PG and Research Department of Economics, St Joseph's College (Autonomous) Devagiri, Calicut. I also declare that this thesis has not been submitted earlier for the award of any degree, diploma, fellowship or any other similar title. I have duly acknowledged all sources used by me in the preparation of this thesis.

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Extended Abstract

Kerala has significantly reaped the benefits of international tourism in comparison to many other states in India. Over the recent period, Kerala has successfully increased the number of overseas visitors to surpass a million per year, a substantial growth from figures well below one hundred thousand in the late 1980s. According to data sourced from 'Kerala Tourism Statistics,' published by the Department of Tourism, Government of Kerala, the tourism industry constitutes nearly 10 percent of the state's income and provides direct employment to 1.5 million people. Notably, foreign exchange earnings from tourism in Kerala soared to just over $15 billion in 2019 from a mere $50 million in the mid-1990s. The study was conducted at this backdrop to identify and elucidate the factors driving foreign tourist arrivals in the state. A detailed analysis of inbound international tourism in Kerala could enhance tourism regulation and management effectiveness, enabling the adoption of appropriate policies and adequate preparations in light of the study's findings, potentially elevating the number of foreign tourist arrivals.

Both quantitative and qualitative techniques were employed in this study. Quantitative analyses involved the use of descriptive statistics, time series analysis, and cross-sectional analysis with diverse datasets. All variables used in these analyses were categorized into three groups: destination-based variables, origin-based variables, and origin-cum-destination-based variables. As part of the qualitative technique, a sample survey was conducted with selected stakeholders in the top four foreign tourist destinations in Kerala. The study also employed an Autoregressive Distributed Lag (ARDL) model on seasonally adjusted data of monthly overall foreign tourist arrivals in Kerala from January 2002 to December 2019, utilizing four predictors. Additionally, three log-log regression models were developed on monthly tourist arrivals in Kerala from the top three source countries (the UK, the US, and France respectively) from January 2015 to December 2019, incorporating five regressors. Furthermore, a multiple linear regression model was developed on arrivals of tourists in Kerala from 148 designated source countries in 2019, including seven regressors. In addition to regression techniques, a one-way ANOVA was conducted to estimate mean differences among countries belonging to different categories (country-wise tourist arrivals as the dependent variable and income, human development, and bilateral visits to and from India as independent variables).

In the descriptive analysis of foreign tourist arrivals in Kerala, seven factors were identified as strongly related and highly relevant. Among these, two factors, namely rainfall and air transport infrastructure, are considered destination-based variables. The data indicates an inverse relationship between tourist arrivals from abroad and rainfall in the destination, while air transport infrastructure has a positive impact on foreign tourist arrivals in Kerala. Four other variables, specifically the availability of direct flights, relative temperature, the presence of Malayalee diaspora abroad, and nominal exchange rate, are classified as origin-cum-destination-based variables. Conversely, several potential factors such as internet usage, land area, population, and human development of the source markets were deemed irrelevant in explaining Kerala's international

tourism, at least in the context of descriptive studies. The analysis further reveals a significant skewness in Kerala's international tourism concerning monthly share, destination-wise share, source market-wise share, and district-wise share of arrivals. Notably, from November to March, approximately 60 percent of arrivals have been recorded since 2002, with Ernakulam and Thiruvananthapuram hosting nearly 70 percent of Kerala's total arrivals each year. Conversely, Northern Kerala remains the least visited region, and Pathanamthitta and Palakkad are identified as the least visited districts in the state. Only a handful of destinations in Kerala, including Kochi city, Kovalam, Fort Kochi, Varkala, Alappuzha, and Thiruvananthapuram city, attracted 67 percent of the total foreign tourist arrivals on average over the past two decades. The concentration of foreign tourists in select destinations and districts suggests that international tourism in the state remains largely underexplored, especially concerning the least visited destinations and districts in Kerala.

ARDL estimation indicates that income, nominal exchange rate, rainfall, and Europe's tourism nights are indeed associated with Kerala's international tourism demand, although not statistically significant even at the 10 percent level. Despite a positive relationship between income and Kerala's tourism demand, aligning with economic theory, there is no statistical evidence supporting this correlation. In contrast, the other three factors, including the exchange rate, exhibit a negative relationship with Kerala's tourism demand, as anticipated. The adverse impact of the exchange rate suggests that Kerala's export competitiveness in tourism improved over the long run with the depreciation of the Indian Rupee against the US Dollar. Rainfall maintains a negative correlation, indicating that Kerala's rainy season disrupts the free movement of tourists, particularly foreign tourists, in the state. Similarly, tourism nights from Europe, a major source market for Kerala's international tourism, also negatively influence the dependent variable. In the error correction model, only the exchange rate emerges as relevant in explaining Kerala's international tourism demand with statistical significance.

The presence of Malayalee diaspora and the international tourism expenditure of source markets were identified as strong and relevant variables in explaining Kerala's international tourism demand, according to the linear regression model developed on a cross-sectional dataset. Air transportation cost exhibits a negative relationship, aligning with economic theory. However, both air transportation cost and income are only mildly related, lacking statistical significance even at the 10 percent level, as per the cross-sectional regression. Other predictors such as internet usage, migrant stock, and the global competitiveness of source markets also show positive relationships with the dependent variable, but without statistical significance.

In the log-linear regression analysis, tourists from the UK in Kerala appear to be relatively sensitive to prices, income, environmental factors, and the tourism seasonality of their source country. French tourists exhibit greater sensitivity to environmental factors and the origin country's tourism seasonality, while US guests respond sensitively to relative prices and environmental factors. The lower relative price of Kerala compared to source countries is relevant in attracting foreign tourists, whereas quantitative income

appears relatively less relevant in explaining Kerala's international tourism demand. It reveals that Kerala remains a favoured destination as it remains affordable with lower relative prices.

In the stakeholder analysis, two dominant factors were identified: social, cultural, and psychological factors, along with economic factors, prevailing among the global themes. Tourism resources and induced arrivals followed closely in importance, while health and climatic factors were also deemed relevant in explaining Kerala's international tourism. Conversely, geographical and technological factors were found to be the least relevant themes concerning overseas tourist arrivals in the state. Among the top codes, direct tourism resources, guests primarily from advanced economies, and the presence of complementary destinations in the vicinity received over 20 out of 28 total responses each. Codes such as dependence on low-cost transportation for city travel, poor waste management in destinations, arrivals for leisure, repeat visits, sufficient government effort, seasonal arrivals, and culinary tourism were the next top codes, each garnering 16-20 responses. Other relevant codes with 14-15 responses each out of 28 included investment by private entrepreneurs, insufficient government efforts, prevalence of tour packages, sunbathing for health rejuvenation, a safe and friendly atmosphere, guests mostly not being affluent, and disturbances caused by noise and overcrowding. Codes with 11-13 responses each out of 28, assuming decent significance, encompassed preferences for walking, lower relative prices, Ayurveda, strict adherence to travel plans by foreign tourists, extreme cold in the origin and a comfortable climate in the destination, travel mania, European cultural influence, shopping, language as a barrier for non-English speaking guests, reliance on the internet for tourism information, online booking and marketing, and greater currency value.

The thematic analysis revealed that most codes belonged to sub-global themes such as purposeful arrivals, well-fashioned arrivals, other negative forces, and the higher relative income of tourists and lower relative prices in the destination. Ten attributes were identified as inherently present: Kerala's international tourism being driven by both economic and non-economic factors; foreign tourists arriving with various intentions; their experience affected by direct or indirect handling of promotions by the government system and private entrepreneurs; behavioural problems in destinations slowing foreign tourist arrivals; visitors arriving to explore Kerala's diverse tourism resources; negative impacts from factors like insufficient government effort, language barriers, lack of basic facilities, substitute destinations, unnecessary regulations, lower arrivals during rainfall, and overcrowding; a substantial category of repeat visitors; Kerala benefiting from Europe's travel culture; and, importantly, foreign tourists arriving not solely due to affluence but also due to greater purchasing power for their income, given the lower cost of living in Kerala's destinations compared to their home countries.

In summary, Kerala's international tourism exhibits a pronounced seasonality, primarily influenced by tourists from advanced economies in Europe and North America, who flock to the state between November and March to escape extreme winter conditions in their home countries. This period coincides with Kerala's stable and comfortable

climate. The tourism seasonality of major source countries plays a significant role, with Europe and North America remaining the primary markets. In contrast, visitors from high-income economies in the Middle East prefer the monsoon season for their visits. The impact of standard tourism demand determinants, such as income and prices, is selective in Kerala's case. Quantitative income shows a moderate relationship with international tourism demand of Kerala, while categorical income is highly relevant, especially as the majority of overseas visitors come from designated high-income countries. This limited impact of income on tourism demand is corroborated by one-way ANOVA, indicating significant differences in mean arrivals between high-income economies and other income categories. Although it was learned that quantitative income was not significantly related to Kerala's international tourism demand as per ARDL and cross-sectional technique, double log regression revealed the significance of income of the top source markets in affecting the visitor arrivals from the concerned countries overtime in Kerala. However, it was true that the arrivals of tourists in Kerala from the top source markets (the United Kingdom, the United States and France) have been less elastic to income. It implies that Kerala's international tourism has not been a luxury product for the tourists from the advanced economies in the West has not been significant in making Kerala's international tourism. Greater purchasing power of the income received by the people of the advanced economies in Europe, North America, the Middle East and Oceania largely powers foreign tourist arrivals in Kerala rather than mere nominal income. Lower relative prices and cost of living in Kerala when compared to the advanced economies has really pulled the number of arrivals to newer heights. Moreover, other two factors strongly influenced the foreign tourist arrivals in Kerala were the availability of direct flights between source countries and India, and presence of Malayalee diaspora abroad.

The presence of complementary destinations in the vicinity further influences the inverse relation between prices and tourism demand as it reduces the average cost of international travel. Thematic analysis highlights the influence of greater international currency value, lower cost of living, and the significant Malayalee diaspora in source countries on Kerala's international tourism demand. Although internet growth has facilitated contemporary international tourism, the percentage of people using the internet in source countries is not statistically significant in driving visitor arrivals. Market size and human development of source countries are weakly correlated or non-correlated with foreign tourist arrivals in Kerala. Kerala remains a favoured destination for visitors from advanced economies not solely due to affluence but because they experience greater purchasing power for their income, given the lower cost of living in Kerala compared to Western advanced economies. The overwhelming relevance of origin-cum-destination-based variables suggests untapped potential in variables related to destinations, providing an opportunity for deliberate efforts to maximise arrivals.

Keywords: Kerala's international tourism, foreign tourist arrivals in Kerala, lower cost of living, greater purchasing power, seasonality, complementary destinations, origin-cum-destination based variables, economic and non-economic determinants

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ABBREVIATIONS

AIC	:	Akaike Information Criterion
ALP	:	Alappuzha
ANOVA	:	Analysis of variance
ARDL model	:	Autoregressive distributed lag model
ASEAN	:	Association of Southeast Asian Nations
ATM	:	Automated Teller Machine
CIAL	:	Cochin International Airport Limited
CLRMs	:	Classical Linear Regression Models
DBVs	:	Destination-based variables
DTAs	:	Domestic Tourist Arrivals
D-W	:	Durbin-Watson
EKM	:	Ernakulam
FTAs	:	Foreign Tourist Arrivals
GoI	:	Government of India
GoK	:	Government of Kerala
GDP	:	Gross Domestic Product
GSDP	:	Gross State Domestic Product
HDI	:	Human Development Index
HDR	:	Human Development Report
ICT	:	Information Communication Technology
IMD	:	India Meteorological Department
IMF	:	International Monetary Fund
INR	:	Indian Rupee
KTDC	:	Kerala Tourism Development Corporation
KTM	:	Kottayam

LSD	:	Least significant difference method
NA	:	Not available
NOAA	:	National Oceanic and Atmospheric Administration
OBV	:	Origin-based variables
ODV	:	Origin-cum-destination based variables
PPP	:	Purchasing power parity
SARS	:	Severe Acute Respiratory Syndrome
TALC	:	Tourism Area Life Cycle Theory
TVM	:	Thiruvananthapuram
UAE	:	United Arab Emirates
UK	:	United Kingdom
UNDP	:	United Nations Development Programme
UNWTO	:	United Nations World Tourism Organization
US	:	United States
USD	:	United States Dollar
UTs	:	Union Territories
WEF	:	World Economic Forum

Chapter 1

INTRODUCTION

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1.1. Background

Kerala, located in the southern part of India, is known for its beautiful and vast backwaters, serene beaches, lush green forests, and abundant wildlife. Kerala is rich for its natural beauty, diverse culture, and unique experiences that attract tourists from all over the world. Tourism resources or attractions primarily and explicitly drive visitor arrivals in tourism destinations without which there will be little point in anyone travelling according to Yale (1991). It is true that tourism supply follows only when a destination has something to offer to the visitors. Destination's natural and cultural factors could contribute for the development of tourism among other factors such as human resources, historical resources and infrastructural resources (Heath & Wall, 1992 and Bunghez, 2016). It is generally known that Kerala's tourism industry has been benefited a lot from its own natural and cultural resources. The state's most popular attractions including its backwaters, beaches, hill stations, and wildlife sanctuaries attract millions of both domestic as well as foreign tourists. The backwaters are a network of lagoons, lakes, and canals that stretch along the coast of Kerala, and are known for their tranquil beauty and unique ecosystem. Tourists can explore the backwaters on traditional houseboats, which offer a comfortable and luxurious way to experience the natural beauty of the region. Cochin, Alappuzha and Kumarakom are the most exciting backwater destinations of Kerala. The state has a 593 km coastline with some of the most beautiful beaches in India, including Kovalam, Varkala, and Cherai. These beaches offer a range of activities such as swimming, sunbathing, and surfing, and are a popular destination for both domestic as well as international tourists. There are tourist destinations in Kerala that are famous for both beaches and backwaters including Cochin and Alappuzha. The state is home to several hill stations too, including Munnar, Thekkady, Vagamon and Wayanad. These hill stations offer a cool and refreshing escape from the heat and humidity of the coastal areas, and are known for their scenic beauty and wildlife. The state houses several wildlife sanctuaries, including Periyar Wildlife Sanctuary and Silent Valley National Park. These sanctuaries offer a unique opportunity to experience the state's diverse wildlife, including elephants, tigers, and leopards. Apart from Kerala's natural tourism resources such as beaches, backwaters, hill stations and wildlife, several other tourism resources or products also play decisive role in the arrivals of tourists. Centuries old heritage of Kerala and its unique culture as an amalgam of art forms, language, literature, life style, festivals and

cuisine have also to be added to the tourism products of the state (Department of Cultural Affairs, GoK, 2022). The potential of a tourist destination can be associated with the presence of factors including natural, cultural and historical resources as pointed out by Heath & Wall (1992) and Bunghez (2016). It implies that there are others factors too that influence tourism in a destination.

The growth of international tourism in Kerala has had significant impact on the state's economy and society. Tourism makes generally positive impact on the growth of the economy and development indicators of the destinations according to Ivanov & Webster (2007). Li et al. (2006) in their study found that tourism has become a significant contributor to the economy of Hong Kong in terms of foreign exchange earnings and contribution to the GDP. The tourism industry has become an important source of income of Kerala too. It contributes to employment generation, infrastructure development, and economic growth of the state of Kerala just like any other tourism destination. The tourism industry has created employment opportunities for local people, particularly in the hospitality and transportation sectors. The state of Kerala has increasingly become one of the favourite destinations for the foreign tourists in India since 1986 when Kerala became the first state in India to declare tourism as an industry (Nair and Dhanuraj, 2018). The number of foreign tourists, who visited Kerala, has increased from a mere 0.05 million in 1986 to 1.19 million in 2019 as per tourism statistics published by Department of Tourism, Government of Kerala (2022). The statistics shows that Kerala has been ranked 7th and 8th alternatively in the list of states or union territories most visited by foreign tourists in India in the past few years (Ministry of Tourism, 2022). It shows that Kerala gets decent share of foreign tourists visiting the country. Tourism sector has become a significant contributor to the Kerala economy as it contributes a whopping 10 per cent of the state income in 2018-19 as per Kerala Economic Review 2020 (Kerala State Planning Board, 2022) and a total of $6.4 billion was generated in 2019 out of which $1.5 billion was foreign exchange earnings as per Kerala Tourism Statistics 2019. Since tourism has largely been labour intensive, development of tourism generates direct, indirect and induced employment opportunities in the state. It provides employment to 1.5 million people directly in the state (Department of Tourism, 2022). Tourism is explicitly an economic activity as a tourist is consumer of goods and services directly or indirectly related to tourism (Bunghez, 2016). The growth of the industry has also led to the development of infrastructure such as hotels, resorts, and transportation facilities, which has improved

the quality of life for local people. In a nutshell, tourism industry is vital to the state of Kerala and the state is dependent to a good extent on visits of foreign tourists. Compared to domestic tourism, Kerala's international tourism has relatively an edge in terms of foreign exchange earnings and state-wise share of overseas tourist arrivals. It is true that foreign tourists have been arriving in Kerala on an increasing basis since 1986 (the year in which Kerala became the first Indian state to declare tourism as an industry) in general and 2002 (the year in which Tourism Vision 2025 was published) in particular.

1.2. Research Problem

Tourism has become a significant contributor to Kerala's state economy and international tourism of the state has become even more important in terms of contribution to foreign exchange earnings and surged share in state-wise overall foreign tourist arrivals in India. It is generally believed that state's natural beauty, diverse cultural heritage and diversified tourism products have led to the growth of tourism in the state. Kerala, which is popularly branded as 'God's Own Country', is known for its beautiful backwaters, beaches, hill stations, and wildlife sanctuaries, which offer unique and memorable experiences for tourists. The state's diverse culture and traditions, including its cuisine, music, and festivals, also attract tourists who are interested in exploring the local culture. However, it is true that only tourist attractions and resources cannot make tourism a reality. There are several other factors too that influence the visitor arrivals. The real factors driving Kerala's international tourism demand are yet to be identified and analysed. It is important to identify what exactly are the reasons for choosing Kerala as the destination by the foreign tourists and what are the relevant themes and codes associated with Kerala's international tourism. The factors driving overseas visitor arrivals in the state could be internal factors, external factors or internal-cum-external factors. Internal factors could be related to the tourism destinations in the state while external factors are related to countries of their origin. The determining factors could be economic, social, cultural, psychological, demographic and geographic. Moreover, there could be negative forces too that might have resulted in reduced arrivals. Negative forces could be both natural as well as man-made. The actual arrivals could be lower than the potential arrivals when the negative forces are prevalent. Moreover, the study on Kerala's international tourism demand gets

greater significance as no study in the tourism economics literature has so far confirmed, foreign tourist arrivals in Kerala have reached the maximum. The current study purports to identify the factors which influence the foreign tourist arrivals in Kerala using both quantitative and qualitative analytical techniques. This study will explore the features of the development of international tourism in Kerala, the attractions and experiences that draw tourists to the state, and limitations and negative forces that pulled Kerala's international tourism backward. Both quantitative and qualitative attempts could help bring out a comprehensive and balanced view on international tourist arrivals in Kerala.

1.3. Review of Selected Literature

Studies on tourism demand were the sources of the review of literature as the present study was confined to the demand segment of tourism economics. Tourism economics, although a recently originated branch of economics compared to many other branches, is rich with extensive studies in various aspects of the discipline. Many studies were available on different aspects of tourism economics including tourism demand, tourism supply, socio-economic impact of tourism, trade of tourism, tourism entrepreneurship, sustainable tourism, tourism and infrastructure development and so on. All the variables chosen in the quantitative analyses of this research were cited in the literature review section with theoretical relation and supportive literature. This section consists of both theoretical and empirical considerations of the variables used in the study. It establishes a strong theoretical background for the study with relevant arguments with the support of empirical evidence.

1.3.1. Tourism Demand

The present study is confined to the demand segment of tourism economics. Aside from price and income, many factors could influence the realisation of demand. Since the present study looks into the factors responsible for destinations in Kerala being chosen by the foreign tourists, the demand function has been used to find the determinants of quantity demanded of tourism goods and services under different conditions. Tourism demand is defined in line with 'demand' in economics as the amount of tourism goods and services that tourists are willing and able to purchase at a given price over a certain period of time. Tourism demand can be measured by estimating tourist arrivals,

overnight stays and tourism expenditure. The studies on tourism demand use either of the three segments in most cases (Narayan, 2004; Papatheodorou & Song, 2005; Vu & Turner, 2006; Ouerfelli, 2008; Folk & Lin, 2018; Naude & Saayman, 2005; Lim, 1997a and 1997b; Roget & Gozalez, 2006; Alegre & Pou, 2004; Alegre et al., 2011; Marcussen, 2011; Kim et al., 2011; Jingwen & Mingzhu, 2018; Gani & Clemes, 2017; Thrane & Farstad, 2012; Moniz, 2012; Santos et al., 2012; Daniel & Rodrigues, 2012; Downward & Lumdson, 2003; Mervar & Payne, 2007; Uysal & Crompton, 1984; Zamparini et al., 2017; Xie (2020) and Song et al., 2003). The international tourism demand is often measured in terms of the number of tourist arrivals, tourism expenditure or number of overnight stays in the destination country according to Ouerfelli (2008). As per the studies reviewed, many factors are found responsible for fluctuations in tourism demand of various countries and regions of the world. The determinants could vary from destination to destination, country to country, region to region and even researcher to researcher. However, international tourism demand is generally measured in the previous researches as a function of certain standard variables such as income of the tourists or origin country, relative tourism prices, exchange rates, transportation cost or distance and a number of dummy variables (Song et. al., 2003; Naude & Saayman, 2005; Algieri, 2006; Merwar et. al., 2007; Marcussen, 2011; Kim et al., 2011; Alegre et al., 2011; Daniel et. al., 2012; and Gani & Clemes, 2017). The relative tourism prices, relative real exchange rates, transportation costs and air distance can be alternatively proxied for price of tourism that could inversely affect tourism demand as per the demand theory. Although all the above variables are cost related ones, they were used as different predictor variables in the tourism economics literature (Uysal and Crompton, 1984).

1.3.1.1. Consumer Demand Theory

Consumer demand or choice theory provides an insight to deal with the consumer behaviour especially in applying various principles on decision making in various conditions. Lipsey and Chrystal (2009) note that the determinants of quantity demanded are briefly price of the product, price of other related products, consumer's income and wealth, consumer's tastes and various individual-specific or environmental factors. While income of the tourists or source countries/regions is positively related to tourism demand, prices or cost of living in the destinations are negatively related. Samuelson and Nordhaus (2002) acknowledge the inverse relation between price and quantity

demanded in terms of both scientific observation and logical understanding. Similarly, being a key determinant, as people's income increases, individuals tend to buy more of almost everything if prices do not rise (Samuelson & Nordhaus, 2002). The tourism demand function can be stated as:

$$Qx = f (Px, Y, P_R, T)$$

Where Qx is tourism demand, Px is the tourism prices, Y is the income of the tourists, P_R is tourism prices of other destinations and T is the tastes of the tourists. When Qx changes in fixed proportion to a given change in independent variables, we have linear demand function. On the other hand, we get non-linear demand function if given change in independent variables leads to change in dependent variable in varying proportions.

There are several studies in tourism economics that confirmed the prevalence of primary factors like prices and income on demand (Downward & Lumsdon, 2003; Uysal & Crompton, 1984; Daniel & Rodrigues, 2012; Gani & Clemes, 2017; Narayan, 2004 and Zamparini et al., 2017). Basic demand function is employed here to identify the determining factors of tourism demand. It is generally believed that prices and cost inversely affect tourism demand. At the same time, consumer income, as per the consumer demand theory, has a positive impact on tourism demand (Uysal & Crompton, 1984; Daniel & Rodrigues, 2012; Gani & Clemes, 2017; Narayan, 2004 and Zamparini et al., 2017). The reasoning is that higher the income, more likely the people can afford international travel. Aside from the standard variables of income and prices, demand theory implies that there are number of other factors too that could affect the demand for tourism.

The present study attempts to identify factors affecting international tourism demand in Kerala including most frequently cited determinants such as prices and income. The standard demand equation would be reformulated on the basis of previous studies. Aside from relative tourism prices and income, factors contributing tourism demand could be many including trip cost, exchange rates, tourist's country of origin, age, gender, employment, education, trade relation, climate, migration, tourism resources, governance, crime status, accommodation, shopping, food, direct flight availability, visa easiness, diplomatic visits and so on.

The present study, in short, is designed and carried out to identify the determinants of international tourist arrivals in Kerala in line with the postulations of the demand theory. It is an attempt to estimate and explain international tourism demand in the state. Qualitative techniques are also employed to complement quantitative analysis.

1.3.1.2. Elasticities of demand and constant elasticity demand function

Constant elasticity demand function, one of the most commonly employed demand functions in the practical research, estimates the sensitiveness of tourism demand to the percentage change in selected indicators (Verma, 2017). In order to identify how much of the demand for tourism services respond to changes in price and income, price and income elasticities of tourism service have to be measured (Samuelson & Nordhaus, 2002). The present study measures the degree of responsiveness of quantity demanded of tourism services due to percentage change in tourism prices and income of the tourists in line with price and income elasticities of demand. This is done to check whether Kerala's international tourism remains a normal good or a luxury good. Roget & Gozalez (2006) and Algieri (2006) found international tourism luxury service as the income elasticity stands higher.

Constant elasticities are often useful to work with isoelastic demand curve although there is no reason to expect elasticities of demand to be constant according to Pindyck et al. (2022). Log-linear demand function can be written as follows:

log (Q) = a – b log *(P) + c* log *(I)*

Where log (Q) is the logarithmic demand function and a, b and c are the constants in the demand function. The slope of the log-linear demand function is determined by *–b* which is price elasticity of demand and *c* which is income elasticity of demand (Pindyck et al., 2022).

1.3.1.3. Substitute and complementary goods

It is important to know whether Kerala's destinations have close substitutes or complements. When Kerala's substitute destinations get stronger, Kerala's international tourism will get weakened and vice versa. Geographical similarities of several destinations in the neighbourhood raise the possibility for such destinations being the

substitutes. At the same time, presence of complementary destinations helps Kerala's international tourism prosper. Destinations are substitutes if an increase in the prices of one destination raises the tourist arrivals in the other. Similarly, destinations are complements if an increase in the price of one decreases the demand for the other (Samuelson & Nordhaus, 2002). It is obvious that presence of complementary destinations makes the tourist arrivals more competitive as the average cost of travel falls with rise in number of complementary destinations in the vicinity. At the same time, relative fall in prices of substitute destinations decreases the travel competitiveness of the concerned destinations. Analysis on change in tourism demand due to differences in relative tourism prices in different tourist locations of Kerala would be meaningful in this background.

1.3.2. Tourism area life cycle (TALC) theory

Tourism area life cycle theory put forward by Butler (1980) suggested and illustrated a hypothetical evolution of a tourist area. According to him, each destination will go through or may have already gone through each stage of tourism development. Hypothetical stages of each destination are given in figure 1.1. When a new tourist area was explored, number of tourists visiting the destination rises and eventually reaches a consolidation stage after going through involvement and development stages. The stage of stagnation will be reached when carrying capacity of the destination reaches the maximum. As pointed out by Butler (2011), "if the carrying capacity of the resort was exceeded, the relative appeal of the resort would decline, it would become less competitive, and this would be reflected in declines in visitation, investment, and development". Once stagnation stage is reached, appropriate intervention would be the key to check the destination faces decline in visitation and investment according to Butler.
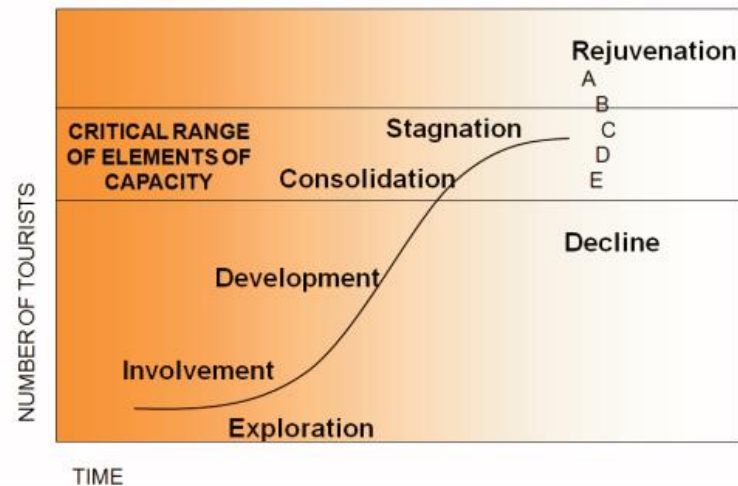
Figure 1.1. Hypothetical evolution of a tourist area

Source: Butler (1980)

1.3.3. Studies on Tourism Demand: Segment-wise Review

The tourism demand has three segments viz. tourist arrivals, tourist overnight stays and tourism expenditure. These segments were used as dependent variables for tourism demand in various studies. Specifically, tourism demand has been proxied in tourism research by the segments of tourist arrivals, tourism overnight stays and tourism expenditure. The study may be conducted on tourism demand by measuring the either segment. Some studies focused only on tourist arrivals to identify tourism demand (Song et. al., 2003; Naude & Saayman, 2015; Vu & Turner, 2006; Nguyen, 2021 and Gani & Clemes, 2017). Several other studies used tourism overnight stays as the sole demand segment (Merwar et. al., 2007; Daniel & Rodrigues, 2012; Masiero et. al., 2012; Thrane et. al., 2012, Zamparini et. al., 2017 and Folk & Lin, 2018). Similarly, tourism economics is rich with the research in the tourist expenditure itself which is being used as the sole segment of tourism demand (Ghosh & Siddique, 2003; Kim et. al., 2011; Marcussen, 2011 and Jingwen & Mingzhu., 2018). There are studies which used more than one segment of the tourism demand too. Tourist overnight stays or tourist expenditure can be used along with tourist arrivals (Sen, 1985; Ahmed, 2010 and Subrahmanian, 2013). Different researchers in tourism economics who studied tourism demand approached the discipline differently in terms of segments of demand, variables used, type of data collected and technique applied for analysis and testing. Regardless, the studies on tourism demand determinants are relevant as future tourism demand can

be estimated if the determinants of tourism demand are identified (Alegre and Pou, 2004).

1.3.3.1. Studies on tourist arrivals

Tourist arrivals could be a better measure of tourism demand as many studies depend both on economic as well as non-economic factors (Zamparini et. al., 2017). Most studies on tourism demand, according to Nguyen (2021), used tourist arrivals as the measure of tourism demand. The studies by Song et al. (2003) and Naude & Saayman (2005) are some of the examples. It was duly confirmed by Li (2004) by pointing out that 37 out of 45 studies on tourism demand published after 1990 used tourist arrivals as the segment of tourism demand or dependent variable in the research on tourism demand.

In an attempt to estimate India's international tourism demand, Selvam (1989) estimated the motives for the foreign tourist arrivals in India. According to him, most of the foreign tourists who arrived in the country are pleasure seekers. He spotted travel for enjoying India's unique culture as the second major motive. Selvam (1989) connected India's scant share of world's foreign tourist arrivals with poor infrastructure. He focused on the need for developing sufficient infrastructure at destinations to attract more tourists and raise India's share in world tourism. In line with this argument, Naude and Saayman (2005) found that tourism infrastructure has been a significant determinant for tourist arrivals in Africa along with political stability, marketing and information, and the level of development. As pointed out by Selvam (1989) above, most foreign tourists who arrive in India are pleasure seekers. According to Dhariwal (2005), international tourist arrivals in India responded negatively to political and domestic disorders. However, it was not even significant at 10 per cent level.

Although, a standard factor and mostly cited variable, income of the tourists only will not drive the tourist arrivals. According to Naude and Saayman (2005), Africa's unique culture, rich wildlife and natural diversity happened to be the determinants for tourist arrivals in Africa although not key determinants. Africa as a less-developed region has some determinants of tourist arrivals that are quite different from the developed region as per the studies. Naude and Saayman (2005) argue that typical 'developed country determinants' of tourism demand such as the level of income in the origin country and tourism prices in the destinations compared to that of origin and the transportation cost are not significant in explaining the demand for Africa

as a tourism destination. However, prices or cost of living has significant negative impact on tourist arrivals according to various studies (Narayan, 2004 and Divisekara & Kulendran, 2006). For every destination, tourism prices may not be moving in opposite direction of tourism demand although prices have had negative impact on tourism demand in Philippines according to Deluna and Jeon (2014). Dhariwal (2005) found that cost of living does not have significant effect on international tourist arrivals in India. It does not mean prices are not at all related to tourism demand as tourism demand in certain regions and circumstances may be differently related to different variables. Song et al. (2003) found that the so-called 'developed country determinants' (income and tourism prices) were significantly related to international tourist arrivals in Thailand with correct signs. It implies that income and prices have still some room to explain the role of standard determinants of tourist arrivals in developing regions despite the arguments of Naude and Saayman (2005).

The fundamental issues such as poor tourism infrastructure, political instability, lack of sufficient information and poor development indicators cannot be the factors attracting the tourist arrivals in the developed countries unlike developing countries. Naude and Saayman (2005) found that political stability seemed much relevant for international tourists who arrive in Africa. However, it remains relatively less sensitive to the tourists from the rest of Africa. Other significant factors triggered the visitor arrivals in African nations, as per the study by Naude and Saayman (2005), were internet usage and urbanization rate. They found internet usage enabled easy access to destinations. Growth of internet has fostered increased tourist arrivals as tourism information and travel-related bookings are being hugely powered by internet. Garin-Munoz and Amaral (2011) found that younger people have higher intention of using internet for making travel decision as well.

Various researchers in economics of tourism used different but interrelated variables related to the demand for tourism in terms of determinants of tourist arrivals. Lim (1997) lists out 14 independent variables which could affect international tourism demand in the order of most important to less important. The variables are income, relative tourist prices compared to competing destinations, transportation cost, dynamics, exchange rate between currencies of the destination and origin countries, secular trend in tourist tastes, substitutable goods or services in the competing destinations, seasonal factors, marketing expenditure, migration and ethnic factors, trade and capital flows, economic activity indicators such as unemployment and income

distribution, qualitative factors such as tourists' attributes, household size, population in the origin country, trip motives or frequency, destination attractiveness, events at the destination, and other factors such as supply/capacity. Algieri (2006) says that demand for tourism and the choice of destinations could depend on income, exchange rates and prices, and unprecedented political changes. According to Roget and Gozalez (2006), economic determinants of both nations and, reputation and peculiarities of each tourism establishment are the major determinants of tourism demand.

Effects of advertisement on tourism has been a major factor in attracting tourists in several countries. However, marketing has not been an inevitable and equally relevant factor in analysing tourist turnout. Japanese and New Zealand tourists are more responsive to advertising than the UK and US tourists (Divisekera and Kulendran, 2006). Tourists from these countries are also highly sensitive to prices compared to UK and US. Although UK and US tourists are found to be less sensitive to prices, they are highly sensitive to income compared to Japan and New Zealand. In Australia's case, an international tourism demand model is a function of world income, state level transportation costs, stock of foreign born residents, the Australian real exchange rate and price levels of international and domestic substitutes (Shafiullah et al., 2019). The determinants for tourism demand may vary from region to region in the same country. While some factors surpass in some regions, some other factors surpass in some other regions. Shafiulla et al. (2019) says that the main determinants of international tourism demand in Australia vary by states and territories. For some regions, diaspora promotes international tourism while world income is the significant driver in some regions. In their study, panel and time series econometric techniques were employed to test the model variables for stationarity, cointegration and direction of causality. Tourist inflow to Philippines was found to be affected positively by income of the origin country and negatively by population in the destination country and distance to the destination (Deluna and Jeon, 2014). The role of income in affecting the tourism demand has been apparently proved in many studies. Uysal and Crompton (1984) found that income was statistically significant at 5 per cent level in instigating tourism demand for many countries.

1.3.3.2. Studies on tourist overnight stays

It is important to estimate average tourist overnight nights in tourism planning as the tourism receipts will be clear only when tourist nights are estimated. Mere estimation of tourist arrivals may not be helpful for the same. Number of overnight stays in rural tourism establishments depends basically on economic determinants, the extent of transport cost and the economic cycle according to Roget and Gozalez (2006). They have employed overnight stays as the proxy to tourism demand as it is a more precise measure. As stated above, several studies were done in the tourism demand aspect measuring tourism demand by tourist overnight stays only. Several researchers argue that tourist arrivals alone cannot give a clear picture on tourism demand (Sen, 1985 and Zamparini et al., 2017). According to them, we need to find and forecast tourism demand for effective tourism planning. Sen (1985) in his study points out that tourism planning should be done not on the basis of arrivals but on the basis of number of tourist nights.

Sen (1985), Roget & Gozalez (2006) and Zamparini et al. (2017) opted overnight stays as an appropriate quantitative measure. Zamparini et al. (2017) made it clear that choice of the three indicators of tourism demand depends on the objectives of the study. For all the studies on determinants of tourism demand that use both economic and non-economic variables, choice must be made between visitor arrivals and overnight stays. The variables used to measure the determinants of tourism demand in their study are found to have considerable impact on tourism demand of which local environmental quality and quality of restaurants had greater significant effect in Italian provinces.

According to Masiero and Nicolau (2012), price sensitivity of the tourism demand is not exactly in line with the law of demand although tourism demand is responding negatively to price. However, Roget and Gozalez (2006) found that price sensitivity to tourism overnight stays is significant at 5 per cent level. At the same time, Masiero et al. (2012) point out that price does not have the same effect on utility for all tourists. Although real prices tend to impact the tourism demand negatively, sensitivity differs from destination to destination and origin to origin. Concerning the length of stay, longer stays lead to higher price sensitivity to tourism activities and vice versa. So to speak, the demand falls almost proportionately to rise in price for the longer stays. It

is not proportionate among the tourists with shorter duration of stay. They are ready to spend more as they stay less. Their average daily expenditure will be higher as they do not reduce the purchases compared to prices. Length of stay of the foreign tourists, however, could be affected by the distance from their home country. Thrane and Farstad (2012) found that tourists from neighbouring countries stayed shorter duration in Norway. They connected this relation with the immensity of the travel costs which the visitors have to pay. Whenever the tourists are from distant nations, they have the tendency to stay longer according to the study of Thrane and Farstad (2012). The tourists from neighbouring countries tend to stay shorter as well since travel costs are smaller. Thus travel cost or distance has been a major factor for length of stay of the foreign tourists. However, this cannot be common for every nationality. It changes as per the differences in availability of tourism resources in the destinations to make the tourists satisfied. Relative tourism prices in the destination can also be a factor for influencing the duration of overnight stays. Income is another major factor that affects tourist overnight stays. It carries higher elasticity to demand confirming that international tourism has been a luxury good (Roget & Gozalez, 2006 and Algieri, 2006). At the same time, Roget et al. (2006) found that other variables such as infrastructure, promotional expenditure, tourism tradition and establishment location were positive but not significant.

Several studies were conducted on tourist overnight stays in Kerala. According to Johny (2002), beach destinations of Kerala maintained higher intensity of foreign tourism activity with a ratio of 1:1 between foreign and domestic tourists in Kerala. It was found in his study that beach tourism in Kerala acts as the compelling force for foreign tourists to stay longer. He found that foreign tourists in the famed destination of Kovalam stayed on an average for 11.8 days while they chose mere 6.5 days in wild life destinations and 5.8 days in the backwater spots.

1.3.3.3. Studies on tourism expenditure

According to Zamparini et. al. (2017) who used overnight stays as the indicator of tourism demand, tourism expenditure could be the right measure of tourism demand when only the economic issues are considered. Expenditure-based tourism segments could be classified into four viz. high, high/medium, medium/low and low spenders

(Alegre et al., 2011). The intensity of spending depends on tourists' income, country of origin, profession, nature of destination, tourists' level of satisfaction and so on.

It is generally believed that the amount of expenditure by the tourists and number of overnight stays are positively correlated. However, average daily expenditure may not be proportionally related to visitor nights. Study by Johny (2002) gives us a clear picture on average daily expenditure and number of visitor nights. According to him, foreign tourists in Kerala spent on an average of ₹2245 at beach destinations where longer stays are recorded. Moreover, the average daily expenditure by each foreign tourist at wildlife destinations was ₹2814 and ₹4642 at backwater centres. It implies that foreign tourists in Kerala who used to choose beach-side accommodation properties to stay longer and spend less when compared to backwater and wildlife destinations. He argues that this is mainly due to the lower and affordable cost at beach destinations. According to Johny (2002), this destination-wise selection by the tourists in Kerala is majorly due to affordability. He, however, reminds that this proportion is also true for domestic tourists.

Distance to the destination from the origin nation is an important determinant in spending especially for lodging and shopping. Compared to tourists from China and Hong Kong, long haul foreign tourists in Macau spent more on lodging and shopping (Kim et al., 2011). Gambling is an important mode of revenue earner as far as Macau island is concerned. The amount spent for gambling differs on the basis of type of visitor according to Kim et al. (2011). If the visitors are professionals or administrative personnel, they are less likely to spend more on gambling. Thus casino hotel marketers cannot target such categories of visitors. They also found that the tourists who stay at casino properties spend significantly more on lodging and gambling than those who stay at non-casino properties. Hence, it is obvious that nature of tourism demand and spending pattern of the tourists largely depend on the attributes of the destinations.

Alegre et al. (2011) state that tourism characteristics and trip-related variables are used to identify the determinants of tourism expenditures. They found that socio-economic variables such as tourist's country of origin, profession and income help to explain tourism expenditure pattern. At the same time, other variables such as gender, age and education did not turn out to be statistically significant. Sun and sand basics or attributes of Spanish beach destinations and fun and social life of the destinations were

the highly and absolutely significant determinants of tourism spending (Alegre et al., 2011). Researchers in common, list out different sets of tested determinants such as type of accommodation, length of stay, travel party size, destination, travel distance, origin market, purpose of travel, mode of transport, activities, age group, packaging, income, purchase channel, information sources, gender, first-time versus repeat visit, motives, marital status, education, occupation and season (Marcussen, 2011 and Kim et al., 2011). Kim et al. (2011) states in their study on factors affecting travel expenditure of Macau, China that marital status, higher education background, household income and travel party size have played major role in spending more on travel-related expenditures. Distance to Macau from origin turned out to be another important variable affecting expenditure pattern.

Determinants of tourism receipts: Visitor expenditure may further be proxied by tourism receipts. Maximising tourism revenue should be the objective of mature destinations rather than tourist arrivals according to Alegre et al. (2011). Algieri (2006) states that there has been a robust and significant long-run co-integration relationship between Russian tourism receipts, world GDP, real exchange rates and air transport prices. It was found that 1 per cent increase in world GDP leads to 7.88 per cent increase in Russian tourism receipts. Thus the global income effect on tourism revenue is significant in Russia. Cost of living in Russia has been found negatively related with tourism receipts by Algieri (2006). The same is the case for airfare for the foreign tourists in Russia. Russian currency's appreciation has impacted the receipts negatively as it made the Russian tourism exports less competitive.

Sports events and travel receipts: Sports tourism is a type of tourism in which people travel either to participate in the sport event or merely watch the event. Receipts from international travellers increased significantly during both the World Cup and the Olympic Games hosted by Brazil in 2014 and 2016 respectively according to Meurer and Lins (2018). Effects of the football event was proved to be much stronger than the athletic event in terms of travel receipts according to their study.

Although most studies available in tourism economics literature used tourist arrivals as the measure of tourism demand, level of accuracy of the dependent variable could vary with segment of tourism demand. When only economic factors are being analysed, tourist expenditure is the better proxy for tourism demand. When non-

economic factors are also being studied, either tourist overnight stays or tourist arrivals are taken as the proxy.

1.3.4. Studies on tourism demand: Variable-wise Review

Different researchers used different but related categories under which specific factors are ascertained. In time series data analysis of rural tourism demand in Galicia, Spain, Roget and Gozalez (2006) list out the determinants of rural tourism demand under four heads viz. economic determinants, promotional determinants, quality determinants and determinants related to destination. Economic determinants include real prices, real income, trip cost and economic cycle. Promotional determinants are promotional expenditure and work with agencies. Quality determinants are supply of leisure activities in the destination, hiring of employees and category of the establishment. Finally, the determinants related to destination include quality of infrastructure (communication and road network), establishment location, tourist tradition and sector regulation.

Tourism demand is determined by number of broad factors including standard variables, destination-specific attributes and other variables according to Gani and Clemes (2017). Moniz (2012) introduced another set of categories viz. socio-economic characteristics, destination attributes and activities, lagged variables aside from income and satisfaction. There are some studies which used a number of relevant variables just individually (Zamparini et al., 2017; Santos et al., 2012; Masiero & Nicolau, 2012; Thrane & Farstad, 2012; Song et al., 2003 and Daniel & Rodrigues, 2012). There are some common variables that the researchers in tourism demand used widely including income, relative prices, travel cost, real exchange rates and various destination specific attributes. The present study has divided the potential determinants of the overseas tourist arrivals in Kerala into three on the basis of relation with origin and destination viz. origin based variables, destination based variables and variables related to origin-cum-destination.

1.3.4.1. Variables related to origin nations

Variables purely related to origin nations are the potential determinants of international tourism demand that are absolutely external to the destination country. Such factors could be the push factors triggering international tourism demand.

Income: Income of the consumer has been a standard determinant of demand as per the demand theory. It could be the data on personal income collected from the respondent in person or GDP per capita data of visitors' countries in the tourism research. Income has widely been used as a standard determinant of tourism demand in tourism research (Song et al., 2003; Kim et al., 2011; Naude & Saayman, 2005; Garau-Vadell & De-Juar-Vigaray, 2017; Narayan, 2004; Malec & Abrham, 2016; Alegre & Pou, 2004; Lee, 1996; Lim, 1997a & 1997b; Divisekara & Kulendran, 2006; Algieri, 2006; Roget & Gozalez, 2006; Gani & Clemes, 2017; Zamparini, et al., 2017; Xie, 2020; Nguyen, 2021 and Shafiullah et al., 2019). The researchers who apply primary data analysis depend sample survey data to collect income of the respondent in person (Alegre and Pou, 2004). At the same time, those who follow time series and cross sectional econometric techniques use GDP or GDP per capita (Lee, 1996; Lim, 1997a and 1997b; Divisekara and Kulendran, 2006; Algieri, 2006; Roget & Gozalez, 2006; Gani & Clemes, 2017; Zamparini, et al., 2017 and Shafiullah et al., 2019).

However, income has not been a significant factor determining tourism demand always although it has been recognised as a standard factor and has positive impact on tourism demand (Dhariwal, 2005 and Xie, 2020). Algieri (2006), however, found that tourism receipts of Russia was highly sensitive to world GDP. One per cent increase in income was followed by 7.88 per cent increase in receipts showing higher level of income elasticity of tourism demand. Lee (1996) also found that income is impacting the international tourism demand in South Korea with statistical significance and high elasticity. The studies by Roget & Gozalez (2006), Malec & Abrham (2016) and Narayan (2004) also confirm the positive relation between income and tourism demand. Nguyen (2021) estimates that income has an important and positive role in prompting the growth of domestic tourism in ASEAN nations. He found that there exists higher income elasticity of tourism demand in the selected destinations, implying that even domestic tourism is also a luxury service. Furthermore, Tang and Tan (2015) reviewed previous studies on tourism demand determinants in detail and found that income has been found positive and statistically significant (at least at 10% level) in most studies. International tourism can be regarded as luxury good since the income elasticity of demand is well above 1 according to Tang and Tan (2015). At the same time, travel is instigated by attitude not by income according to Kerala's renowned travel documentary creator Kulangara (2019). People do not travel merely because they are

rich, in his opinion. Even a poor man can travel if he/she has mind and preparedness at the same time. Although everyone likes to travel, only those with positive intention can travel. In line with this argument, Garau-Vadell and De-Juar-Vigaray (2017) found that income has not been a significant factor for shopping by the international residential tourists in Spain from Britain and Germany. They just want to experience the unique tourism resources available in Spain. Naude and Saayman (2005) argue that income has been a typical developed country determinant of tourism demand. However, some studies found that families with higher household income tend to spend more on tourism (Kim et al., 2011). Increase in per capita income of the origin countries found positive impact on visitor arrivals to New Zealand (Gani and Clemes, 2017), Australia (Divisekara and Kulendran, 2006) and Italy (Zamparini et al., 2017). These nations have been the developed nations as well. Income, according to Song et al. (2003), has been a significant determinant for tourism demand in Thailand at least at 10 per cent significance level. Divisekara and Kulendran (2006) established positive relation between income and visitor inflow in Australia from all the main markets of Japan, New Zealand, UK and US. Xie (2020) found contradictory results on the effect of income on arrivals of tourists in Norway from China and Japan. While income figures significant in Japan's models, it was relatively insignificant in China's models. However, in both cases, the authors found that number of Norwegian tourists who arrive in China and Japan increase when income grows. Income, which is considered to be a determining factor of tourism demand in many studies, has been linked to age group by Munoz and Amoral (2011) in a study on usage of internet and travel decision. According to them, the age group of 35-44 are involved in increased internet activities, procure enough income and having great intention to travel. Naude and Saayman (2005) found in their research on tourist arrivals in Africa that internet enabled the destinations easily accessible to the international tourists. Having said all these, income has been a factor positively affecting tourism demand with varied significance and intensity. However, as clear from different studies, income is not always a significant factor effecting international tourism demand. GDP and per capita GDP has been used in alternate terms in the cross-section or time series analysis using secondary data.

Income elasticity has been widely used in the tourism research to identify the sensitivity of tourism to income (Rudez, 2018; Divisekara & Kulendran, 2006; Algieri, 2006; Roget & Gozalez, 2006 and Falk & Lin, 2018). Falk and Lin (2018) in their study

on tourism demand in Switzerland during 1934-2015 found that the income elasticity of visitor overnight stays remained at around two in the early 1960s and fell to around one in the early 1980s. It remained stable at approximately one in Switzerland since then as per their study.

Country of origin and region: Studies were conducted to identify the tourism demand country-wise or region-wise (Masiero & Nicolau, 2012; Song et al., 2003; Divisekara & Kulendran, 2006; Papatheodorou & Song, 2005 and Vu & Turner, 2006). Masiero and Nicolau (2012) measured determinants of price sensitivity for Germany and Switzerland separately. Song et al. (2003) measured major origin country-wise determinants for Thailand tourism. Vu and Turner (2006) found in the shift share analysis that Asia experienced an increasing growth rate in tourist arrivals compared to Oceania over a period of time. Determinants of international tourism demand could vary from origin to origin besides destination to destination. Apart from the above mentioned studies, Naude and Saayman (2005) cited some determinants as developed country determinants in their paper on international tourism demand in Africa. No uniformity was found on some factors such as health, political stability, landlocked status of the destination irrespective of the financial status of the country of origin. While some factors are significant for some countries of origin, some other variables are not significantly related. In the end, Naude and Saayman (2005) in their article articulate that different factors are important to different markets. The determinants of tourism demand could even vary from region to region inside a country (Shafiulla et al., 2019). Shafiulla et al. (2019) cited the examples of impact of prices, trip cost and migration on tourism demand in Australia. Moreover, geographical proximity and income status of the nations could matter in the studies on tourism demand.

Internet: The internet has revolutionised the manner in which tourists and travellers obtain travel-related information and make travel-related bookings. Travellers make use of internet widely for accessing travel related information. It has been a significant factor facilitating international tourist arrivals (Naude & Saayman, 2005; Camacho & Pacce, 2018). Internet usage for information depends basically on the information communication technology (ICT) penetration level in the regions and the demographic characteristics of the population. Web searches have been influential in buying goods and services online or offline. Internet searches could be useful in buying services

related to their travel. So to speak, visitors can use internet to study about destinations, contact tour packages, book hotels and taxis, and so on. While internet usage has been crucial in making travel decision these days, per capita income, level of education and travel frequency are not related to it according to Munoz and Amoral (2011). They found that 35-44 age group is significantly involved in travel-related internet activities. They are internet literate, and has income and willingness to travel as well. The present study, however, used internet as a potential factor triggering tourist footfalls in the destination in three dimensions. The effect of revolutionary changes in the ICT helps tourism sector also flourish in terms of increased visitor arrivals. Abiola-Oke and Aina (2020) in their study on online travel booking and tourist arrivals found that there exists a significant relationship between the two variables in Nigeria. In line with that, booking powered by online booking sites/apps can be an explanatory variable in explaining international tourism demand.

Human development and education: Education was considered as a socio-demographic determinant by Moniz (2012) in his study on repeat visits. Level of education has had a stronger impact on tourism consumption next to income according to Alegre and Pou (2004). They found that the marginal effects in probability of tourism consumption were positive with 8.18 per cent for people with primary-school education, 18.7 per cent for those with secondary school education and 20.39 per cent for people with higher education compared to illiterates or people without education. Cho (2010) adopted social index as the variable combining the human development index along with newspaper index, personal computer index and television index collectively found significantly related to tourist arrivals from Americas, Asia and Oceania. There are studies too which attempted to examine the effect of tourism on human development (Balaguer & Cantavella-Jorda, 2002 and Chattopadhyay et al., 2021).

Population and urbanisation: Alegre and Pou (2004) made an attempt to identify the probability of tourism consumption from different cities based on various levels of population. According to Song and Turner (2006), in conformity with Alegre and Pou (2004), foreign tourist arrivals from a given origin are expected to depend upon the population of the source market. Population has been used as a potential determinant of tourism demand in various studies as well according to Tang and Tan (2015). Population was found to be positively related with statistical significance for the tourist

arrivals from Asia, Americas and Oceania in a study by Cho (2010). It was found to be insignificant for tourist arrivals from Europe at the same time. This was added to the variables category as larger the population means larger area with more potential tourists.

Land area: It is generally believed that larger the land area, larger the market for tourism demand. It is presumed that tourist departures from smaller countries could be lower compared to bigger nations and vice versa. This is on the basis of theoretical relationship between demand and market size. Land area is a potential factor affecting the market size. Higher the size of market, larger the quantity demanded (Samuelson and Nordhaus, 2002). The present study used land area as a potential determinant of Kerala's international tourism demand on the basis of the presumption that larger the land area of the source markets, larger the quantity demanded of tourism services.

Tourism seasonality: Seasonality nature of tourism is pretty common for almost all regions of the world (Corluka, 2018). It remains a chronic problem of world's tourism industry owing to the uneven nature of tourism demand and fixed nature of tourism supply (Connel et al., 2015 and Yildirim & Coskun, 2016). Seasonality should be applied as a potential destination based or origin based determinant of tourism demand. There could be several others factors that drive tourism seasonality as well. Corluka (2018) points out that the seasonality is driven by weather, timing of religious festivals and timing decisions regarding bonus to the employees, academic vacation and industry vacation. According to him, seasonality drew great attention in tourism literature. Andriotis et al. (2007) found that season of visit is a significant variable in effecting the preferences of the tourists. In the current study, tourism seasonality is alternatively used as global tourism seasonality measured by tourist nights and tourist arrivals of the source markets. It is interesting to examine whether Kerala's international tourism season is driven by climate or festivals and special events or vacation.

Economic crisis: Tourism demand could be affected by some special factors including economic recession or downturn (Lee, 1996; Narayan, 2004 and Gani & Clemes, 2017). Fall in economic activities in the origin country can be an external shock to the tourism demand in the host country. Global financial crisis has been responsible for the fall in tourism demand across the world in 2009. This was revealed by Tang and Tan (2015) reviewing various previous studies in detail. However, economic crisis has not been an

undisputable factor in triggering tourism demand as Lee (1996) was not able to connect the fall in tourism expenditure in South Korea from most major markets with the oil crisis of 1974 and 1980. Having said that, the global economic meltdown of 2009 is chosen as the potential determinant of tourist arrivals in Kerala in this study.

1.3.4.2. Destination based variables

Destination-specific variables are the ones that are strictly related to the destinations. They are the pull factors of international tourism demand as well. However, it cannot be limited to the picturesque landscape and natural resources unlike how usually people think about destination attributes. It expands from nature to politics, culture to infrastructure and so on. Destination's attributes are important as satisfaction on those could instigate repeat visits (Moniz, 2012). The factors which could be affecting the tourism demand are several including nature and climate, governance, peace and security, pollution level, hygiene, transportation, food, accommodation, shopping, natives behaviour and pleasure activities (Gani & Clemes, 2017 and Zamparini et al., 2017). Unlike variables that are purely related to source markets, destination's specific factors are absolutely related to the destination only. It has apparent impact on international tourism as international residential tourism demand is instigated by exceptional climate, high-quality residences, integrated healthcare, safety, peace and hospitality according to Vadell and De-Juar-Vigaray (2017). Thus, destination specific attributes could maximise the length of overnight stay. The studies which covered various attributes related to destinations are analysed below.

Tourism resources or attributes: A matured destination must have some unique features or exciting scenery. Salman et al. (2021) noted that thousands of tourists visit Penang Hill in Malaysia after being attracted by its eye-catching scenery and naturally preserved locations. According to Alegre et al. (2011), attributes of Spanish destinations such as hygiene, safety, scenery, beaches, climate, stay, affordability of resources, tranquillity and accessibility have played significant role in creating tourism demand. The other resources of destination such as fun and social life of Spain have been other significant drivers of tourism demand. Another factor that could impact the tourism demand is destination's environmental assets or natural resources including climate (Gani and Clemes, 2017 & Zamparini et al., 2017). There is a big category of tourists who have been seeking pleasurable climate. The study by Downward and Lumsdon

(2003) agree with this argument as he found that a great majority of the tourists (92.2%) in a rural destination of the UK were to imbibe the beauty of picturesque landscape and spend a few days in a calm and quiet places. Enjoying nature and wild life and visiting churches and castles are other major motives of the tourists visiting Herefordshire, the UK according to Downward and Lumsdon (2003). Zamparini et al. (2017) considered weather condition as a determining factor of tourist nights. These are all reveal that tourism resources in a destination will work significantly in triggering visitor arrivals. As far as Kerala is concerned, Kerala has been a favourite destination state for the tourists in India. Kerala's emerald beaches, rich wildlife, exquisite backwaters, rich culture, unique art forms and cuisine, and so on make the state favourite among the foreign tourists who arrived in India. It is obvious that gorgeous beaches of Kerala have been pretty favourite among the foreign tourists in Kerala. According to Johny (2002), beach destinations of Kerala maintained higher intensity of foreign tourist activity with a ratio of 1:1 between foreign and domestic tourists in Kerala. It was found in his study that beach tourism in Kerala acts as the compelling force for foreign tourists to stay longer. He found that foreign tourists in the famed destination Kovalam stayed on an average of 11.8 days while they chose mere 6.5 days in wild life destinations and 5.8 days in the backwater spots.

Air transport infrastructure: Air transportation sector makes crucial impact on tourism development. According to Widawski et al. (2017), airports open up the tourism markets before new destinations and induce creation of tourism infrastructure. Tourists are always concerned about the physical attributes of the destination. Transportation plays major role in it. Cochin International Airport Limited (CIAL) has been playing an important role in the tourism development of various tourism segments of tourism industry especially in the Central Kerala. Thachil (2010) in her study found that CIAL has led to the boom in the hotel industry in and around Cochin. This is exactly in line with Widawski et al. (2017). CIAL has been resulted in the doubling of tourists in four years from 2003 to 2007. It has boosted investment in tourism sector too. She also found that CIAL has brought about an increase in the number of tour operators in and out of Kerala. Infrastructure bottlenecks will undoubtedly limit the tourist arrivals. The result which was found by Harini (2015) that infrastructure has been a major factor in bringing tourists again to the destination can go hand in hand with Thachil (2010).

Rainfall: Many studies on tourism demand were conducted to investigate the effects of non-economic variables including climatic factors on tourism seasonality according to Xie (2020) and Salman et al. (2021). Gani & Clemes (2017) and Alegre et al. (2011) used climate as a potential determinant of tourism demand. Although different seasons and climates have their own significance, climate has been a major factor in determining tourism demand in Spain according to Alegre et al. (2011). Specifically, climatic factors including rainfall has had significant impact in affecting the tourist arrivals. Regardless, it is obvious that Kerala's rainy season 'June to September' remains dominantly offseason for international tourism in Kerala. So, it is relevant in placing rainfall in the list of predictor variables.

Natural calamities: Natural calamities in the host country can also affect visitor arrivals as it could claim loss of human life, displace people and damage country's economic infrastructure (Gani and Clemes, 2017). Tang and Tan (2015) made it clear that various natural disasters were found influential in the tourism demand research. They cited the example of SARS outbreak and Tsunami in the first decade of 21st century. The impact of natural calamities can be two dimensional as the painful disasters both in origin and destination countries could dampen the tourism demand. According to Vu and Turner (2006), outbreak of SARS in the early 2000s restricted international tourism considerably and resurrected extraordinarily in 2004 immediately after the end of outbreak of SARS. Rosello et al. (2020) found that natural disaster in the form of floods and storms can have smaller and shorter impacts unlike volcanic eruptions. The present study used massive flooding in Kerala in 2018 and 2019 as the potential factors affecting the tourism demand. However, the outbreak of Covid 19 as a pandemic cannot be comparable with previous instances of epidemics. Covid 19 put international travel literally to a halt across the world in 2020, 2021 and early 2022. International tourism was negligible during this period in terms of number of arrivals.

Tourism expenditure by the government: According to Kubickova (2016), governments of the developing economies have been much more active in destination management and development in the recent time. Javed and Tuckova (2020) argued that government role is crucial but need to be optimised. It depends, according to them, on the status of tourism development and tourism area life cycle stage at which the destination is arrived. As per tourism area life cycle (TALC) theory of Butler (1980), lower level of government involvement would be enough when a destination is in

consolidation stage. Higher level of involvement is required for the destinations that are lying below the consolidation stage as per the theory. Retnosary & Salleh (2020), who studied government's role in heritage site preservation and development, opined that government support can be of great importance.

1.3.4.3. Origin-cum-destination based variables

Relative tourism prices/travel costs/air distance: Tourism price was represented in most studies by relative cost of living for tourists in the destination or travel cost of the tourists. Multiple price-related variables can be included in a single model as done by Narayan (2004) in his study on tourism demand in Fiji. He used relative hotel price compared to the respective source country and transport cost proxied by one-way real economy-class airfares together as the independent variables. He found relative tourism prices were negatively related for all the selected source markets in line with the law of demand. Relative tourism prices could be proxied by exchange rates in some situation. Regardless, travel decision by an individual is negatively related to relative prices according to the economic theory when tourism is considered as a normal good. The same has been treated by many researchers (Daniel & Rodrigues, 2012; Masiero & Nicolau, 2012; Gani & Clemes, 2017; Malec & Abrham, 2016; Sharma, 2016; Xie; 2020; Nguyen, 2021 and Santos et al., 2012). The travel distance that could proxy cost of travel can also be an important determinant of tourism demand according to some researchers (Gani & Clemes, 2017 and Santos et al., 2012). Travel cost depends on the geographical distribution of the origin and destination as postulated by Santos et al. (2012). So to speak, longer the distance, greater the cost of travel and vice versa. Santos et al. (2012) made it clear that transport cost tends to decrease as number of destinations included in the multi-destination trip increases. Being a standard factor, tourism price variables are widely included in tourism demand research and found negatively and significantly related to tourism demand in most cases (Selvam, 1989; Dhariwal, 2005; Algieri, 2006; Divisekara & Kulendran, 2006; Sharma, 2016; Song et al., 2003; Masiero & Nicolau, 2012; Malec & Abrham, 2016 and Roget & Gozalez, 2006). Selvam (1989) found that great majority of the foreign tourists prefer cheap public transportation modes such as railway and buses. Tang and Tan (2015), while reviewing the previous studies in tourism demand, made it clear that relative prices have been found adverse to tourism demand in most econometric models with at least 10 per cent significant level. Having said that, Masiero and Nicolau (2012) argued that price and

tourism demand relationship is not unambiguous as it has a complex relation with tourism demand. It is worth noting that the sensitivity of tourism prices on tourism demand depends on consumer awareness and qualitative knowledge about close substitutes according to Divisekara and Kulendran (2006). It also varies from origin to origin. Specifically, rise in transportation cost has a negative impact on tourism demand (Shafiulla et al., 2019). Although inflation or increase in cost of living in the destinations makes negative impact on tourism demand, the intensity differs from destination to destination or origin to origin. Inflation was found negative factor in tourist arrivals in India and significant at 10 per cent level (Dhariwal, 2005). In line with this finding, Xie (2020) found that Chinese tourists were sensitive to changes in consumer prices. In contrast, Shafiulla et al. (2019) found that travel costs had a positive impact in a few regions of Australia. Similarly, Lee (1996) also found that tourism prices were positively related to the tourism demand in South Korea from a few major markets while it was negatively related for the demand from a few other major markets. Xie (2020) himself found in the same study that change in prices affects only marginally the arrivals of tourists in Norway unlike the tourist arrivals from China. Regardless, tourism prices have had negative impact on tourism demand as per many studies irrespective of variation in significance and different proxies for tourism prices being taken up by the researchers. The study by Nguyen (2021) on domestic tourism in ASEAN nations is one study that confirmed negative and important relation between prices and domestic tourism demand.

Relative Temperature: Beautiful weather helped Penang hill in Malaysia to attract thousands of visitors every day according to Salman et al. (2021). Comfortable temperature in the destination and uncomfortable temperature in the source countries could attract tourists great in number. Gani & Clemes (2017) and Alegre et al. (2011) used climatic factors as the driving forces of international tourism demand. The temperature data was used in many studies as a destination attribute in the tourism demand literature. The present study tries to extend the variable as a origin-cum-destination factor as both source country's temperature and destination's temperature could simultaneously affect the tourist arrivals.

Exchange rate: Exchange rates are supposed to make stronger impact on international tourism demand. How does it happen? Rise in rate of exchange in terms of an international currency will make the tourism exports of the country more competitive.

Thus, depreciation or devaluation flourishes the nation's tourism exports while appreciation or revaluation makes the international tourism dearer (Algieri, 2006). Exchange rates were used as an explanatory variable in tourism demand research differently by different researchers. The fall in external value of Thai Baht happened to raise the cost advantage for foreign tourists in Thailand according to Song et al. (2003). Dhariwal (2005) used exchange rates as a potential determinant for international tourism receipts in India (both nominal devaluation and real devaluation) and found nominal devaluation as negatively impacting the tourism demand significantly. Similar attempt was made by Sharma and Pal (2021) in their study on exchange rate volatility and tourism demand in India. Exchange rates of Indian Rupee in terms of currencies of the source markets acted inversely to the tourist arrivals in India from the US and Canada in line with the expectation (Sharma, 2016). Similarly, Xie (2020) attempted to explain tourism demand of Norway from China and Japan with the help of nominal exchange rates. He found exchange rates were significant in explaining the arrivals of Chinese tourists in Norway too. At the same time, it was not so in Japan's case. Regardless, it is obvious that exchange rates have had varied impact on tourism exports and tourism demand.

Direct flights: Direct flight operations between the origin country and destination could trigger visitor arrivals in large number as the destination becomes easily accessible. It could reflect the movement of nationals of the respective countries across the borders. It is expected that tourists are more likely to travel from the countries to the destination where direct flights are available. This is from the presumption that destination's accessibility and travellers' easiness for travel could hike tourist numbers. Availability of direct flights attracts more visitors even from the faraway countries as cost and time become more competitive (Tveteras and Roll, 2014). Introduction of direct flights by Turkish Airlines significantly resulted in surged foreign tourist arrivals in Turkey according to Cetin et al. (2016). Direct flight service, however, is not equally relevant in explaining the tourist arrivals from all source markets. Gutierrez and Defilippi (2021) found that Peru had increased tourist arrivals even from the countries where there existed no direct flight services to Peru. At the same time, they identified that direct flight operation between Spain and Peru has significantly affected the tourism demand. Significant positive direct and indirect effect of non-stop flights between Peru and tourist source countries was confirmed already by Tveteras and Roll (2014). As pointed

out by Association of Caribbean States (2021), tourism industry is heavily reliant on civil aviation as both business and leisure travellers widely use air transport sector intensively. According to them, this has come true especially for the passengers to small island nations of the Greater Caribbean. Bieger and Wittmer (2006) found that air transport and tourism are interlinked as the former helped flourish new destinations and the latter cherished air transport back. Since great majority of international travel happen through air route, availability of flights between the destination and source markets could be a factor of inbound tourist arrivals.

Migration: The presence of a foreign diaspora from source markets can generate tourism demand in respective destinations. The migrant stock in a country could stimulate international tourism inflow, as individuals often travel to meet their relatives in these destinations (Shafiulla et al., 2019). Influenced by immigrants in the sending countries, individuals may choose to visit these destinations. It is evident that the higher the migrant stock, the greater the travel inflow. Nevertheless, the migrant stock of a destination's diaspora in origin countries could be a reflection of the positive relationship between the two nations.

Trade and trade openness: Trade relation or economic transactions for buying goods and services between origin countries and destination could trigger both inbound and outbound tourist flows. Higher the export and import volumes, higher the travel arrivals. Higher trade volume shows the warm bilateral relations between origin and destination countries. Trade openness, which is measured by total exports and imports of the destination country as percentage of its GDP overtime, was also used as a potential factor in the study to identify the effect of globalisation on tourist arrivals. According to Dhariwal (2005), visitor arrivals in India were encouraged significantly as India's economy was opened up virtually to the outer world in the wake of 'New Economic Policy 1991'. Tang and Tan (2015), reviewing the previous studies, made it clear that trade openness has been used as a potential determinant in the tourism demand research although found insignificantly related to the tourism demand. Suleiman and Albiman (2014) have found that there has been a short term causal relation between tourism, trade, infrastructure and economic growth too.

Bilateral visits: Bilateral visits by the political leaders (heads of the states and top ministerial representatives) show the warm relation between the two nations. It could be

considered as the reflection of the warm bilateral ties between the destination country and origin countries on one the hand and entry gate for the warm relation on the other. Regardless, these mutual diplomatic visits could reflect increased arrivals of tourists between each other. According to Minardi et al. (2020), Indonesia Tourism Ministry is conducting tourism diplomacy with India to attract more Indian visitors to Indonesia. Palerea and Sengupta (2017) argue that there exists increased opportunities for India to have increased arrivals of tourists from Spain in future owing to the recently introduced bilateral arrangements and India's diversified tourism resources.

The classification of variables into selected categories would, however, enable the researcher make an effective communication with the readers. Even though the categorisation into standard variables and destination-specific variables has been common in the tourism demand research, some modification was done in the present study. The modified categories are origin-based variables, destination-based variables and origin-cum-destination based variables. This is the categorisation on the basis of relation of the variables with origin and destination.

1.4. Research Gap

Most of the studies conducted in the demand segment of tourism economics deals with factors that have contributed towards tourist arrivals/tourism stays/tourism expenditure in various countries/states/cities/locations. Various studies used various types of data and various types of techniques of analysis. However, it was clear from the select literature review that the effort to identify tourism demand in Indian context has been limited although a few models were available for the review (Dhariwal, 2005 and Sharma & Pal, 2021). The qualitative techniques using thematic analysis on international tourism demand is understood to be limited from the reviews made when compared to econometric approaches in the tourism economics literature. Thematic analytical technique was hardly available for the review which deals with India's international tourism including that of Kerala. The current study attempts appropriate regression techniques on different datasets to identify and analyse the factors responsible for arrivals of foreign tourists in Kerala in three different dimensions using secondary data collected from the designated national as well as international agencies. Such attempts were hardly found in Kerala's case in the select literature review. Available studies in tourism economics of Kerala dealt mostly with economics of

tourism, tourism and economic development and sustainable tourism. Alongside, qualitative analysis powered by thematic analysis is also attempted to fulfil the inadequacy of econometric models in explaining Kerala's international tourist arrivals. The present study takes only one segment of tourism demand i.e. tourist arrivals as the studies in general used either of the three segments of tourism demand. The study which is confined to a particular geographical area cannot be generalised to other similar areas unconditionally as every destination does have its own unique significant factors of tourism demand. Even standard determinants of income and prices may affect the tourism demand of different regions differently. This destination-wise differences in factors driving the tourism demand is evident in the studies reviewed. The present study also analyses the prevalence of both economic as well as non-economic factors in driving overseas tourist arrivals in Kerala.

1.5. Research Questions

The following research questions were prepared to address the research problem in the light of reviews of available literature made in the area of tourism demand;

1) What are the factors affecting foreign tourist arrivals in Kerala that proxy international tourism demand?
2) What is the role of origin based variables in impacting international tourism demand in Kerala?
3) What is the role of destination based variables in impacting international tourism demand in Kerala?
4) What is the role of variables related to origin-cum-destination in impacting international tourism demand in Kerala?
5) How economic predictor variables such as income, prices (air transportation cost, exchange rate and relative price levels), trade volume, economic crisis and tourism expenditure are related to Kerala's international tourism demand?
6) How semi-economic or non-economic predictor variables including internet, rainfall, temperature, tourist overnight stays, bilateral visits, migration, direct flights, flooding, geographical features, human development, global competitiveness and population are related to Kerala's international tourism demand?
7) What are the stakeholders' perceptions on Kerala's international tourism?

1.6. Objectives

Following objectives were set to find answers for the above research questions:

1) To understand the trends and patterns of foreign tourist arrivals in Kerala.
2) To identify and analyse the factors responsible for foreign tourist arrivals in Kerala.
3) To examine stakeholders' perceptions on factors driving foreign tourist arrivals in Kerala.

1.7. Hypotheses

1) Origin-based variables are significantly related to foreign tourist arrivals (FTAs) in Kerala.
2) FTAs in Kerala are steered by destination based variables.
3) The variables based on destination-cum-origin nations affect FTAs in Kerala significantly.
4) Both economic and semi/non-economic factors are strongly related to Kerala's international tourism demand

1.8. Data and Methodology

The present study follows a functional approach to measure international tourism demand in the Indian state of Kerala where foreign tourist arrivals are significant. The functional approach is a broader term used to denote the attempts to study different aspects of tourism (Lea, 1988). According to Lea (1988), it is a model of analysis which attempts to put forward neutral viewpoint on different aspects of tourism. Dynamic and static variables are used to measure the tourism demand in line with functional approach. It represents both tourist/source country characteristics and destination characteristics. The international tourism demand of Kerala, proxied by foreign tourist arrivals, was measured and analysed using several econometric techniques. Tourist arrivals can be a better segment of tourism demand when the study uses both economic as well as non-economic variables (Zamparini et. al., 2017). Factors driving the tourist arrivals were also analysed by qualitative method too.

Quantitative analysis: Both quantitative and qualitative approaches were adopted to estimate and analyse Kerala's international tourism demand and examine the underlying

issues associated with foreign tourist arrivals in the state. Autoregressive distributed lagged (ARDL) approach, linear regression and log-linear regression were run as part of the econometric approaches to identify and explain the determinants of overseas visitor arrivals in Kerala. Descriptive analysis was also employed in the study to find out the effects of various factors belonging to the categories of variables related to the destination and source countries.

ARDL approach was applied to estimate to separate the long-run and short-run effects, and to test for cointegrating relationships. It helps identify how foreign tourist arrivals in Kerala (dependent variable) vary with changes in explanatory variables overtime. The impact of the lagged values of the predictors in driving the overseas visitor arrivals in Kerala was estimated through ARDL approach. Factors contributed to the month-wise foreign tourist arrivals in Kerala from January 2002 to December 2019 were analysed by ARDL approach with 4 predictor variables. The researchers including Gani and Clemes (2017) and Narayan (2004) identified the factors responsible for tourist arrivals from the selected origin countries using time series analysis. Cross-sectional analysis was also adopted in the present study to analyse the determinants for tourist arrivals in Kerala from the designated 148 nations in 2019. It enabled the researcher identify the determinants from a different dimension. The role of origin based variables and origin-cum-destination based variables can be suitably estimated by the cross-sectional regression. Both time series and cross-sectional analyses (ARDL method and linear regression respectively) were adopted to estimate the determinants of overall foreign tourist arrivals in the state. Apart from these techniques, log-log regression was also run with one dependent variable and five independent variables on month-wise tourist arrivals in Kerala from Kerala's top three source markets (the UK, the US and France) from January 2015 to December 2019. It measures elasticities of Kerala's international tourism demand to percentage change in relative prices, income, environmental factors and origin country's tourism seasonality. Furthermore, one-way ANOVA was also run with 'Post Hoc test' to estimate the mean differences of countries belonging to different categories (income, human development and bilateral visits to and from India). It could help understand whether there exists any significant mean difference among the different categories of countries and the tourist arrivals in Kerala. Descriptive analysis was done prior to the inferential analytical tools. Correlation

coefficients, R^2 values, seasonality index, growth rates, averages and percentages are widely used for the same.

Several econometric tests were initiated as part of time series and cross-sectional studies. It includes F-test to know how far the data are scattered from mean, t-test to compare the means of two groups, Durbin-Watson test to check autocorrelation, test of multicollinearity to know if there exists any correlation between independent variables and Akaike information criterion to evaluate how well a model fits the data it was generated from. All assumptions of the least squares regression models were fulfilled in this case too for developing a valid model. In the linear regression and log linear regression models, multicollinearity of the valid independent variables are kept at the tolerable limit of 0.10 and above. Autocorrelation of the models was measured using Durbin-Watson test. Only the model that comes in the acceptable range of 1.5-2.5 is accepted. Comprehensive analytical frameworks on the econometric models have been detailed in the respective chapters.

Qualitative analysis: Thematic analysis was employed as part of the stakeholder analysis to examine and analyse the determinants of foreign tourist arrivals and unearth underlying issues associated with that. The factors responsible for the arrivals of overseas tourists in Kerala were identified in the thematic analysis after analysing the stakeholder perceptions in line with the studies of Amoako et al. (2021), Alvarez et al. (2011), Salman et al. (2021), Nunkoo & Ramkissoon (2013) and Yuksel et al. (1999). Semi-structured in-depth interviews were conducted to collect data from different stakeholders. 30-40 minutes were taken for each person-to-person interview. Seven specific categories of stakeholders viz. auto/taxi drivers, accommodation units, natives & native shop owners, restaurants & tea shops, other destination employees, foreign tourists and government employees in the tourism department are interviewed. A total of 28 stakeholders across Kerala's top 4 foreign tourism destinations viz. Fort Kochi, Kovalam-Poovar, Varkala and Alappuzha. Kochi city and Thiruvananthapuram city, where foreign tourists have been massively arriving, were exempted from the sample destinations as no specific location for foreign tourist arrivals could not be identified. Sample size was saturated at 28 across the top four destinations as the number required to gather new information or themes has reached maximum (Amoako et al., 2021; Faulkner & Trotter, 2017 and Fush & Ness, 2015). Each interview was audio recorded with oral permission and transcribed into English language afterwards. Subsequently,

codes were identified and standardised. Global themes and organising themes were identified and arranged in a table thereafter. Thematic analysis was adopted to examine the positives and negatives associated with overseas tourist arrivals in the state. Responses and corresponding number of responses were aligned in tables as part of it.

Previous studies in tourism demand in the tourism economics literature were relied for choosing the possible determining factors of international tourism demand in Kerala (see Review of Literature: pp. 6-32). The measurement of tourism demand was done by estimating origin based variables, destination based variables and variables related to origin-cum-destination. Although these three categories of variables were chosen mostly in line with Gani and Clemis (2017), the present study was highly indebted to all the cited articles in the review of literature section for the broad idea and selection of variables. Although large number of studies were available on international tourism demand of different destinations across the world, only a few addresses the demand determinants of international tourism in Indian context.

Independent variables: The study resorts both the secondary data and primary data on a number of variables. For the sake of convenience and effective communication, variables used in the quantitative analyses are classified into three viz. origin-based variables, destination-based variables and variables related to origin-cum-destination.

All the variables belonging to the category of *origin-specific variables* are strictly related to the origin nations or source markets of international tourism in Kerala. The variables in this category that were used in different models of this research are income (GDP per capita/imports in $), international tourism expenditure ($ million), tourism seasonality (number of tourist overnight stays), internet usage (%), economic crisis (dummy), trade volume ($ million), population (million), migrant stock (total), human development (HDI), global competitiveness (global competitive index of World Economic Forum) and land area (square km). All these variables except tourism season and economic crisis likely to make positive effect on the visitor arrivals, fall in line with the theoretical considerations.

Destination-specific variables are the destination attributes that could trigger tourist arrivals. The variables in this category are rainfall (millimetre), air transport infrastructure (categorical variable) and flooding (2018 and 2019 flooding in Kerala).

While rainfall and economic crisis are likely to be negatively related to the overseas visitor arrivals, air transport infrastructure is supposed to induce the arrivals.

The third one is a combined category of variables that may be better known as *origin-cum destination based variables*. The variables that are related to both origin and destination in tandem belong to this category. It includes air transportation cost measured by air distance, nominal exchange rates, relative prices, relative temperature, trade relations, presence of Malayalee diaspora in the source markets, mutual bilateral visits and availability of direct flights. In detail, role of air distance in affecting the overseas visitor arrivals in the state was estimated by the cross-sectional regression. The inclusion of nominal exchange rates and relative prices in the study was supposed to analyse the competitiveness of Kerala's destinations when compared to the source markets. Climate being a crucial factor in influencing the overseas visitors, relative temperature (source country's temperature/destination's temperature in ^{0}C) could be meaningful in identifying the tourism demand. Trade relations between destination country and source country (total trade volume in $ million), presence of Malayalee expatriates in the tourist sending country (total) and mutual bilateral visits (visits of state heads in total) were taken as the explanatory variables in the cross-sectional study as how different types of interrelationships between destination and origin countries can be transformed to tourism demand. Direct flight operation (with or without stoppages) between destination country and origin country (categorical variable) is supposed to influence the overseas travel accessible.

Data sources: The data on domestic as well as foreign tourist footfalls in Kerala and foreign exchange earnings in the state from tourism were collected from Department of Tourism, Government of Kerala (2022). Ministry of Tourism, Government of India (2022) was resorted for the data on tourist footfalls and foreign exchange earnings from tourism in India. Ministry of External Affairs, Government of India (2020) for mutual diplomatic visits and Ministry of Commerce, GoI (2022) for trade related data were the other national sources of secondary data used for the descriptive and inferential analyses. Trends and patterns of foreign tourist arrivals in India and Kerala are explained using the data collected from the 'Tourism Statistics' of India and Kerala respectively being published since 2002. The data on Kerala's rainfall with special reference to Kochi, where foreign tourist arrivals constitute nearly 40 per cent of Kerala's total foreign tourist arrivals on an average overtime, was collected from India

Meteorological Department (2021) online. The sources of secondary data stated above are the state-level as well as national level data collected from the government sources. Moreover, the data on emigration from Kerala was collected from the periodical 'Kerala Migration Surveys' conducted by Rajan & Zachariah (2019). World Bank (2020; 2022a; 2022b; 2022c; 2022d; 2022e; 2022f and 2022g) remains major source of data at the international level. Its online data portal was extensively used for collecting per capita GDP (PPP basis), international tourism expenditure, population, land area and world internet users of the origin nations. The data on imports of the source markets and consumer price indices of India, the UK, the US and France were collected from data portal of 'Globaleconomy.com' (2020; 2021a; 2021b and 2021c). The data on global competitiveness of the source countries was collected from World Economic Forum. The data on HDI was collected from the human development data portal of UNDP (2020). Likewise, exchange rate of Indian Rupee in terms of US Dollar over the study period was collected from bookmyforex.com (2020). The data on tourist overnight stays of the source markets in Europe were collected from 'Eurostat' (2021) while the data on relative temperature (temperature of the source countries/Kerala's temperature) were collected from National Oceanic and Atmospheric Administration (NOAA), USA (2020). The data on air distance between Kerala and its source markets in 2019 was collected from www.distance.to (2020). Moreover, the data on characteristics of the tourists who arrive in Kerala in terms of gender, age, education, employment, overnight stays, expenditure, repeat visits, level of satisfaction, type of food preferred, purpose of travel and problems faced were collected from 'Kerala Continuous Tourism Report 2019' which was prepared by 'Datamation Consultants Pvt Ltd' (2022) and submitted to Department of Tourism, Government of Kerala. The details of direct operations were collected from 'Air India' which has been India's longstanding and main international airliner. No airliner in India, other than 'Air India', has been operating overseas flights to the countries where 'Air India' doesn't operate direct flights (with or without stoppages). Only Air India's data were used as collecting data regarding operation of international flights by other Indian airliners will hardly make any difference.

1.9. Definitions of concepts

Foreign tourists: Foreign tourists are visitors from abroad who arrive and stay at least a night in the destination with the intention of leisure, pilgrimage, business, visiting friends and relatives, education, healthcare or any other intention. They are supposed to stay in Kerala less than a year. This is in line with the definition of UNWTO (2020) which states "a visitor is a tourist (or an overnight visitor) if his/her trip includes an overnight stay or as a same-day visitor (or excursionist) otherwise".

Destination: The term 'destination' widely used in this study was to denote both specific tourism area where visitors arrive in the state of Kerala on one hand and total foreign tourists who arrive in different tourism areas in the state of Kerala on the other. It complies with UNWTO (2020) as "the main destination of a tourism trip is defined as the place that is central to the destination to take the trip". While quantitative analysis deals with the visitor arrivals in various tourism areas of Kerala over a period of time, qualitative analysis was done with stakeholders in Kerala's top four destinations of foreign tourists.

Stakeholder: The term 'stakeholder' used in the thematic analysis of the current study refers to a person involved in a particular field of Kerala's international tourism consisting of foreign tourists, restaurateurs, shop owners, hoteliers, other destination employees, natives and tourism regulator (government). They belong to various categories including tourism service providers and employees, tourism regulators, foreign tourists and natives. According to Cambridge Dictionary (2020), "stakeholder is a person such as employee, customer or citizen who is involved with an organization, society etc and therefore has responsibilities towards it and interest in its success".

1.10. Importance of the study

International tourism has been vital for the state of Kerala in terms of its contribution to the economy which is evident from the foreign exchange earnings from the export of tourism. Growth of hospitality industry and the fate of all related income earning stakeholders depend up on the arrivals of tourists including foreign tourists. The study on factors driving overseas visitor arrivals in the state could benefit both tourism regulators as well as tourism managers. Government as the tourism regulator can adopt the policies addressing the negatives identified in the present study. Government can

promote the sectors on which Kerala's international tourism has strength as well. Tourism managers can make appropriate adjustments in tourism investment in line with the factors driving tourist arrivals. The study could provide some insights for improving the international tourism of Kerala leaving the stakeholders who find livelihood from tourism benefited. The study assumes greater importance as only a few econometric studies in Indian context were available for the review in estimating and explaining tourism demand. Empirical studies available in Kerala's international tourism focused mainly on the role of tourism in economic development rather than tourism demand. Moreover, no study on thematic analysis was available for literature review on both Indian and Kerala contexts.

1.11. Chapter-wise scheme

The results and discussions of the study on Kerala's international tourism are presented in five chapters in addition to the usual introductory and summary chapters. The thesis has been structured in seven chapters. First chapter gives an introduction to the study which includes the background and research problem, literature review, research questions, objectives, hypotheses, data and methodology, definitions of concepts, importance of the study and chapter-wise scheme of the thesis. Chapter 2 gives an idea on the trends and patterns of foreign tourist arrivals in Kerala for the past three decades. It shows how important have been the foreign tourist arrivals for the state of Kerala. It demystifies the need and importance of detailed study on determinants of overseas tourist arrivals in Kerala from different dimensions. It includes a detailed description of the features of foreign tourists who arrive in Kerala. A descriptive analysis on determining factors of Kerala's foreign tourist arrivals was made in chapter 3. Chapter 4 examines the factors driving overall foreign tourist arrivals in the state using both time series and cross sectional techniques. It covers destination based variables, origin based variables and origin-cum-destination based variables. While time series analysis was done on overall month-wise arrivals of foreign tourists in Kerala, cross sectional study was made on nationality-wise arrivals of tourists in the state in 2019. It specifically covers origin-based variables and variables related to origin-cum-destination. The 5th chapter makes an effort to estimate Kerala's international tourism demand from the top three source markets with a comparative time series analysis. The chapter 6 makes a detailed discussion on factors and themes associated with Kerala's international tourism using thematic analysis. Final chapter (7) is the summary of findings of the study with

contribution of the thesis, limitations of the study, conclusions of the study, and recommendations.

Chapter 2

KERALA'S INTERNATIONAL TOURISM: TRENDS, PATTERNS AND FEATURES

CONTENTS

2.1. Introduction

Over the years, Kerala has emerged as one of the most sought-after tourist destinations in the country, attracting millions of visitors from all over India and the world every year. Kerala's diverse tourism resources and products and unique culture and traditions have become important attractions for tourists. In this chapter, we will examine the trends, patterns, and features of international tourism in Kerala. The chapter will begin with an overview of the institutional regulatory and promotional efforts since the formation of the state of Kerala in 1956. We will then delve into the current and past international tourism scenario in India and Kerala's position in it. The patterns of the foreign tourist arrivals in terms of month-wise composition, destination-wise composition, district-wise composition and source market-wise composition are also detailed. Furthermore, the chapter will explore the characteristics of international tourists who visit Kerala, such as their demographics, travel and tourism preferences, and expenditure patterns. Overall, this chapter will provide a comprehensive understanding of the international tourism industry in Kerala, highlighting the trends, patterns, features and challenges.

2.2. An overview of regulation and promotion of tourism in Kerala

The role of government as regulator and facilitator of tourism cannot be overlooked in the study on the growth of tourism in Kerala where tourism is officially regarded as an industry in 1986. Kerala governments, from time to time, have taken measures to promote tourism in the state. Although it is not easy to estimate the immediate effects of tourism policy of the government on tourism demand, the long-term effects are quite visible. Several remarkable and significant steps were taken by the Government of Kerala for the development of tourism overtime. The history of tourism in Kerala can be traced back to late 1950s and 1960s, when the state government began promoting the state's natural beauty and cultural heritage as much needed tourism products. The Tourism Department formed in 1958 and renamed as Department of Tourism in 1981 is arguably responsible for the promotion, planning and development of tourism in the state according to Nair and Dhanuraj (2018). In the 1966, the government established the Kerala Tourism Development Corporation (KTDC) to promote and develop tourism in the state. Since then, the state has made significant progress in developing its tourism

infrastructure, including the construction of hotels, resorts, and transportation facilities. Kerala government launched its efforts to develop international tourism in the state with the establishment of international beach resort in Kovalam in 1976 with central government patronage according to Nair and Dhanuraj (2018). Kovalam, the southern fishing village of Thiruvananthapuram had already shot in to limelight with the arrivals of masses of hippies on their way to then Ceylon in the early seventies. The potential of Kovalam as a beach destination was discovered even during the reign of erstwhile Travancore royal family in the 1930s and they built a palace named "Halcyon Castle' later turned five-star hotel after government took over the property in the seventies (Kallungal, 2022). Moreover, Kerala is the first state in India to approve tourism as an industry in 1986 as it is significant in contributing to the GSDP, state's total employment and share of service exports (Nair and Dhanuraj, 2018). Launch of official website of Kerala Tourism Department in 1998 has played significant role in promoting Kerala's tourism destinations and tourism products according to Radhakrishnan (2009).

The Government of Kerala initiated Responsible Tourism in 2007 and started implementing it in the state in 2008 as a pilot phase in four destinations viz. Kovalam, Kumarakom, Thekkady and Vythiri, out of which first three have been favourite destinations for the foreign tourists in the state. It is envisaged to foster better economic benefits and wellbeing of the local people and communities besides the efforts to preserve natural heritage, cultural heritage and world's diversities. During its second phase between 2011 and 2017, three more destinations viz. Kumabalangi in Ernakulam, Amabalavayal in Wayanad and Bekal in Kasaragode were added besides the four destinations in the first phase. Responsible tourism mission was launched by the Government of Kerala in October 2017 as a nodal agency to spread and implement the ideologies and initiatives of responsible tourism all over the state. Although still may not be perfect, state government's time to time policy decisions and revolutionary decisions to steer the tourism into newer heights resulted in increased arrivals of overseas tourists in the state since 1986 when tourism was officially declared by the state government of Kerala as an industry. The launch of 'Kochi-Muziris Biennale' in 2011 as a grand international exhibition of contemporary art doubled fame of Kerala especially Kochi among the foreign visitors. The list of milestone events is provided in table 2.1.

Table 2.1. Milestones in Kerala tourism regulation and promotion

Year/period	Milestone
1958	Tourism Department was established
1966	KTDC was established
1976	Beach resort at Kovalam by the state government
1981	Tourism Department renamed as Department of Tourism
1986	Approved tourism as an industry
1995	First tourism policy of Kerala
1998	Launch of official website of Kerala tourism department
2000	First Kerala Travel Mart
2002	Tourism Vision 2025 declared
2007	Responsible tourism (first phase: pilot basis)
2011	'Kochi-Muziris Biennale' founded
2011-2017	Responsible tourism (second phase)
2012	Second tourism policy of Kerala
2017	Responsible tourism (state-wide launch)

Source: Nair & Dhanuraj (2018); Kochi Biennale Foundation (2023)

The phrase "God's own country" has not been used to denote many regions of the world. Kerala has been successfully branded as "God's own country" for various reasons. "God's own country" is the magical tagline scripted in 1989 by Walter Mendez, then National Creative Director of Mudra, a reputed Ad agency in India for Kerala's Tourism Department (Nair, 2015). The rest is history as it incredibly attracted tourists from different parts of the world into the state in the subsequent years. This branding has been effectively being used by the government and tourism service providers.

Expenditure by the government for tourism: Plan expenditure by the government for the development of tourism in Kerala is illustrated in figure 2.1. Plan expenditure, from nearly ₹600-800 million during 2002-03 and 2009-10, surged to ₹1,300 million and beyond ever since 2010-11. It reached around ₹3,000 million during 2016-17 and 2018-19 before falling to ₹1,955 million in 2019-20. The phenomenal growth of plan expenditure for tourism in Kerala happens in the context of second phase of responsible tourism (2011-17) and second tourism policy of Kerala (2012). Part of it happens

through marketing expenditure by the government in the source nations of the foreign tourists in the state. However, the marketing expenditure has not been consistent throughout past few years although nearly ₹900 million and ₹600 million were spent in 2018-19 and 2019-20 respectively (Department of Tourism, 2022).
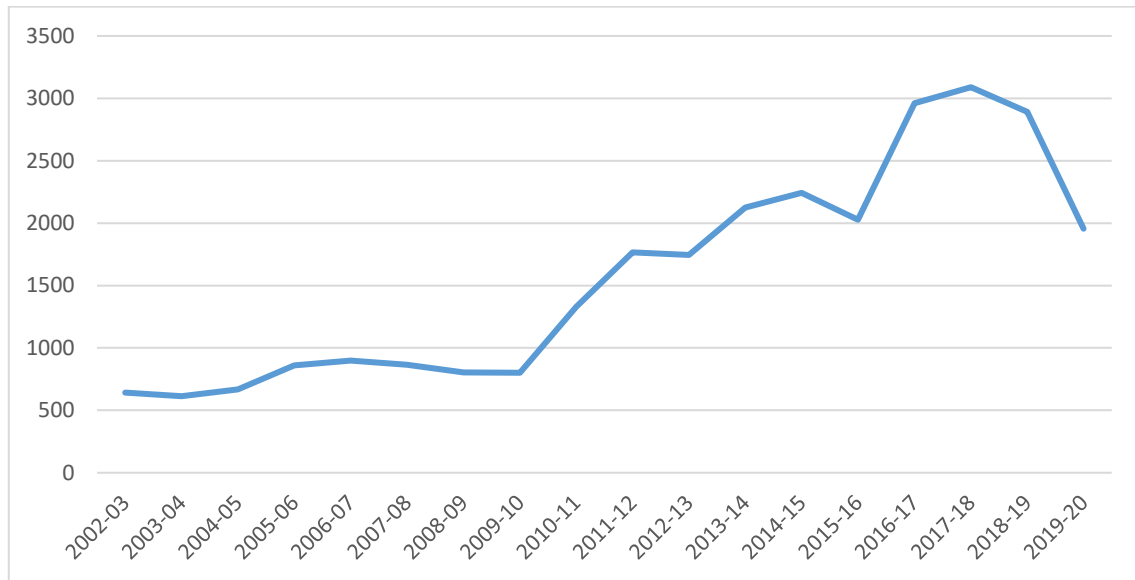
Figure 2.1. Plan expenditure on tourism in Kerala (₹ million)

Source: Kerala Tourism Statistics-Department of Tourism, GoK (2022)

2.3. Trends and Patterns of Foreign Tourist Arrivals (FTAs) in Kerala

2.3.1. Trend and growth of FTAs in Kerala

Tourism has become a major industry in the world contributing 10.3 per cent of the global GDP and providing employment to 333 million directly and indirectly in 2019 (10.3% of all jobs) according to World Travel & Tourism Council (2022). It has become a major contributor to the state income of Kerala too as discussed in the beginning of the opening chapter. It contributes millions of US Dollars ($1,460 million in 2019) through foreign exchange earnings every year according to Kerala Tourism Statistics 2019 as international tourism has become all the more important for the state of Kerala. Therefore, it is important to examine the trends and patterns of foreign tourist arrivals in detail as the entire study revolves around the vitality of the inbound tourism in Kerala. As per the data presented in table 2.2, there has been a varied but mostly positive growth of FTAs in both Kerala and India in the past three decades. Several years experienced phenomenal growth of the foreign tourist arrivals while several other

years saw slower growth. Kerala hosted nearly 51,000 foreign tourists in 1986 rose to 210,000 in 2000, 659,000 in 2010 and 1.19 million in 2019 (see Table 2.2). At the same time, India registered the arrivals of 1.45 million foreign tourists in 1986 climbed to 2.65 million in 2000, 5.78 million in 2010 and 10.93 million in 2019. FTAs in Kerala in 1989, 1992, 1995, 2003 and 2006 have been, however, considerably high compared to the preceding year as the annual growth rate crossed 20 per cent, as per the data presented in table 2.2. Such a situation happened only once in India's case when growth rate crossed 20 per cent in 2004. FTAs in Kerala has not been flimsy compared to the national figure. Kerala has marked improvement in terms of share of foreign tourists in India over the years as well. While Kerala registered negative annual growth rates in 2001 and 2009 only in the pre-Covid period, India registered negative growth rates several times during the same period. Foreign tourist footfalls in India were negative in 1990, 1991, 1993, 1998, 2001, 2002 and 2009 on year-on-year basis. Global recession during 2008-2009 impacted the tourist arrivals both in Kerala and India in 2009 negatively. Growth of international tourism of the state was even sharper in the late nineties onwards among other Indian states. Around 3-4 per cent share of Kerala in total visitor arrivals in India in the late eighties and early nineties surged to 7-8 per cent in late nineties and 10-12 per cent thereafter. Kerala has improved its position as it managed to secure 7th or 8th rank, among the states and Union Territories in terms of share of foreign tourist arrivals, on a consistent basis since 2008 from 9th or 10th rank before 2008. The years of 2020 and 2021 were exceptional as overwhelmingly negative growth rates and extremely subsided arrivals of foreign tourists were recorded both in Kerala and India owing to Covid 19 pandemic and subsequent severe lockdown.

Table 2.2. Trend, growth and share of foreign tourist arrivals in Kerala and India

Year	FTAs in Kerala ('000)	Growth of FTAs in Kerala (%)	FTAs in India ('000)	Growth of FTAs in India (%)	Kerala's Share of FTAs in India (%)	Rank among states and UTs
1986	50.841	-	1451	-	3.50	NA
1987	51.816	1.92	1484	2.27	3.49	NA
1988	52.083	0.52	1591	7.21	3.27	NA
1989	62.952	20.87	1736	9.11	3.63	NA
1990	66.139	5.06	1707	-1.67	3.87	NA
1991	69.309	4.79	1678	-1.70	4.13	NA
1992	90.635	30.77	1868	11.32	4.85	NA
1993	95.209	5.05	1765	-5.51	5.39	NA
1994	104.568	9.83	1886	6.86	5.54	NA
1995	142.972	36.73	2124	12.62	6.73	NA
1996	176.855	23.7	2288	7.72	7.73	NA
1997	182.427	3.15	2370	3.58	7.70	NA
1998	189.941	4.12	2360	-0.42	8.05	NA
1999	202.173	6.44	2480	5.08	8.15	NA
2000	209.933	3.84	2650	6.85	7.92	NA
2001	208.83	-0.53	2540	-4.15	8.22	8
2002	232.564	11.37	2380	-6.30	9.77	8
2003	294.621	26.68	2730	14.71	10.79	9
2004	345.546	17.28	3460	26.74	9.99	10
2005	346.499	0.28	3920	13.29	8.84	9
2006	428.534	23.68	4450	13.52	9.63	NA
2007	515.808	20.37	5080	14.16	10.15	9
2008	598.929	16.11	5280	3.94	11.34	8
2009	557.258	-6.96	5170	-2.08	10.78	8
2010	659.265	18.31	5780	11.80	11.41	7
2011	732.985	11.18	6310	9.17	11.62	8
2012	793.696	8.28	6580	4.28	12.06	8
2013	858.143	8.12	6970	5.93	12.31	7
2014	923.366	7.60	7680	10.19	12.02	7
2015	977.479	5.86	8030	4.56	12.17	7
2016	1038.419	6.23	8800	9.59	11.80	7
2017	1091.87	5.15	10040	14.09	10.88	8
2018	1096.407	0.42	10560	5.18	10.38	8
2019	1189.771	8.52	10930	3.5	10.89	7
2020	340.76	-71.36	2740	-74.9	12.44	NA
2021	60.49	-82.25	1520	-44.5	3.98	NA

Source: Department of Tourism (Government of Kerala), 2022; Ministry of Tourism (Government of India), 2022 and author's calculations

NA = Not available & FTAs: Foreign tourist arrivals

Foreign tourist arrivals in Kerala and India during 1986-2021 are illustrated in figure 2.2 to understand the trend and growth of overseas tourist arrivals both in Kerala and India. It is clear that international tourism of both Kerala and India remain closely associated with each other as the lines look moving in same direction with simultaneous ups and downs. Kerala's and India's international tourism entered a new stage of substantial growth since the beginning of 21st century from the slow pace and small number of overseas tourist arrivals in the late eighties and full nineties. The era of globalisation in light of Kerala's first tourism policy in 1995 and subsequent steps in tourism accelerated growth of the arrivals of international tourists in India in general and Kerala in particular. Kerala shifted the gear in terms of foreign tourist arrivals in early 2000s in the background of declaration of Tourism Vision 2025 in 2002. India too started accepting foreign tourists in voluminous number since India adopted tourism policy of 2002.
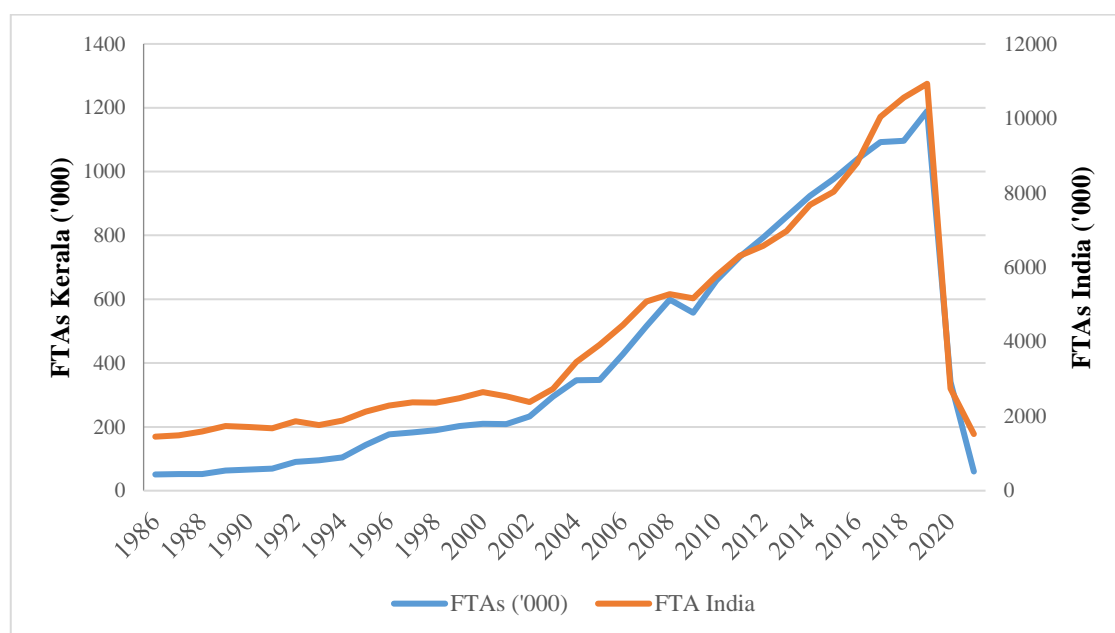
Figure 2.2. Foreign tourist arrivals (FTAs) in Kerala and India ('000) 1986-2021

Source: Department of Tourism (Government of Kerala), 2022 & Ministry of Tourism (Government of India), 2022

2.3.2. Seasonality of foreign tourist arrivals (FTAs) in Kerala and India

Seasonality indices of month-wise arrivals of foreign tourists in Kerala and India during 2002-2021 are presented in table 2.3. The month-wise statistics on FTAs would help understand the nature of managing the international tourism in the destination and would cast light into its effect on the livelihood of the people who depend the tourism

industry. For the sake of better understanding on the seasonality of the tourism in Kerala, the months in an entire year can be classified into three categories viz. lean months with the tourist arrivals share of below 6 per cent, average months with 6-9 per cent and peak months with the share of above 9 per cent. FTAs in Kerala and India for the past two decades have been classified accordingly for making a comparative analysis of the international tourism season. Five months from November to March period witnessed highest arrivals of foreign tourists in the state of Kerala during 2002-2019 period on an average with the share of 59 per cent and happened to be the peak months of visitor arrivals. The same period witnessed greater than average arrivals shown by greater seasonality indices (greater than 1) as per data shown in table 2.3. The same is exactly true for visitor arrivals in case of India too. Three months from December-February recorded the highest monthly inflow in Kerala with 12.38 per cent, 13.65 per cent and 12.47 per cent on an average respectively. At the same time, India witnessed massive arrivals, particularly in the month of December, averaging arrivals share of 11.65 percent. Even during other peak months—January, February, and November—the visitor arrivals share averaged 9.91 percent, 9.87 percent, and 10.32 percent, respectively. On the flip side, May, June, July, and September were lean months for overseas visitor arrivals in Kerala, accounting for just 4.13 percent, 3.63 percent, 5.6 percent, and 5.53 percent, respectively. These months marked the offseason for foreign tourists in the state. However, they fared relatively better for India as a whole, with corresponding percentages of 5.82, 6.42, 7.79, and 6.64 during the same period.

April, August, September, and October have been average months in terms of foreign tourist arrivals in both Kerala and India, accounting for 6-9 percent of foreign tourist arrivals on average. It is noteworthy that although both Kerala and India had almost the same international tourism season, the share of arrivals and seasonality indices varied across months. Kerala's 18-year average share of foreign tourist arrivals is higher than that of India in January and February. However, India's average visitor arrivals share in May, June, and July surpassed Kerala's share.

The seasonality for Kerala's international tourism is represented by greater seasonality indices during the November to March period (greater than 1). All other seven months during the 2002-2019 period remained offseason for Kerala's international tourism. In contrast, India's international tourism remains broader and

more stable in terms of seasonality indices. India's seasonality indices remained greater than one for six months from October to March (see Table 2.2 & Appendix 1). This implies that Kerala's international tourism is more sensitive to seasonality. Moreover, the possibility of disguised unemployment is greater for Kerala's international tourism compared to India's international tourism as well.

Table 2.3. Seasonality indices and average of month-wise foreign tourist arrivals (Jan 2002 to Dec 2019)

Month	FTAs in Kerala		FTAs in India	
	SI*	MA (%)	SI*	MA (%)
January	1.63	13.59	1.19	9.91
February	1.57	13.07	1.18	9.87
March	1.2	10.01	1.08	8.94
April	0.9	7.49	0.82	6.73
May	0.5	4.13	0.71	5.82
June	0.44	3.63	0.77	6.42
July	0.67	5.6	0.93	7.79
August	0.85	7.08	0.86	7.17
September	0.66	5.53	0.8	6.64
October	0.9	7.53	1.04	8.74
November	1.19	9.93	1.23	10.32
December	1.5	12.41	1.4	11.65

Source: Author's estimates on the basis of data accessed from Department of Tourism, GoK (2022)

SI: Seasonality index; MA: month-wise average percentage of tourist arrivals during 2002-2019

$$*Seasonality\ index = \frac{average\ monthly\ year-on-year\ arrivals\ (2002-2019)}{overall\ monthly\ average\ arrivals}$$

$$= \frac{sum\ of\ arrivals\ in\ each\ partiular\ month/\ totalyears}{sum\ of\ arrivals/\ total\ months}$$

The month-wise pattern of the foreign tourist arrivals was entirely redrawn in the post-Covid period. Number of arrivals starts significantly falling in March 2020 amid the initial spread of the deadly virus and closure of normal international travel after normal months of January and February (Department of Tourism, GoK, 2022). The year on year growth of arrivals in 2020 since March was absolutely not comparable with the pre-Covid period as international tourism was nearly nothing in the wake of the pandemic. Only two per cent of the arrivals was recorded in the whole months in 2020 after March. Although the whole of 2021 was also in the grip of Covid 19, later part of it shows some signs of revival when international travel restrictions were slightly eased. Three-fourth of the foreign tourist arrivals were recorded in the months from January to March and October to December periods in 2021. India's figures are also not very

different as inbound tourist arrivals in the country was also plummeted since March 2020 and international tourism sector remained nearly disappeared until the figures start reviving since October-November 2021. Nearly 73 per cent of the arrivals in India in 2021 were recorded in the months from January to March and October to December periods in 2021 in line with Kerala's data (Ministry of Tourism, GoI, 2022).

2.3.3. District-wise foreign tourist arrivals (FTAs) in Kerala

The concentration of foreign tourists who arrived in the state of Kerala during 1999-2021 period is illustrated in figure 2.3. Great majority of the foreign tourists are being hosted by Ernakulam and Thiruvananthapuram districts for the past two decades (72.12 per cent on an average). So to speak, three-fourth of the foreign tourists who arrived in the state visited a few destinations in these two districts viz. Thiruvananthapuram, Kovalam, Varkala, Kochi city, Fort Kochi and Maradu. The unequal distribution of FTAs in Kerala brings the unutilised potential of the state in to light. Idukki, Alappuzha and Kottayam have been the other three districts with a decent share of FTAs with 7.46 per cent, 7.45 per cent and 4.99 per cent respectively on an average. Thus in total, 92 per cent of the FTAs in Kerala have been accommodated in just five districts on an average. These districts managed to maintain their share in total foreign tourist arrivals in the state across two decades with some variation. Among the major districts, Ernakulam managed to surge its share from nearly 30 per cent in early 2000s to 45-50 per cent since 2009. Growth of Ernakulam as the dominant destination for foreign tourists in Kerala caused for the fall in share of Thiruvananthapuram. Share of Thiruvananthapuram came down to around 30 per cent since 2009 from 35-40 per cent before 2009. At the same time, there has been a stagnation in arrivals of foreign tourists in Kollam where 8,000-9,000 arrivals were recorded every year since 1999. However, its share in total arrivals has come down drastically overtime. There has been ups and downs in arrivals and share of total arrivals in Alappuzha and Idukki although they continued to host good number of foreign tourists throughout the 22-year period. Kottayam recorded growth of arrivals overtime with less fluctuation and maintained decent share in the total arrivals. (see Figure 2.3, 6.1 and Appendix 4).

Among the relatively less visited districts, Malappuram registered significant growth since 2003-2004. From below 1,000 arrivals before 2003, the number of arrivals reached around 3,000 in 2004 and 10,000 in 2008 and 20,000 in 2013. After reaching

23,000 in 2015, there has been a slight decline in arrivals in Malappuram thereafter. However, the arrivals numbers resurged to over 25,000 in 2019. Kozhikode managed to raise its number of arrivals to above 10,000 since 2013 from a figure below 1,000 before 2006 while Thrissur witnessed steady growth of arrivals of foreign tourists. The arrivals of around 2,000 foreign tourists in Thrissur district during 1999-2005 rose to around 4,000 during 2006-2010, 6,000 in 2012, 8,000 in 2015 and over 10,000 in 2016. It has become nearly 16,000 in 2019. Kannur found substantial hike in arrivals of foreign tourists during 2009-2015 period. The number of arrivals in Kannur reached 9,000 in 2015 from below 1,500 during 1999-2003, around 3,000 during 2006-2008 and 6,000 during 2010-2012. There has been a decline in the number of arrivals in Kannur after reaching its peak in 2015. Palakkad and Pathanamthitta remained least visited districts in Kerala by the foreign tourists since 1999 with minimum of 150 arrivals and maximum of 2,000 arrivals. (see Appendix 4).

South and Central Kerala registered maximum number of FTAs in the state while Northern Kerala hosted merely below 5 per cent in total on an average. So to say, FTAs in the state have been concentrated in both South Kerala and Central Kerala. This is of course not due to the lack of tourism destinations in Northern districts. There are so many destinations in this region where plenty of domestic tourists arrive. Over one-fourth of the domestic tourists arrive in North Kerala's destinations in 2018 (Department of Tourism, 2022). Top 10 destinations for the foreign tourists in Kerala for the past two decades belong to the districts in Central and South Kerala as well. (see Figure 2.3 & Appendix 4).
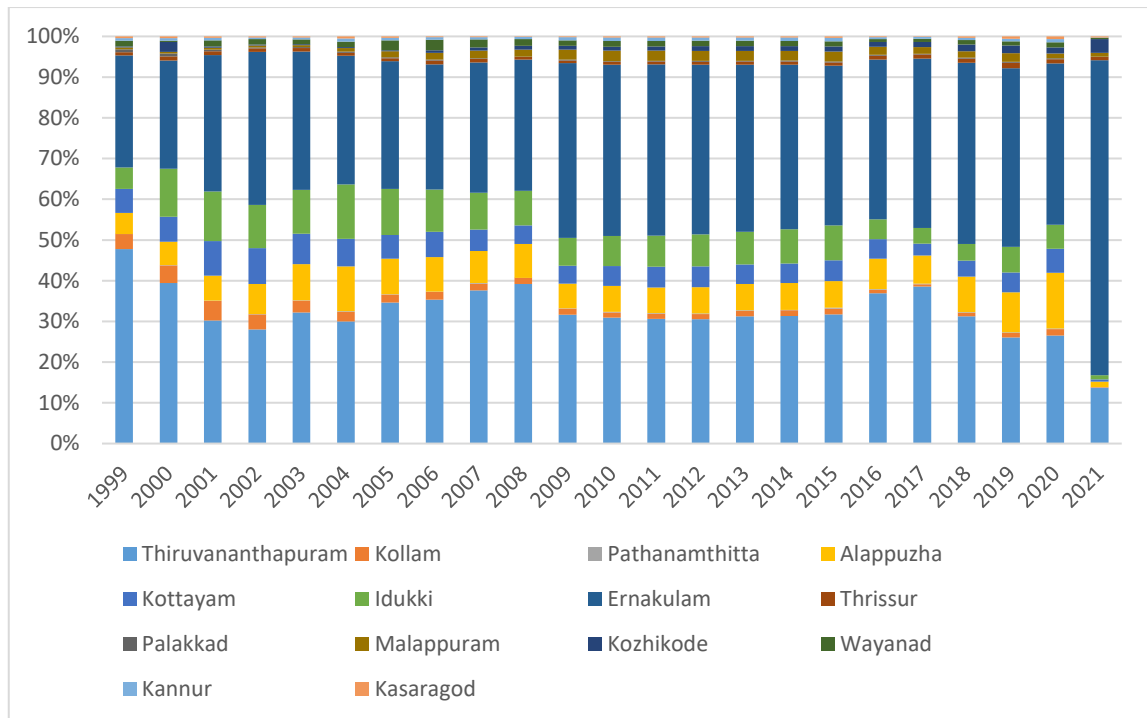
Figure 2.3. District-wise composition of FTAs in Kerala during 1999-2021 (%)

Source: Department of Tourism (Government of Kerala), 2022 and author's calculation

District-wise arrivals composition of foreign tourist arrivals in 2020 remained similar to pre-Covid period although the arrivals figures plummeted to poor numbers since March. The second year of Covid 2021 witnessed sharp changes in district-wise composition of foreign tourist arrivals as Ernakulam alone hosted 77 per cent of the total arrivals in 2021 while the share of Thiruvananthapuram fell to 14 per cent. All other districts including Alappuzha, Idukki and Kottayam had the scant share of nearly 1-2 per cent of the total foreign tourist arrivals in 2021. (see Figure 2.3).

2.3.4. Top ten destinations of foreign tourists in Kerala

Since 2009, the top ten destinations for foreign tourists visiting Kerala have consistently been choosing districts, including Ernakulam, Thiruvananthapuram, Idukki, Alappuzha, and Kottayam. Ninety-two per cent of the total foreign tourist arrivals in Kerala have been concentrated in these five districts only on an average during 1999-2021 (see Appendix 4). Kochi city and Kovalam alone hosted over one-third of the foreign tourists in the state with the share of 18.84 per cent and 16.05 per cent on an annual average respectively. Fort Kochi, Varkkala, Alappuzha and Thiruvananthapuram city have been other favourite destinations with the annual average share of 11.2 per cent, 7.68 per cent, 6.33 per cent and 6.27 per cent respectively. All the other destinations in

the list viz. Maradu, Kumarakom, Munnar and Thekkady accommodated just around 3-4 per cent each of the foreign tourists who arrived in Kerala. Important thing to notice here is that foreign tourist arrivals in Kovalam start shrinking since 2017 (even before Covid and 2018-2019 flooding) after reaching the peak in 2015. Both number and share of foreign tourist arrivals starts subsiding in Kerala's long standing favourite beach destination for the foreign tourists. (See Figure 2.4, Appendices 4 & 10).
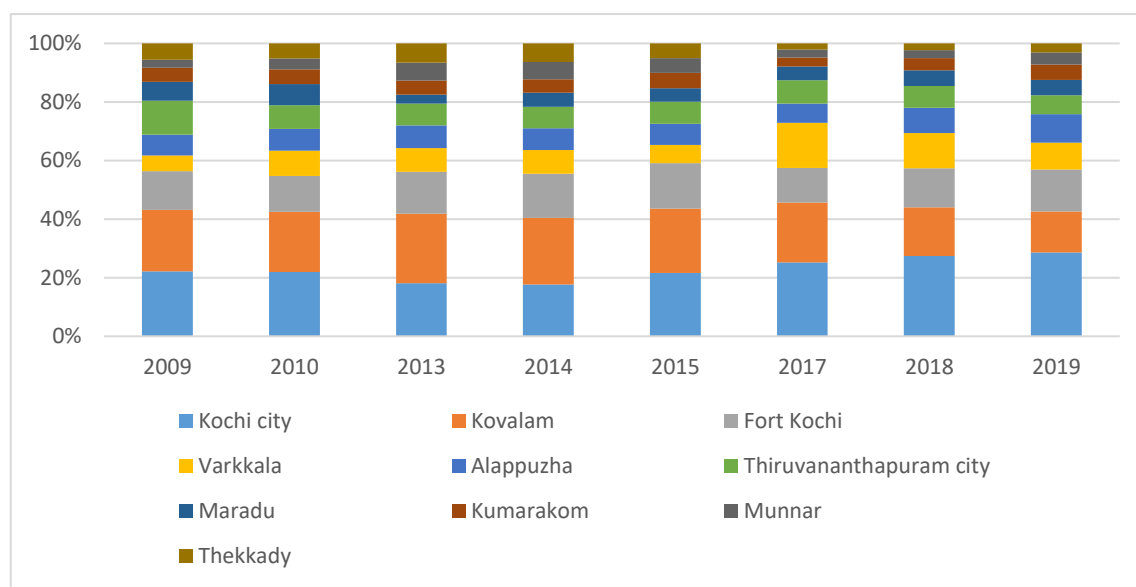
Figure 2.4. Top ten destination-wise composition of foreign tourists in Kerala from 2009 to 2019 (%)

Source: Department of Tourism (Government of Kerala), 2022; Ministry of Tourism (Government of India), 2022 and author's calculations

Note: Data unavailable for 2011, 2012 and 2016

2.3.5. Major source markets of international tourism in Kerala and India

The UK, the US, France and Germany have been the top four source markets of international tourism in Kerala during 2003-2019 period with the average annual share of 18.4 per cent, 8.7 per cent, 8.44 per cent and 6.96 per cent respectively as per the Kerala Tourism Statistics being published by Department of Tourism, GoK (2022). A chunk of foreign tourists who arrived in the state have been from these four nations only (42.5%). The rest 30 per cent of the foreign tourists in Kerala are from other 11 nations in the list viz. Saudi Arabia, Maldives, Australia, Italy, Russia, Canada, Malaysia, Oman, Switzerland, the UAE and the Netherlands with a share of around 2-4 per cent each. In total, 72.14 per cent of the total foreign tourists who arrived in Kerala

during 2003-2019 were from the top 15 nations while 27.86 per cent on an average arrive from other markets. Among the top source markets of Kerala's international tourism, UK's share was slightly reduced since 2010 although UK tourists continued to dominate total foreign tourist arrivals in the state throughout the period. Guests from the US, France, Germany, Australia, Canada, Italy, Switzerland and Netherlands managed to send their nationals to Kerala on a consistent basis. Number of tourist arrivals from Saudi Arabia, Oman, Malaysia, the UAE and Russia surged after 2010 and managed to send their nationals significantly on continuous basis thereafter. Advanced economies of Europe, North America and the Middle East have been top source markets of Kerala's international tourism since 2002 when Kerala declared its Tourism Vision 2025. (see Figure 2.5 & Appendix 3). It is good for Kerala's tourism industry that Kerala managed to explore new markets of the Middle East and Russia in the recent period. The other major source nations of foreign tourists who arrived in Kerala were South Africa, Israel, Spain, Japan and Sweden. It can be observed here that all top markets for Kerala's international tourism are either developed economies of Europe and North America or the emerging and high income economies of the Middle East. The advanced economy of Australia and upper middle income economies such as Russia, Malaysia and Maldives have also been Kerala's top source markets. (see Figure 2.5).
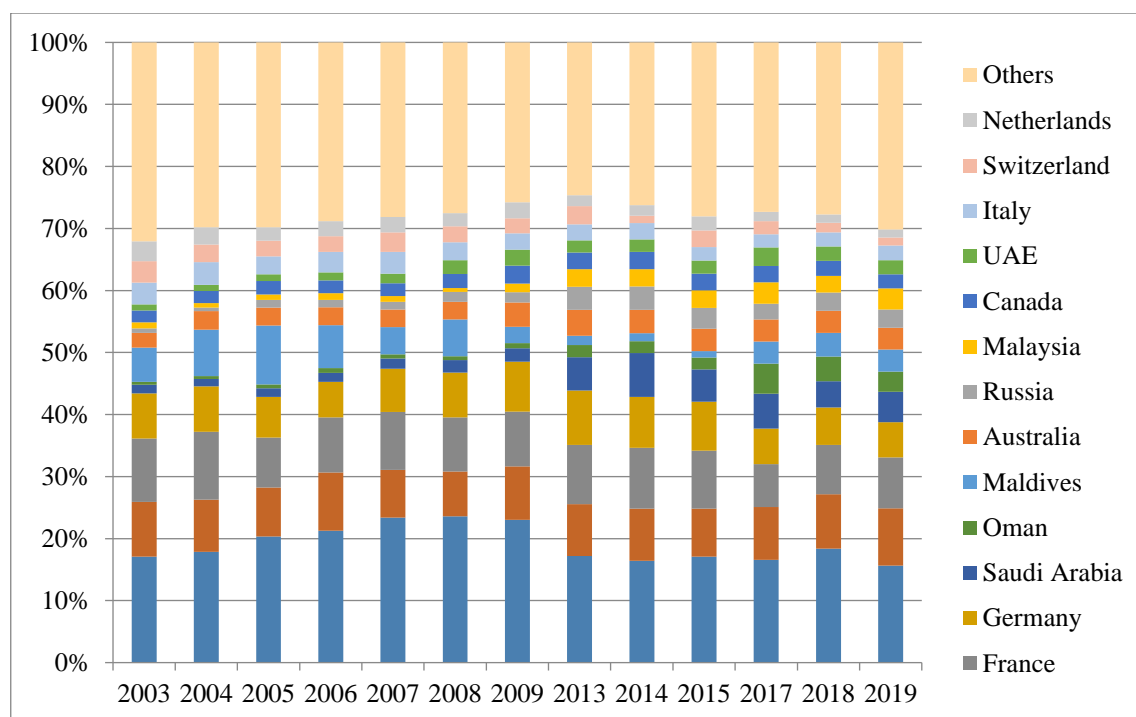
Figure 2.5. Source-wise composition of foreign tourists in Kerala 2003-2019 (%)

Source: Author's calculation on the basis of data accessed from Department of Tourism (Government of Kerala), 2022 and author's calculations. Note: Data unavailable for 2002, 2011, 2012 and 2016

The United States, the United Kingdom and Bangladesh remained India's top 3 source markets for international tourism with a massive overall share of nearly 41 per cent during 2003-2019 period on an average. These nations accounted for 15.14 per cent, 12.99 per cent and 12.93 per cent share of foreign tourist arrivals in India during the 17-year period on an average respectively as per the data collected from 'India Tourism Statistics' published by Ministry of Tourism, GoI (2022). The rest top 12 origin nations viz. Sri Lanka, Canada, France, Germany, Australia, Malaysia, Japan, Russia, China, Singapore, Nepal and Republic of Korea accounted for around 30 per cent of the overseas tourist arrivals in India on an average. Most source nations are high income economies while some other countries belong to upper-middle income category. Three nations viz. Bangladesh, Sri Lanka and Nepal belonging to the lower-middle income economies category are India's neighbouring countries too. The US, the UK, Canada, France, Germany, Australia, Malaysia, Russia and Singapore are the common entries in the list of top 15 source markets of Kerala's and India's international tourism. (see Figure 2.6).

While the US managed to send their nationals to India on a constant basis with around 15 per cent on an average, share of the UK tourists reduced from 13-15 per cent

during 2003-2010 to nearly 10 per cent since 2014. There has been a high variation in share of arrivals of tourists from Bangladesh, another major market of India's international tourism. Arrivals of tourists from Bangladesh resurged to above 14-15 per cent since 2015 after a continuous decline in share from 17 per cent in 2003 to 8 per cent in 2013. Tourists in India from Sri Lanka, Canada, Australia, Malaysia, Germany, France and Japan managed to send around 2-4 per cent throughout the period since 2003. Russia and China more than doubled their share in total foreign tourist arrivals in India from around 1 per cent during 2003-2010 to nearly 3 per cent. At the same time, arrivals from Japan, Singapore and Nepal remained on a constant basis at around 2 per cent each (see Figure 2.6).
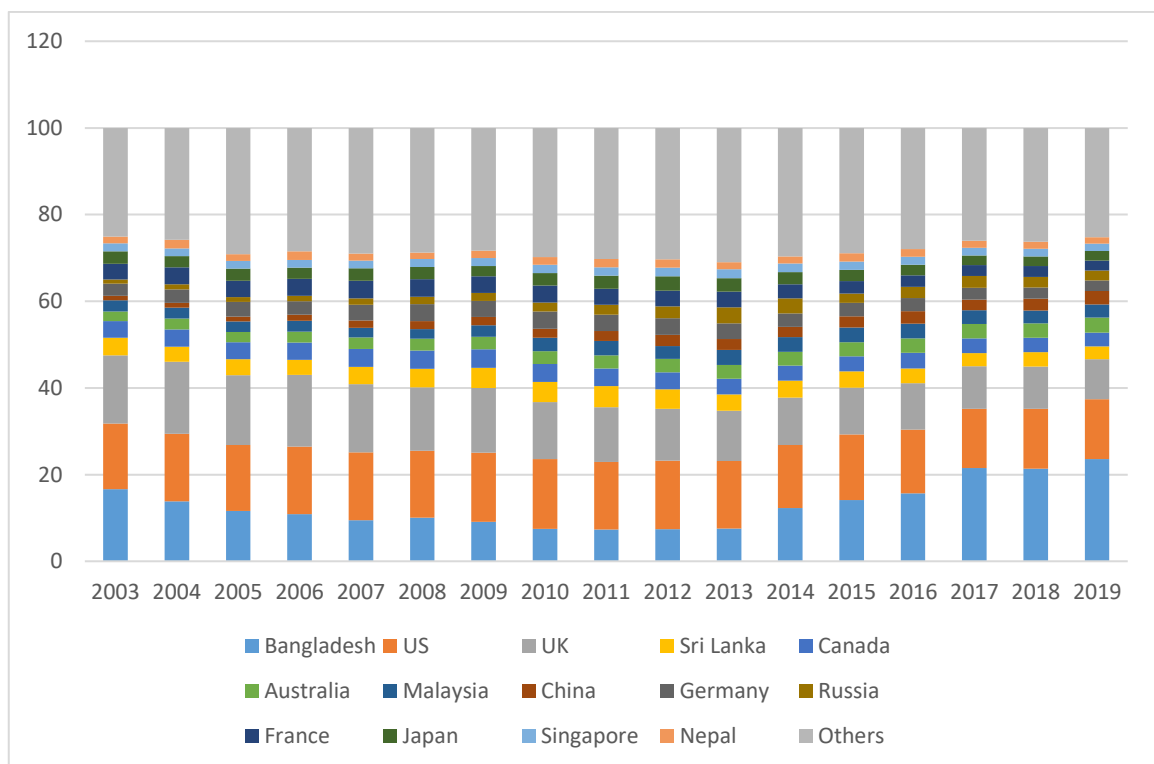
Figure 2.6. Source-wise composition of foreign tourists in India 2003-2019 (%)

Source: Author's calculation on the basis of data accessed from Ministry of Tourism (Government of India), 2022

2.3.6. Region-wise arrivals of foreign tourists in Kerala

Europe remains top source region of Kerala's international tourism as the top source countries are from Europe as per figure 2.7. Nearly 50 per cent share of the overseas tourist arrivals in the state of Kerala have been from Europe alone since 2002 (Department of Tourism, 2022). As per figure 2.7, Europe remains top source region with 47 per cent share of overseas tourist arrivals followed by the Middle East (16%),

North America (12%), South Asia (6%), South-East Asia (6%) and Oceania (4%). The rest 10 per cent of the overseas visitors in the state were from Africa, Latin America, East Asia and Central Asia. While the arrivals of tourists from Europe and the Middle East spread across many countries, arrivals from North America, South Asia, South-East Asia and Oceania were dominated by one or two countries. As per the illustration in figure 2.7, the United States dominates the arrivals of tourists in Kerala in 2019 from North America (80%) while Maldives dominates the arrivals from South Asia (64%), Malaysia from South-East Asia (60%) and Australia from Oceania (82%). The domination of Europe on the tourist arrivals in Kerala can be substantiated by the presence of 25 per cent share among total international departures by the Europe as per data portal of World Bank (2022e).
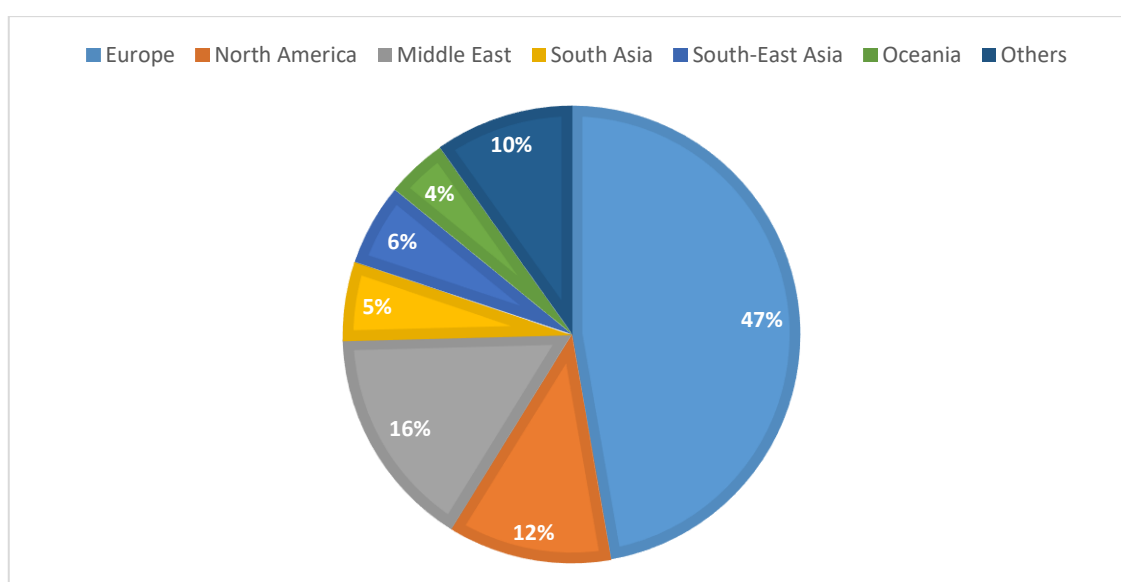
Figure 2.7. Region-wise composition of foreign tourist arrivals in Kerala (2019)

Source: Author's calculation on the basis of data accessed from Department of Tourism (Government of Kerala), 2022

2.3.7. Trend in arrivals of tourists from the top 5 markets in Kerala and India

The United Kingdom, the United States, France and Germany have been the top source markets for Kerala's international tourism since 2003 as shown in figure 2.8. They have managed to send their nationals to the state of Kerala in larger volume with a little variation in growth over the period of 17 years. They have remained top four source markets of Kerala's international tourism throughout the period. In the meanwhile, Saudi Arabia was emerged as the fifth largest source market after 2009. Saudi Arabia,

from a lower share of mere 1-2% from 2003 to 2009, geared up its share to 4-7% thereafter. (see Figure 2.8).
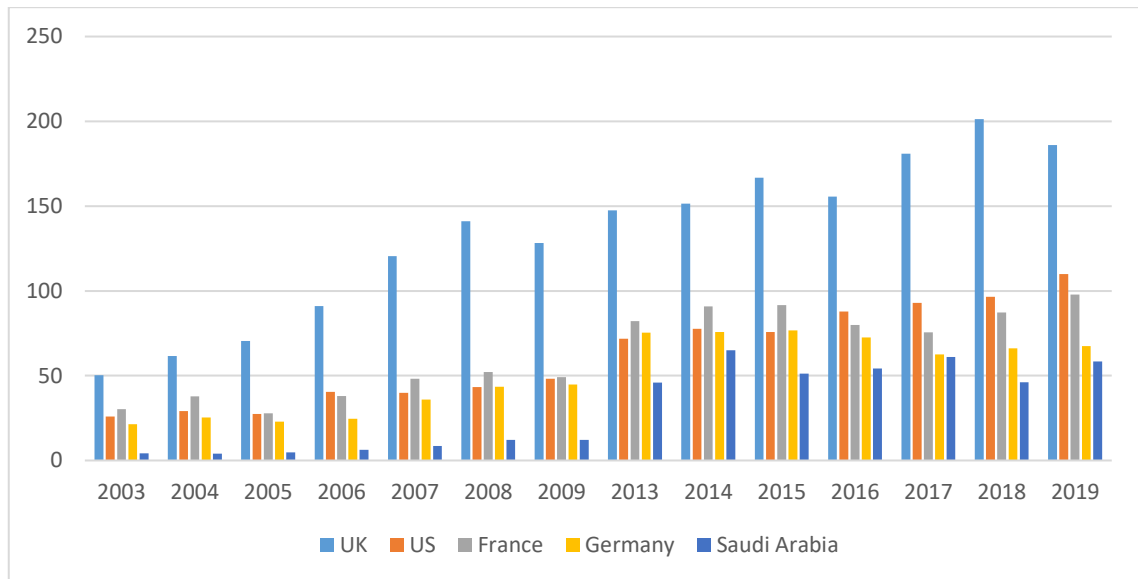
Figure 2.8. Trend in arrivals of tourists in Kerala from the top 5 origin nations during 2003-2019 ('000)

Source: Department of Tourism (Government of Kerala), 2022

Note: Data unavailable for 2010, 2011 and 2012

While the UK, the US, France, Germany and Saudi Arabia remained Kerala's top 5 source markets during 2003-2019 period, the US, the UK, Bangladesh, Sri Lanka and Canada dominated overseas tourist arrivals in India. All the top source markets except Bangladesh have managed to send their nationals to India in a steadily increasing manner. Tourist arrivals from Bangladesh has found sudden surge in arrivals since 2014 onwards. It reached around one million tourists in 2014 and further surged to over 2 million in 2017. Over the years, the US, UK and Bangladesh remained India's top three origin nations of foreign tourist arrivals, however. Sri Lanka and Canada have managed to increase the arrivals of tourists in India alike. With around 0.1 million in 2003 and 0.35 million in 2019, there has been a steady and slow growth of arrivals of tourists in India from both nations too. (see Figure 2.9).
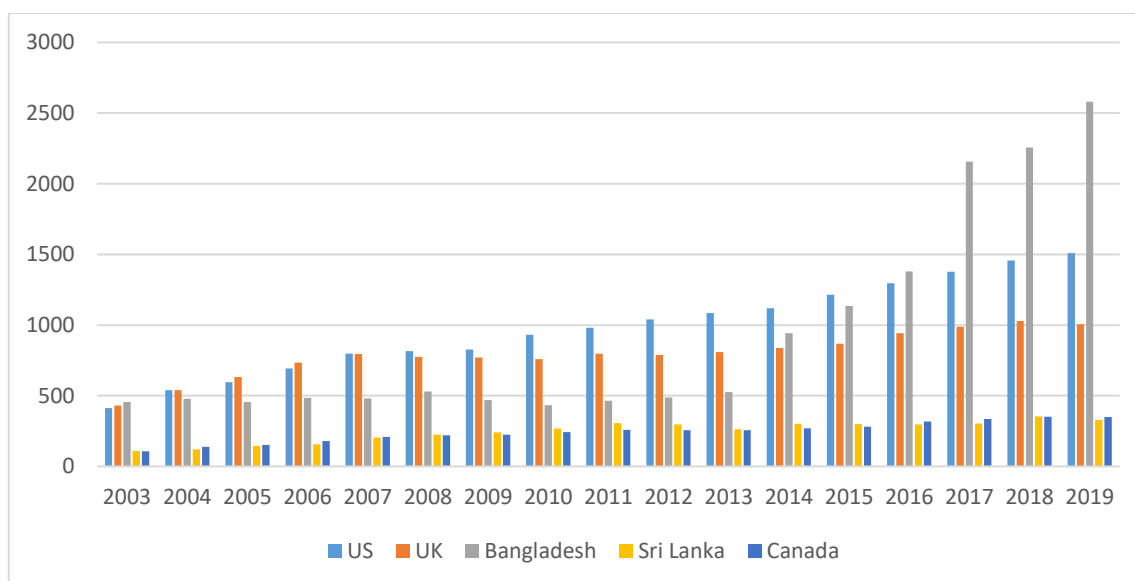
Figure 2.9. Trend in arrivals of tourists in India from the top 5 origin nations during 2003-2019 ('000)

Source: Ministry of Tourism (Government of India), 2022

2.3.8. District and nationality-wise tourist arrivals in Kerala

The concentration of top markets in the mostly visited districts of Thiruvananthapuram, Alappuzha, Kottayam, Idukki and Ernakulam can be understood from the table 2.3. It was already made clear that foreign tourists in Kerala have not been equally distributed in terms of districts and destinations hosted (See Figures 2.3 and 2.4). The table 2.4, however, is used to exhibit the distribution of foreign tourists from the top 20 markets in the top 5 districts of Kerala. Great majority of the tourists from the top four markets in 2018 viz. the UK, the US, France and Germany, which account for over 40 per cent of the total foreign tourists in Kerala, were hosted in both Thiruvananthapuram and Ernakulam districts (60-75%). Great majority of the foreign tourists who arrived in Alappuzha and Kumarakom were from these four top markets in 2018 as well. This was accomplished as absolute number of tourists from these four top markets is too high although percentage is low. Around half of the tourists in Idukki district who arrived in 2018 were from the UK, France and Malaysia. It is striking that Ernakulam is the destination for most of the tourists who arrived in Kerala. Around 30-60 per cent of the tourists from the top 20 markets were arrived in Ernakulam district in 2018 with an average of 45 per cent. At the same time, it is just 10-60 per cent with an average of 30 per cent in the second mostly visited district Thiruvananthapuram. It was surprising that tourists from all the Gulf nations in the list such as Saudi Arabia, Oman and the UAE

were more or less reluctant to visit the mostly visited districts of foreign tourists in Kerala except Ernakulam. A total of 50-60 per cent of them visited only Ernakulam in 2018. A good share of the tourists from these Middle East nations is arrived in Kozhikode and Malappuram as well. It may be clubbed with huge Malayalee expatriates from these districts who have been working and residing in this region for the past few decades. The countries such as the US, Saudi Arabia, Oman, Australia, Malaysia, the UAE, Canada, the Netherlands, Spain, Japan, Israel and South Africa were the other origin nations for foreign tourists in Kerala which sent around half or more of the tourists in Ernakulam district in 2018. At the same time, majority of the guests from Maldives, Russia and Sweden arrive in Thiruvananthapuram. Whatsoever, Ernakulam and Thiruvananthapuram dominantly remained favourite destination districts for foreign tourists who arrive in Kerala. (see Table 2.4 and Figure 2.3).

Table 2.4. District-wise and nationality-wise FTAs in Kerala in selected districts in 2018 (%)

Country	Thiruvananthapuram	Alappuzha	Kottayam	Idukki	Ernakulam
UK	33.73	13.80	5.44	4.50	37.72
US	26.28	6.18	6.08	3.86	51.35
France	24.56	15.82	4.79	9.03	39.37
Germany	35.64	14.28	3.26	3.97	34.86
Saudi Arabia	11.71	6.98	4.14	2.43	59.86
Oman	10.76	2.52	2.17	4.50	59.88
Maldives	61.82	0.07	0.02	0.10	36.78
Australia	26.60	8.87	4.73	3.87	51.06
Russia	52.87	3.59	0.38	0.63	38.33
Malaysia	21.02	2.68	1.80	14.15	51.10
Canada	28.81	10.41	5.44	3.85	45.31
UAE	16.50	2.59	4.26	2.19	50.73
Italy	40.62	9.70	5.14	4.98	35.30
Switzerland	37.41	13.75	4.76	4.70	31.25
Netherlands	31.79	10.03	4.59	3.35	43.67
South Africa	27.96	8.70	6.41	2.65	51.30
Sweden	46.79	9.12	1.63	2.04	29.92
Spain	26.30	9.83	5.13	7.08	47.46
Japan	38.40	6.41	1.69	2.13	48.31
Israel	21.74	8.68	5.43	6.79	48.81

Source: Department of Tourism (Government of Kerala), 2022 and author's calculations Note: Share represents the percentage share of foreign tourists in the concerned district out of the total tourists from the concerned nation; FTAs in '000; TVM= Thiruvananthapuram; ALP= Alappuzha; KTM= Kottayam; IDK= Idukki; EKM= Ernakulam

2.3.9. Foreign exchange earnings from tourism in Kerala and India

Foreign exchange earnings from tourism are almost equal to the consumption expenditure made by the foreign tourists for various goods and services in the destination. It is vital for the economy in multiple ways. It adds to the existing foreign exchange reserve of the country as well. It strengthens the high-powered money of the central bank and becomes a basis for money supply in the economy. It is also used as part of open market operations of the central bank to stabilise the variations in the foreign exchange market and domestic currency. It enables the importers and outbound investors of the country as well for making international payments. More importantly, spending by the tourists fuel the economic activities in the destination directly and indirectly.

Foreign exchange earnings from tourism in Kerala was just $12.4 million in 1991 marginally rose to $48.9 million in 1995 climbed to $116.9 million in 2000, $830 million in 2010 and $1,459.2 million in 2019. The growth trajectory of foreign exchange earnings from tourism in Kerala is illustrated in figure 2.10. The apparent downfall in the foreign earnings was recorded only in 2009 following the fall in visitor arrivals in the wake of global economic meltdown. Similar trend is also visible in the foreign exchange earnings from tourism in India too. It was just $1,861 million in 1991 slowly crossed 3,084 million in 1995 and $3,338 million in 2000 marginally climbed to $ 14,490 million in 2010 and $29,834 million in 2019. (see Figure 2.10).
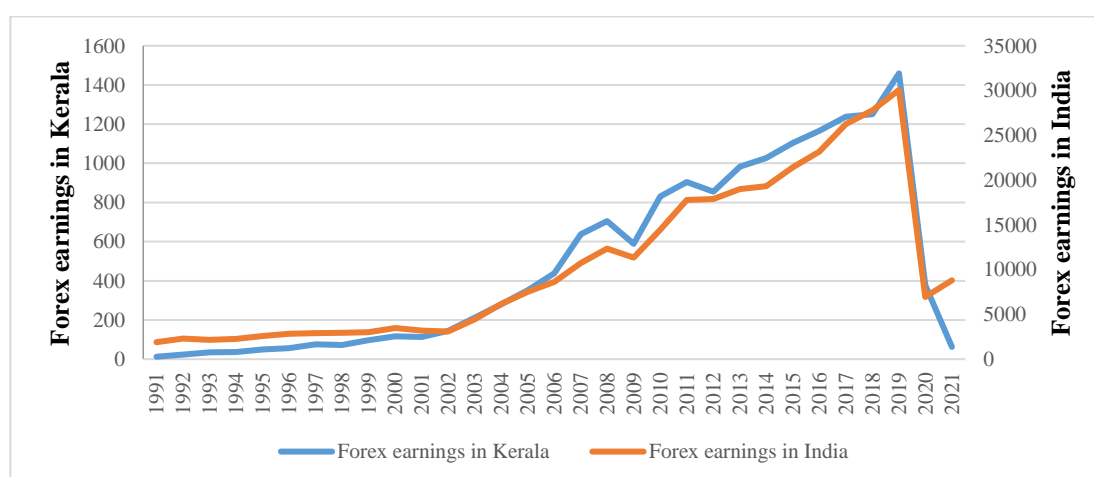
Figure 2.10. Foreign exchange (forex) earnings in Kerala and India from tourism 1991-2021 (In USD million)

Source: Department of Tourism (Government of Kerala), 2022 and Ministry of Tourism (Government of India), 2022

International Tourism of Kerala: A Study on Tourism Demand and Stakeholder Perceptions

2.4. Features of foreign tourists in Kerala

Social, economic, demographic, preferential and perception-related characteristics of the foreign tourists in Kerala are presented in this section on the basis of data availed from 'Kerala Continuous Tourism Report 2019', submitted by 'Datamation Consultants Pvt Ltd' to Department of Tourism, Government of Kerala. The report was prepared by the Haryana-based agency on the basis of sample survey among 16,000 foreign tourists who visited Kerala during 2017-18, 2018-19 and 2019-20. Sample destinations spread across Kerala including major foreign tourist destinations such as Thiruvananthapuram city, Varkala, Kovalam, Kumarakom, Munnar, Thekkady and Alappuzha. The current section helps understand the classification on the basis of gender, age, education and employment of the foreign tourists who arrive in Kerala. Moreover, the current section also draws attention to the distribution of foreign tourists in Kerala on the basis of source of tourism information, role of tour packages, repeat visits, mode of transport, purpose of travel, overnight stays, tourism expenditure, type of food preferred, level of satisfaction and major problems faced.

2.4.1. Gender status of the foreign tourists

Two third of the foreign tourists who arrive in Kerala are male (66%) while India remains relatively 'gender-neutral' as 41 per cent of the foreign tourist arrivals in the country are female as per India Tourism Statistics 2019 (Ministry of Tourism, GoI, 2022). However, nearly half of the tourists in Kerala from the UK, the USA, Italy, the UAE, Maldives, Singapore and Kuwait are female. Overwhelming arrivals of female tourists from these countries especially the UK and US nearly offset extreme domination of male guests from other countries. Nearly 40 per cent of the guests from France, Germany, Oman, Malaysia and Switzerland are female. There are countries too with the overwhelming majority (over 75%) of the male tourists. Saudi Arabia, Russia, Spain, Japan, New Zealand, South Africa and Belgium are such source countries. It is clear that there exist no regional differences in gender-wise classification of foreign tourists in Kerala. (see Table 2.5).

Table 2.5. Gender-wise classification of foreign tourists in Kerala (% of total)

Sl. No.	Country of Origin	Male	Female
1	United Kingdom	52.1	47.9
2	United States of America	56.6	43.4
3	France	61.2	38.8
4	Germany	62.7	37.3
5	Saudi Arabia	84.5	15.5
6	Oman	60.4	39.6
7	Maldives	53.4	46.6
8	Australia	68.6	31.4
9	Malaysia	61.2	38.8
10	Italy	50.4	49.6
11	United Arab Emirates	54.9	45.1
12	Canada	65.2	34.8
13	Russia	79.4	20.6
14	Spain	85.3	14.7
15	Switzerland	62.7	37.3
16	Japan	75.5	24.5
17	New Zealand	76.5	23.5
18	South Africa	83.7	16.3
20	Kuwait	51.9	48.1
19	Singapore	53.9	46.1
21	Belgium	84.7	15.3
22	Others	65.6	34.4
23	*Kerala's State-wise average*	*65.9*	*34.1*
24	*India's national average*	*58.6*	*41.4*

Source: Datamation Consultants Pvt Ltd (2022)

2.4.2. Age composition

Majority of the foreign tourists who arrive in Kerala are both youth and middle aged as nearly 80 per cent of the respondents belonged to 19-55 age category as per the data presented in table 2.6. Nearly 20 per cent are above 55 while 10 per cent belong to 19-25 age category. Overwhelming majority of the foreign tourists in the working age categories partially implies that most foreign tourists in Kerala choose their vacation to visit Kerala. This could be justified as 85 per cent belong to various income earning employment categories (see Figure 2.11). At the same time, children (below 15) and senior citizens (65 and above) together constitute 18 per cent of the total arrivals in India with considerable departure from Kerala's figures as per India Tourism Statistics 2019.

Table 2.6. Age-wise distribution of foreign tourists in Kerala (%)

Age category	<=18	19-25	26-35	36-45	46-55	56-60	Above 60
Percentage	1.5	9.7	21.1	25.8	23.6	13.7	4.5

Source: Datamation Consultants Pvt Ltd (2022)

2.4.3. Education composition

Education looks not making any difference in Kerala's international tourism as the foreign tourists who arrive in Kerala spread across various education categories with two-digit percentage shares. However, just over one third of the visitors were graduated. (see Table 2.7).

Table 2.7. Classification of foreign tourists in Kerala according to education (%)

Education category	Post Graduate	Graduate	Technical	Secondary level	Others
Percentage	14.3	23.9	12.6	13.8	35.4

Source: Datamation Consultants Pvt Ltd (2022)

2.4.4. Employment composition

A big majority of the foreign tourists who arrive in Kerala were involved in their own business or they are self-employed (63%). It implies that foreign tourists in the state are not employment-wise diverse. Professionals with 8 per cent, employees with 13 per cent and others (retired, housewives etc) with 12 per cent constitute other important categories of employment. (see Figure 2.11). It is obvious that foreign tourists belonging to self-employed and others (retired, housewives etc) categories are free to arrange their travel as they are free from any regulation imposed by employers regarding vacation.
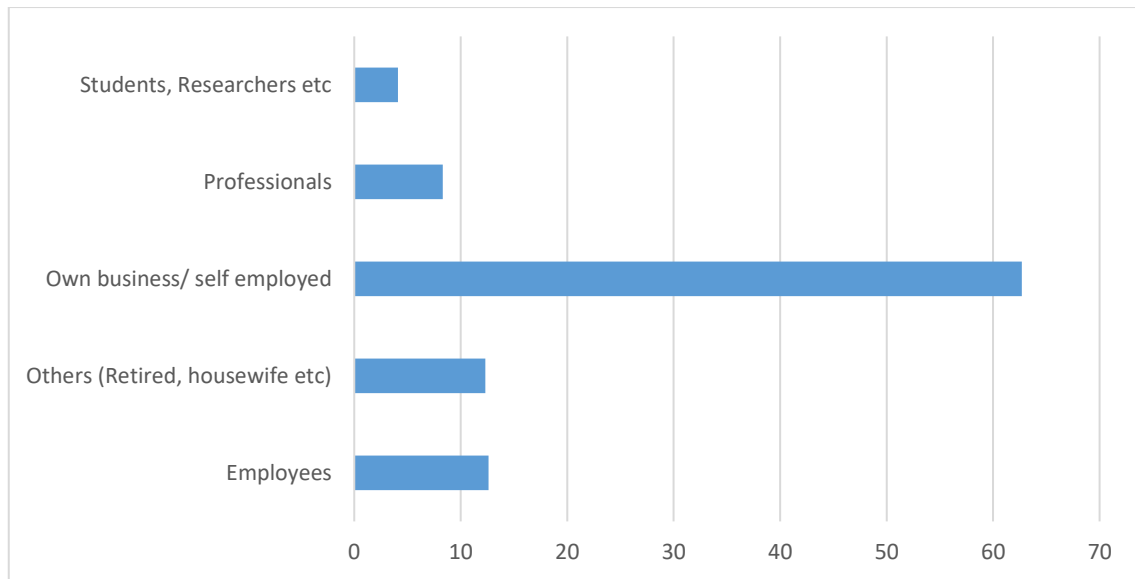
Figure 2.11. Classification of foreign tourists in Kerala according to employment (%)

Source: Datamation Consultants Pvt Ltd (2022)

2.4.5. Source of tourism information

The figure 2.12 shows that foreign tourists massively depend websites (30%) for tourism information due to its accessibility and affordability. It clearly implies that this is a way in which the growth of internet facilitates tourism especially international tourism in the recent period. Apart from this online source, tourist offices and information centres remained another major source of tourism information (20%). It shows that tourism offices and information centres set up across the destinations by the Department of Tourism, Government of Kerala are still relevant. Accommodation units, tour operators and friends and relatives, publications and own experience are the other important sources with 7-10 per cent share each. For better results in international tourism, the state can effectively promote maximum information on websites (of the tourism authority, tourism service providers and other travel based sites). This is the most economic and effective way of promoting international tourism in the state.
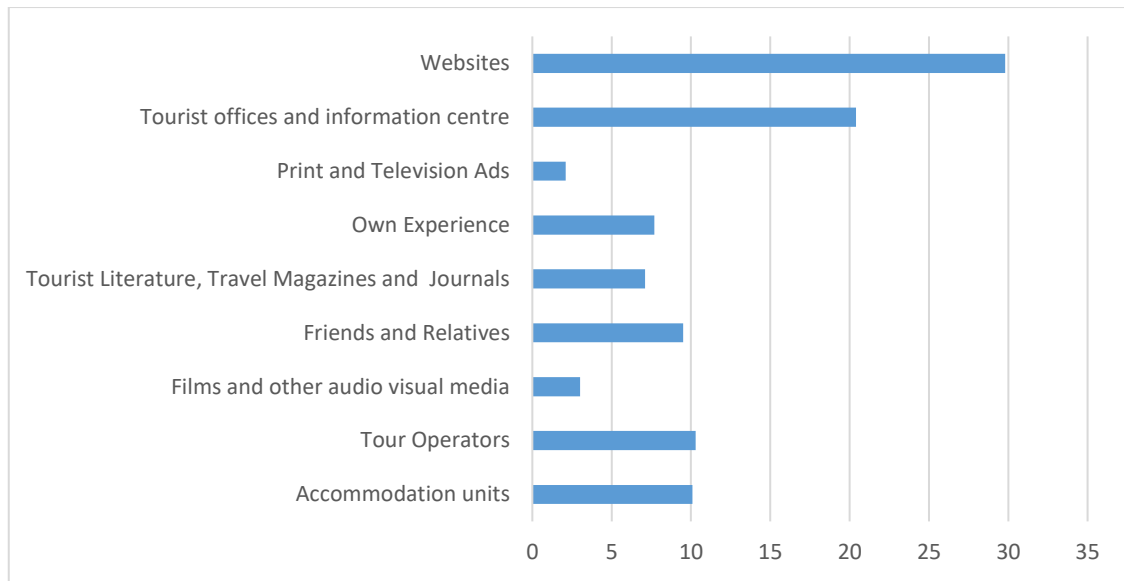
Figure 2.12. Classification of foreign tourists in Kerala according to source of information (%)

Source: Datamation Consultants Pvt Ltd (2022)

2.4.6. Role of tour packages

Nearly one-third of the foreign tourist arrivals in Kerala were on tour packages while arrivals not on package tourists remain major category as per the data presented in table 2.8. Among the top destination districts, over one-third of the tourist arrivals in Kottayam and Thiruvananthapuram were on tour packages with 42 per cent and 35 per cent respectively. It implies that tour operators focused on these two districts where top destinations of Kovalam-Poovar, Varkala and Kumarakom are located. At the same time, arrivals not on package tours remained predominant category in case of Alappuzha, Ernakulam and Idukki where nearly 85 per cent foreign tourists arrive not on package tours. However, 16 per cent share of foreign tourists in Ernakulam is not a small figure as Ernakulam gets nearly 40-50 per cent of Kerala's total foreign tourist arrivals over the past 2 decades (see Figures 2.4 & 6.1 and Appendix 5).

Table 2.8. Percentage distribution of foreign tourists in Kerala on the basis of arrivals through tour packages

Package Tour	ALP	EKM	IDK	KTM	TVM	Rest of Kerala	Total
Yes	17.6	16.1	12.3	41.5	34.8	32.2	29.4
No	82.4	83.9	87.7	58.5	65.2	67.8	70.6
Total	100	100	100	100	100	100	100

Source: Datamation Consultants Pvt Ltd (2022)

ALP: Alappuzha; EKM: Ernakulam; IDK: Idukky; KTM: Kottayam; TVM: Thiruvananthapuram

2.4.7. Repeat visits

The data presented in table 2.9 shows that just over one-fifth of foreign tourists in Kerala are repeat visitors while first time visitors still remain the dominant category. Repeat visitors in India is a much bigger category with 41 per cent of the total arrivals as per India Tourism Statistics 2019 (Ministry of Tourism, GoI, 2022). At the same time, repeat visitors in Alappuzha, Kottayam and Thiruvananthapuram constitute nearly one-third of the total arrivals. Repeat visitors were the rare category in Idukki with mere 3 per cent of the total visitor arrivals from abroad. Although only 23 per cent of the overseas visitors in Ernakulam were the repeat visitors, absolute figure could be huge as nearly 40 per cent of the average annual share of foreign tourists of Kerala arrive in Ernakulam over the past two decades (see Figure 2.4). It indicates that repeat visitors remain a minor but crucial category as Kerala gets guests on regular basis in large numbers. This is in compliance with stakeholder analysis in chapter 6 (see Tables 6.2 and 6.6).

Table 2.9. Percentage distribution of foreign tourists in Kerala on the basis of first time or repeat visits

Category	ALP	EKM	IDK	KTM	TVM	Rest of Kerala	Total
First Time Visitor	70.4	77.1	96.7	71.0	64.3	69.6	78.2
Repeat Visitor	29.6	22.9	3.3	29.0	35.7	30.4	21.8
Total	100	100	100	100	100	100	100

Source: Datamation Consultants Pvt Ltd (2022)

ALP: Alappuzha; EKM: Ernakulam; IDK: Idukky; KTM: Kottayam; TVM: Thiruvananthapuram

2.4.8. Mode of transport for the arrivals

It is clear from the figure 2.13 that majority of the foreign tourists arrive in the state of Kerala by flights (Chartered flights: 12% plus normal passenger flights: 45%). It may not imply that the rest 43 per cent choose modes other than flights for the international travel. Those who use non-flight modes of transportation (railway: 15%, public road transport: 9%, private coach/bus: 7% and others including cars, mini coaches etc: 12%) could arrive in Kerala from the rest of India. As per the data published by Ministry of Tourism, GoI (2022), 80 per cent of the foreign tourists in India arrive by flights while 19 per cent by land ways (road and railways) and 1 per cent by sea route. Moreover, tourists from the neighbouring Bangladesh overwhelmingly arrive in India mainly by land modes.
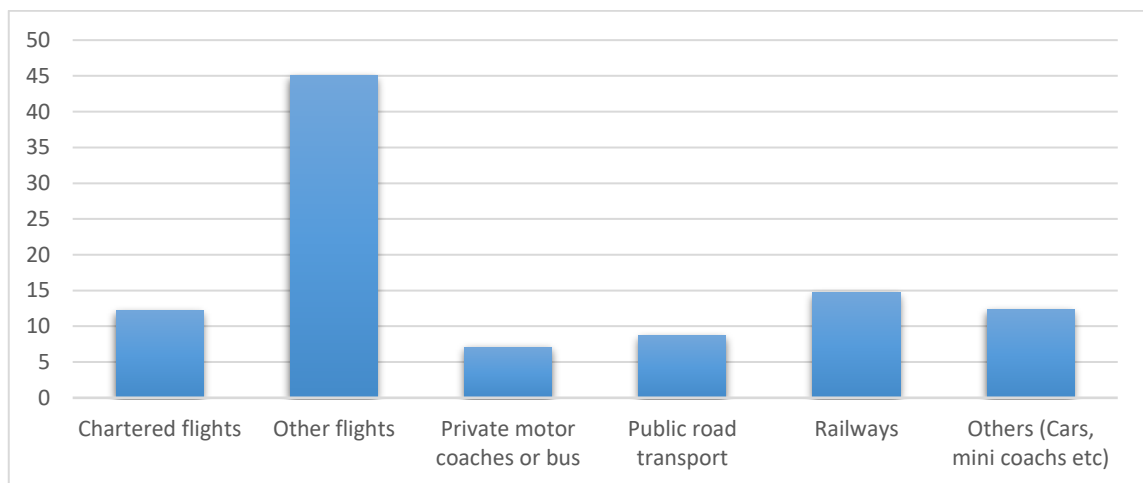
Figure 2.13. Classification of foreign tourists in Kerala according to mode of transport to Kerala (%)

Source: Datamation Consultants Pvt Ltd (2022)

2.4.9. Purpose of travel

Majority of foreign tourists who arrived in Kerala were to enjoy their vacation (57%) which is almost in compliance with India's national average (62% as per India Tourism Statistics 2019). While health remains next important purpose for foreign tourists in Kerala with 13 per cent, only 6 per cent arrives in India for the same. Sixteen per cent of the foreign tourists who arrive in India were for business and professional meets (2nd important category of foreign tourists in India) while it was ranked only 3rd important category with 8 per cent in Kerala. (see Table 2.10). It implies that attempt can be made

to maximise the foreign tourist arrivals both in Kerala and India by equipping the state and nation as a hub for business tourism, health tourism, pilgrim tourism, education tourism and so on. It is, however, clear that Kerala was seen more as a health tourism hub (promoting Ayurveda tourism) than a business and education hub.

Table 2.10. Distribution of foreign tourists in Kerala according to purpose of travel (%)

Purpose of travel	Business & Professional	Education, Research & Training	Health	Leisure , Recreation & holidays	Visiting friends & relatives	Others
Percentage	7.6	6	13.2	57.4	7.1	6.8

Datamation Consultants Pvt Ltd (2022)

2.4.10. Overnight stays by the foreign tourists

Most of the foreign tourists who arrive in Kerala were relatively short staying guests when compared to India's national average as 45 per cent stay for 8-14 days while 27 per cent stay for 4-7 days, as per the data presented in table 2.11. Five per cent foreign tourists stay mere a couple of days as well. Only 21 per cent stay fortnightly to a month and 3 per cent stay even longer. Average length of stay remains longer in India with 23 days on an average as per India Tourism Statistics 2019 (Ministry of Tourism, GoI, 2022) while great majority of the foreign guests in Kerala stay less than 15 days. In compliance to this finding, it was revealed in the stakeholder analysis attempted in the 6th chapter of this thesis, that there are guests in Kerala who stay months every year on the one hand and there are guests who stay shorter duration on the other. As pointed out by Johny (2002), the foreign tourists who stay in popular beach destinations of Kerala tends to stay longer while those who arrive in the backwater and wildlife destinations stay shorter.

Table 2.11. Distribution of foreign tourists in Kerala according to number of stays

Days	1-3 days	4-7 days	8-14 days	15-28 days	28 days and above
Percentage	4.59	26.55	45.14	20.69	3.03

Source: Datamation Consultants Pvt Ltd (2022)

2.4.11. Tourism expenditure

As per the data presented in table 2.12, majority of the foreign tourists in Kerala are low spending guests as 51 per cent spent only up to ₹500 a day during 2018-19 period as per Kerala Continuous Tourism Report 2019 (Datamation Consultants, 2020). Nearly 25 per cent others spent only up to ₹501-1000 a day while 14 per cent others spent up to ₹1001-2500. It shows over 75 per cent of the foreign tourists in Kerala are low spending guests who spent mere ₹1000 and below per day. This is exactly in compliance with the stakeholder analysis employed in chapter 6 of this thesis. It was found in the stakeholder analysis that opting low-cost transportation for city travel, bargaining and cautious spending, economic spending by long staying guests and strict adherence to travel plan (see Tables 6.2, 6.5 and 6.6, and Appendix 8) are the organising themes associated with foreign tourist arrivals in Kerala. Most of the foreign tourists in the state were lower spending guests as three-fourth of them spend only up to ₹1000 a day out of which half of the tourists spend just up to ₹500. Nearly 20 per cent of the foreign tourists spend between ₹1000-5000 a day and only 10 per cent spend over ₹2500 a day. This is in line with the stakeholder analysis where it was identified that most guests are not rich and strictly following the daily budget (see Table 6.5 and Appendix 8). Moreover, it was also found in the stakeholder analysis that short staying guests spend more while long staying guests spend less (see Table 6.5 Appendix 8). Among the expenditure categories, accommodation remained the top item followed by food and transportation respectively in terms of percentage distribution of amount spent on each item. (see Table 2.12). This falls in line with Kim et al. (2011) who argue that long haul tourists spend more on food and lodging.

Table 2.12. Percentage expenditure of foreign tourists in Kerala per day per person

Expenditure (₹)	Up to 500	501-1000	1001-2500	2501-5000	5001-10000	10000 above	Total
Accommodation	4.41	39.90	33.73	12.59	7.19	2.18	100
Food & Drinks	25.70	37.51	23.31	9.74	2.64	1.10	100
Transport	34.50	32.57	20.69	8.89	2.33	1.02	100
Recreation *	66.42	20.62	7.73	2.95	1.33	0.94	100
Shopping	63.66	21.77	9.66	2.33	1.48	1.10	100
Souvenirs	77.23	17.45	1.79	1.41	1.17	0.94	100
Others	86.72	7.50	2.10	1.56	1.17	0.94	100
Total	51.24	25.33	14.14	5.64	2.48	1.17	100

Source: Datamation Consultants Pvt Ltd (2022)

*Recreation, cultural and sports activities

2.4.12. Type of food preferred

Both continental and South Indian food (including Kerala food) were preferred by the foreign tourists in Kerala as per the data presented in table 2.13. Specifically, 39 per cent of the foreign tourists preferred Western food as the Western countries remained the major markets of Kerala's international tourism. South Indian food were preferred by nearly 29 per cent of the foreign tourists while 21 per cent others preferred purely Kerala food. It implies that culinary tourism is prevalent in Kerala's international tourism as tourists from abroad intend to experience food variety available in the destination. This data is consistent with the stakeholder analysis where culinary tourism was identified as an important organising theme of Kerala's international tourism (see Table 6.6 and Appendix 9). Since nearly half of the foreign tourists prefer South Indian food including pure Kerala cuisine, local restaurateurs also get a chance to host the foreign guests.

Table 2.13. Percentage distribution of foreign tourists in Kerala in terms of type of food preferred

Chinese	Continental	North Indian	South Indian	Typical Kerala
4.6	39.1	6.7	28.6	21.1

Source: Datamation Consultants Pvt Ltd (2022)

2.4.13. Level of satisfaction

Great majority of foreign tourists who arrive in the state are satisfied both on overnight stays and food quality as per the data shown in table 2.14. This is important as food and accommodation remained major items of tourism expenditure as per data presented in table 2.12. However, non-satisfaction of 15 per cent and 17 per cent of the foreign tourists on overnight stays and food quality should be, of course, a cause of concern. That has to be minimised still further to cherish sustained international tourism prospects of Kerala.

Table 2.14. Percentage of foreign tourists who are satisfied on stay and food in Kerala

Satisfaction	Percentage
Not satisfied on stay	14.8
Satisfied on stay	85.2
Total	100
Not satisfied on food quality	17.3
Satisfied on food quality	82.7
Total	100

Source: Datamation Consultants Pvt Ltd (2022)

2.4.14. Major problems of foreign tourists in Kerala

Major problems faced by the foreign tourists in Kerala are shown in table 2.15. Lack of information outlets remains the top challenge faced by the foreign tourists even as 12 per cent of foreign tourists expressed the same as the main issue. It shows more information centres are required in the destinations apart from the existing centres and increased website access. Absence of sufficient toilet facilities in the destinations was the second largest problem (11.7%). This is in compliance with the stakeholder analysis where lack of basic facilities was identified as an important organising theme (see Table 6.8 and Appendix 9). Absence of walkways, lack of proper maintenance, absence of drinking water facilities and poor parking facilities are the major problems with 7-9 per cent each. Overall, 60 per cent of the foreign tourists in Kerala respond that the above said six problems are the major ones on which Kerala's tourism authority has to strongly deal with. Problems related to ATM and card payment facilities in the destinations, environmental pollution, non-accessibility and security concern are the

other important problems with 4-7 per cent each. As per the problems listed in table 2.15, the issue has been mostly infrastructural.

Table 2.15. Percentage distribution of foreign tourists in Kerala in terms of major problems faced

Sl. No.	Items	Percentage
1	Lack of information outlets	12.2
2	Absence of toilet facilities	11.7
3	Absence of walkways	9.2
4	Lack of proper maintenance	8.5
5	Absence of drinking water facilities	8.4
6	Poor parking facilities	7.8
7	Problems in ATM and card facilities	7.1
8	Environment pollution	6.3
9	Non accessibility	5.5
10	Security concern	3.9
11	Lack of signage	3.2
12	Internal transport at unreasonable rates	3.2
13	Poor lighting	3.1
14	Knowledge guides at unreasonable price	2.4
15	Discourteous behavior	2.3
16	Congestion/crowded	2.1
17	Restricted movement/curbs on movement	1.9
18	Lack of shopping facilities	1.2

Source: Datamation Consultants Pvt Ltd (2022)

2.5. Conclusion

A general overview of the trends and patterns of foreign tourist arrivals (FTAs) in Kerala and demographic and preferential characteristics of foreign tourists in Kerala were detailed in this chapter. It was shown that Kerala has a prominent place in the international tourism map of India as it obtained a decently big share of foreign tourist arrivals and foreign exchange earnings in the country when compared to many other states and union territories. At the same time, the review found that FTAs in the state of Kerala was not equally distributed as a big share was concentrated in just a few districts. The lion share was procured by just two districts viz. Ernakulam and Thiruvananthapuram just as only Tamil Nadu, Maharashtra, Uttar Pradesh and Delhi are accounted for over 60 per cent foreign tourist arrivals in the country. The northern Kerala registers a scant share of FTAs over the years while foreign tourists concentrate in southern and central regions of Kerala. Kerala's main source markets for its

international tourism were only a few nations over the years including the UK, France, the US and Germany. The UK, the US and Bangladesh have been the main source markets of India's international tourism, at the same time. The seasonality nature of both Kerala's and India's international tourism was revealed as most arrivals of tourists happen in the months of November to February in line with Connel et al. (2015) and Yildirim & Coskun (2016).

Characteristics of foreign tourists who arrive in Kerala were also examined in this chapter. Regarding gender, male tourists are accounted for two-third of the total arrivals in Kerala while percentage share of female tourists was over 40 per cent in India. While education looks not relevant in explaining Kerala's international tourism, age and employment are seemingly relevant as foreign guests are overwhelmingly both youth and middle aged (25-55). Regarding employment, majority of the foreign tourists are self-employed or running own enterprises. Providing all the tourism related information both online and offline assumes greater significance in Kerala as websites and tourism information centres remained top sources of information for the foreign tourists in the state. Although most guests are first time visitors, repeat visit category also has significant room in Kerala's international tourism. Share of repeat visitors in India was even bigger with over 40 per cent of the total. Food and accommodation remained major items of tourist expenditure in Kerala followed by transportation as huge amount of money was spent on these items compared to other items such as recreation and shopping. Culinary tourism remained a major segment of Kerala's international tourism as South Indian food especially Kerala food are preferred by many foreign tourists in the state. Level of satisfaction of the foreign tourists in the state was greater on quality of food consumed and accommodation units stayed. Lack of sufficient information outlets, absence of toilet facilities, absence of walkways, lack of proper maintenance, absence of drinking water facilities are identified as the major problems faced by foreign tourists in Kerala. It implies that the issue has been mainly infrastructural.

The present chapter extensively covered the trends and patterns of Kerala's international tourist arrivals in the past few decades. Moreover, socio-economic, demographic and perception-based characteristics of the foreign tourists in Kerala were also covered. It helps the readers understand the backdrop and relevance of both quantitative and qualitative analyses carried out on determinants of overseas tourist

arrivals in the state being reported in the subsequent chapters. More importantly, the features identified in the analysis on factors driving the trends and patterns of overseas tourist arrivals in Kerala can be explained by techniques applied in the following chapters.

Chapter 3

DESCRIPTIVE ANALYSIS ON FACTORS DRIVING KERALA'S INTERNATIONAL TOURISM DEMAND

CONTENTS

3.1. Introduction

3.2. Destination Based Variables

3.3. Origin Based Variables

3.4. Origin-cum-destination Based Variables

3.5. Conclusion

3.1. Introduction

The descriptive analysis is done with the variables that were used as potential determinants in various studies on tourism demand. Both continuous data and categorical data are used for analysing the factors driving foreign tourist arrivals in Kerala. A broad examination of the factors affecting Kerala's international tourism is done in a descriptive way. One-way ANOVA was also applied to measure mean differences between tourist arrivals and several relevant categories to alongside the descriptive analysis. The variables, which are used in this chapter, are grouped under three heads viz. destination based variables, origin based variables and origin-cum-destination based variables. The destination based variables that are exclusively related to Kerala include rainfall, natural calamities and air transport infrastructure. Origin based variables that are absolutely related to source markets such as income, internet usage, migrant stock, human development, global competitiveness, land area, size of population and global economic crisis. Availability of direct flights from and to the destination, air distance or air transportation cost, relative temperature, presence of Malayalee diaspora, bilateral relations, trade relations and nominal exchange rate are the variables that are related to both origin and destination in tandem.

3.2. Destination Based Variables

3.2.1. Rainfall and foreign tourist arrivals in Kerala

Kerala is a state where plenty of rainfall is receiving seasonally every year. It could hamper the free movement of tourists especially pleasure seeking tourists. It is found in the figure 2.3 that Kerala received larger share of its foreign tourist arrivals in the months of January, February, March, November and December on an average. Total of 59 per cent of the overseas tourist arrivals in the state overtime make their entry these 5 months when lowest rainfalls are registered in Kerala. Lowest overseas tourist arrivals were received in the months of May, June, July and September. Maximum rainfall was registered in the months of June (21.29 per cent) and July (18.85 per cent) on an average. May and September also witnessed heavy rainfall in the state during 2002-2019 period with the average monthly share of rainfall of 10.73% each. More specifically, top four months from December to March in terms of overseas tourist arrivals, received lowest monthly share of rainfall of nearly 1 per cent each. Rainfall of

Kerala is negatively correlated to the foreign tourist arrivals in the state with the coefficient of 0.5 and statistically significant at 1 per cent level. At the same time, domestic tourist arrivals in Kerala remained weakly correlated to rainfall with the coefficient of -0.14. It is only statistically significant at 5 per cent level. It shows rainfall makes stronger negative impact on the arrivals of overseas tourists than domestic tourists. (see Table 3.14., Appendix 1 & Appendix 6). This is in line with Alegre et al. (2011) who found significant relation of climate on tourist arrivals in Spain.

3.2.2. Natural calamities and foreign tourist arrivals in Kerala

Natural disasters were found space in the research on tourism demand according to Tang and Tan (2015). Vu & Turner (2006) and Rosello et al. (2020) used and established significant effect of natural disasters on the arrivals of tourists. Kerala witnessed landslides and floods that ravaged most districts due to incessant extremely heavy rainfall in back to back years in August 2018 and August 2019 and had to see number of people succumbed to the century's largest deluges in the state. Kerala economy faced severe loss owing to the damage to the public and private properties and loss of lives and livelihood. As per India Meteorological Department (IMD) data, Kerala received 2346.6 mm of rainfall from June 1 to August 19 2018 as against 1649.5 mm during the year before in the same period. The August 1-19 2018 rainfall was 164 per cent higher than the normal (reliefweb.int). Total of 339 humane, 40,188 large animals, 7,765 small animals and 0.75 million birds lost lives (Kerala Disaster Management Authority, 2018). In this context, Kerala's international tourism has had some losses as growth rate of foreign tourist arrivals in 2018 fell to mere 0.42 per cent as against over 5 per cent growth rates (5%-18%) in the previous 10 years (see Table 2.1). August-November footfalls slumped greatly in 2018 as compared to the same period arrivals in the previous year. December arrivals did not find new heights as well. Kerala had to face another flooding and rain ravage in August 2019 in which 121 people reportedly lost lives although it was not wider than the previous year's flooding. It concentrated in the northern Kerala where foreign tourist arrivals are not significant compared to central and southern Kerala. Showing no impact of flooding in the southern districts, foreign tourist arrivals registered new heights in the months of August-December 2019. Hence, it can be concluded that natural calamity in the form of flooding makes shorter but stronger impact on international tourism demand. Its impact,

however, was limited to the districts where the damage of the flooding was maximum. It did not spread to non-flood affected areas of the state. This is not perfectly complying with the significant effect identified by Vu & Turner (2006) and Rosello et al. (2020).

3.2.3. Air transport infrastructure and foreign tourist arrivals in Kerala

Cochin International Airport Limited (CIAL) started its commercial operations in June 1999 and soon became Kerala's busiest airport and Kerala's largest immigration check point. It is located in the Ernakulam district where largest foreign tourist arrivals take place among Kerala's 14 districts every year. The analysis on the role of CIAL in fuelling overseas tourist arrivals in the state could assume much relevance in light of its increased role in flight operations and locational features. Although Kerala witnessed massive arrivals of foreign tourists during 2000-2019 (period after the commencement of commercial operations of CIAL), average annual growth rate of foreign tourist arrivals of 2000-2019 period (9.56 per cent) was lower than that of 1986-1999 period (11.76 per cent). It looks Kerala starts slightly matures in the growth of overseas tourist arrivals. In view of the surged overall annual average arrivals of 0.655 million in the latter period compared to just 0.11 million in the former, the role of air transport infrastructure looks positive and stronger in driving foreign tourist arrivals in Kerala. It is found that foreign tourist arrivals have surged since 2000 after the commencement of commercial operations of the Cochin International Airport, Kochi. (see Table 3.1). This could go hand in hand with Harini (2015) and Thachil (2010) who argued that infrastructure especially air transport infrastructure has led to the growth of investment in supporting tourism infrastructure on the one hand and growth of tourist arrivals on the other. The significant role being played by CIAL in driving surged arrivals of foreign tourists was mentioned by a few stakeholders as well, as reported in chapter 6 (see Table 6.8 & Appendix 9).

Table 3.1. Foreign tourist arrivals (FTAs) in Kerala before and after starting commercial operations of CIAL, Cochin, Kerala

Average annual growth rate of FTAs in Kerala (%)		Average annual FTAs in Kerala ('000)	
1986-1999*	2000-2019**	1986-1999*	2000-2019**
11.76	9.56	110	655

Source: Author's calculations on the basis of data accessed from Kerala Tourism Statistics (various issues)

*1986-1999: The period before the commencement of the commercial operation of CIAL

**2000-2019: The period after the commencement of the commercial operation of CIAL; CIAL: Cochin International Airport Limited

3.3. Origin Based Variables

3.3.1. Income of the source markets and Kerala's international tourism

Categorical income of the source markets remains relevant in explaining Kerala's international tourism demand as great majority of the foreign tourists who arrive in Kerala are from the high income countries. Specifically, all origin countries in the list of top 15 source markets during 2002-2019 except Maldives, Russia and Malaysia were high income countries with the per capita of income of above $12,535 in 2019 as per the World Bank criterion. Maldives, Russia and Malaysia belong to the upper middle income category too and they were on the verge of upper middle and high income countries categories border line with the per capita income range of $10,600 – $12,000. Nearly 72 per cent of Kerala's foreign tourist arrivals during 2002-2019 were from the top 15 source markets (see Figure 2.5). All the top source markets except Russia, Malaysia and Maldives are high income economies. In light of this analysis, it is obvious that categorical income has played a major role in driving Kerala's overseas tourist arrivals. Having said that, income and Kerala's foreign tourist arrivals are not perfectly related as share of arrivals is not in line with strength of the economy. Moreover, continuous data on income remains just moderately correlated to the overseas tourist arrivals in the state (0.35) with the statistical significance at 1 per cent level. It is, however, revealed in the analysis that categorical income of the source markets is strongly related to Kerala's international tourism demand while quantitative income is mere moderately related. (see Tables 3.2 & 3.14).

Table 3.2. Average monthly share of top 15 source markets during 2002-2019 and income status

Source markets	UK	US	France	Germany	Saudi Arabia	Maldives	Australia	Italy	Russia	Canada	Malaysia	Oman	Switzerland	UAE	Netherlands
Share	18.4	8.7	8.4	7	4.12	3.6	3.45	2.62	2.53	2.4	2.3	2.27	2.2	2.1	1.9
Status	H	H	H	H	H	UM	H	H	UM	H	UM	H	H	H	H

Source: Author's calculation on the basis of data accessed from different issues of Kerala Tourism Statistics, Department of Tourism, Government of Kerala; World Bank

Note: Share: Average monthly share of foreign tourist arrivals in Kerala from top 15 source markets during 2002-2019

Status: Income status of the countries as per World Bank's criterion

H: High income country (per capita income above $12,535); UM: Upper middle income country (per capita income in $4,046 - $12,535 range)

The relevance of categorical income was also tested by one-way ANOVA and presented in tables 3.3 and 3.4. It shows that there exists some kind of relationship between income and Kerala's international tourism as there exists significance difference was found between groups as per one-way ANOVA result presented in table 3.3 (F= 6.044, p = .001). At the same time, the moderate effect found in the correlation analysis was confirmed by the presence of both significant and insignificant difference between group mean values. It is important to note that there exists significant differences for mean values of high income economies with all other economies as per the results shown in table 3.4. No significant mean difference could be found for the other economies with most of the income groups. It also implies that high income economies remain main markets for Kerala's international tourism. The findings are, however, not perfectly complying with the studies confirming the statistical significance of income in driving tourism demand positively (Deluna & Jeon, 2014; Uysal & Crompton, 1984; Gani & Clemes, 2017; Divisekara & Kulendran, 2006 and Zamparini et al., 2017). At the same time, it is important to observe that there are studies that have failed to confirm the statistical significance of income in driving the tourist arrivals positively (Shafiullah et al., 2019 and Naude & Saayman, 2005).

Table 3.3. ANOVA for income status of the source countries and foreign tourist arrivals in Kerala in 2019

Country-wise foreign tourist arrivals in Kerala (total) in 2019

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	7810356077.845	3	2603452025.948	6.044	.001
Within Groups	62030091033.047	144	430764521.063		
Total	69840447110.892	147			

Source: Author's estimation

Table 3.4. Multiple Comparisons: Post hoc test on income status and FTAs in Kerala (2019)

Dependent Variable: Country-wise foreign tourist arrivals in Kerala (total) in 2019

LSD

(I) Income status:	(J) Income status:	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.00 (High income)	2.00	13134.09915*	4225.69261	.002	4781.7005	21486.4978
	3.00	16115.42067*	4663.18822	.001	6898.2791	25332.5622
	4.00	17204.28745*	5563.78918	.002	6207.0405	28201.5344
2.00 (Upper middle income)	1.00	-13134.09915*	4225.69261	.002	-21486.4978	-4781.7005
	3.00	2981.32153	4799.36831	.535	-6504.9902	12467.6333
	4.00	4070.18830	5678.41191	.475	-7153.6191	15293.9957
3.00 (Lower middle income)	1.00	-16115.42067*	4663.18822	.001	-25332.5622	-6898.2791
	2.00	-2981.32153	4799.36831	.535	-12467.6333	6504.9902
	4.00	1088.86678	6011.09043	.857	-10792.5047	12970.2382
4.00 (low income)	1.00	-17204.28745*	5563.78918	.002	-28201.5344	-6207.0405
	2.00	-4070.18830	5678.41191	.475	-15293.9957	7153.6191
	3.00	-1088.86678	6011.09043	.857	-12970.2382	10792.5047

*. The mean difference is significant at the 0.05 level.

Source: Author's estimation

3.3.2. Internet usage of the source markets and Kerala's international tourism

The role of internet usage should be acknowledged in the recent period tourism as travel and accommodation related bookings and wide range of tourism related information seems to have powered massive arrivals of tourists especially international tourists (Naude & Saayman, 2005 and Garin-Munoz & Amaral, 2011). Surprisingly, this is found partially right and partially wrong. At least a part of the effect that the internet has made on the tourist arrivals could be just transformational as people started using internet for travel related purpose when the internet became popular substituting other modes of booking tourism-related services and accessing tourism information. It must be read along with the fact that tourist arrivals actively prevailed and tourism destinations actively remained even before the invention of internet. However, no one can deny the role played by the growth and universalisation of internet in the 21st century in surging the international travel across the world. Growth of Kerala's international tourism can be only partially accounted for growth of internet. Kerala's case is also not an exception. It is found that, internet usage of source markets and arrivals of tourists in Kerala from those markets are merely moderately correlated (0.31) with the statistical significance at 1 per cent level (see Table 3.14). As per the scatter plot and fit line drawn between the two variables, merely 10 per cent of Kerala's country-wise foreign tourist arrivals in 2019 can be explained by percentage of people using internet (see Figure 3.1). However, it does not mean internet has had no impact on Kerala's international tourism. It only means tourist arrivals in Kerala from the source markets are not in line with the percentage of people using internet. Internet could power travel related bookings and help access tourism information for sure (Naude & Saayman, 2005 and Garin-Munoz and Amaral, 2011).
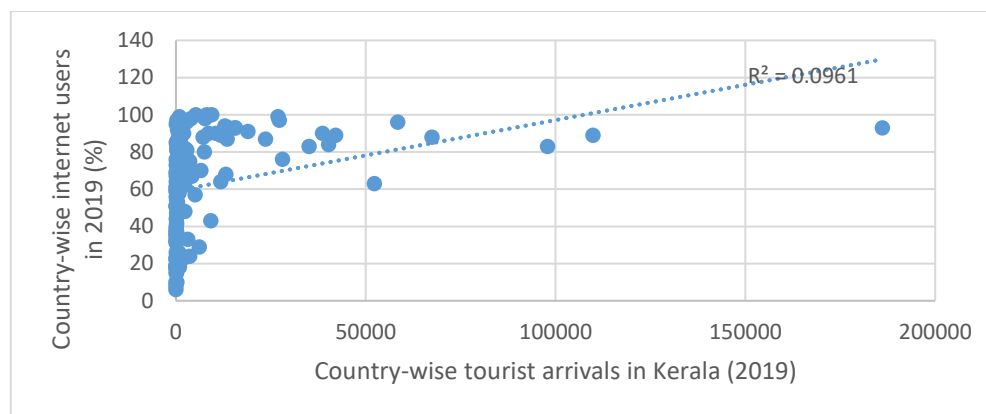
Figure 3.1. Trend-line and scatter plot of country-wise tourist arrivals in Kerala and percentage of internet users in 2019

Source: Author's calculation on the basis of data on internet users (World Bank, 2022b) and tourist arrivals (Department of Tourism, 2022)

3.3.3. Human development of the source markets

As against the expectation, human development of the source markets was nearly not correlated with the foreign tourist arrivals in Kerala (r: -.02 with no statistical significance) as per data shown in table 3.14. However, some relation was found between the two as per one-way ANOVA run on HDI categories and country-wise arrivals of tourists in Kerala in 2019. The F statistic of the change between the mean values of at least two groups remain statistically significant at 1 per cent level (F = 5.741, p = .000; see Table 3.5). The true story of the mean differences between the groups is clear from table 3.6. It is found that there exists significant mean difference for the very high HDI category countries with other three categories. The same is not true for other categories as there exists no significant mean difference for the categories other than very high HDI category. It implies that mean difference between very high HDI category nations and other categories remains statistically significant. This is closely in line the effect with income status of the source markets. This is partially due to the methodological structure of HDI as income is one of the three components. The effect of human development, thus, has become limited at least in Kerala's case. It does not perfectly fall in line with Alegre and Pou (2004). However, it is true that source markets of Kerala's international tourism have been mainly the countries with high human development.

Table 3.5. ANOVA on human development indices and country-wise foreign tourist arrivals in Kerala (2019)

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	7504664128.752	3	2501554709.584	5.741	.001
Within Groups	62309074591.384	143	435727794.345		
Total	69813738720.136	146			

Source: Author's estimates

Table 3.6. Multiple Comparisons: Post hoc test on HDI and FTAs in Kerala (2019)

Dependent Variable: FTAs in Kerala in 2019

LSD

(I) HDI of the source countries in 2019	(J) HDI of the source countries in 2019	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
.8 and above (Very high HDI)	.7-.799	12313.21613*	4413.30185	.006	3589.4768	21036.9555
	.55-.699	15387.57613*	4945.39982	.002	5612.0429	25163.1094
	below .55	15821.89613*	4945.39982	.002	6046.3629	25597.4294
.7-.799 (High HDI)	.8 and above	-12313.21613*	4413.30185	.006	-21036.9555	-3589.4768
	.55-.699	3074.36000	5466.12087	.575	-7730.4785	13879.1985
	below .55	3508.68000	5466.12087	.522	-7296.1585	14313.5185
.55-.699 (Medium HDI)	.8 and above	-15387.57613*	4945.39982	.002	-25163.1094	-5612.0429
	.7-.799	-3074.36000	5466.12087	.575	-13879.1985	7730.4785
	below .55	434.32000	5904.08533	.941	-11236.2394	12104.8794
below .55 (low HDI)	.8 and above	-15821.89613*	4945.39982	.002	-25597.4294	-6046.3629
	.7-.799	-3508.68000	5466.12087	.522	-14313.5185	7296.1585
	.55-.699	-434.32000	5904.08533	.941	-12104.8794	11236.2394

*. The mean difference is significant at the 0.05 level.

Source: Author's estimates

3.3.4. Global competitiveness of the source markets

Global competitiveness of the origin markets of Kerala's international tourism has been found responsible for the tourist arrivals in the state. Global competitiveness has been measured by World Economic Forum (WEF) on the basis of 12 pillars viz. institution, infrastructure, ICT adoption, macroeconomic stability, health, skills, product market, labour market, financial system, market size; business dynamism; and innovation capability. Some of them are seemingly direct potential determinants while something

else could have only indirect effect. Categorical data on overall global competitiveness of the origin countries makes phenomenal effect on the overseas tourist arrivals in Kerala. Average global competitiveness score of top 15 source markets in 2019 was 75.3 while it is 67.89 for intermediate markets and 55.4 for the smaller markets. This strong impact is, however, not confirmed by the limited effect created by the continuous data on competitiveness score and tourist arrivals. Correlation coefficient of just 0.42 reveals the milder but positive effect of global competitiveness of the source countries on the foreign tourist arrivals in Kerala (see Table 3.14). Categorical data on global competitiveness also makes some sense in affecting the foreign tourist arrivals in the state (see Table 3.7).

Table 3.7. Global competitiveness (GC) of source markets of Kerala's international tourism

Top 15 markets*		Intermediate markets**		Smaller markets***	
Country	**GC Score**	**Country**	**GC Score**	**Country**	**GC Score**
UK	81.6	Kuwait	63.6	Afghanistan	NA
US	84.7	Philippines	62.05	Algeria	55.05
France	78.4	New Zealand	77.1	Cameroon	45.55
Germany	82.3	Bahrain	64.55	Colombia	62.15
Saudi Arabia	68.625	Denmark	80.9	Ethiopia	44.35
Maldives	NA	Poland	68.55	Ghana	51.25
Australia	78.75	Austria	76.45	Hong Kong	82.6
Italy	71.1	Ukraine	57.2	Iraq	NA
Russia	66.15	Sri Lanka	56.55	Macedonia	56.95
Canada	79.75	Qatar	71.95	Malawi	43.05
Malaysia	74.5			Myanmar	NA
Oman	63.2			Nigeria	47.9
Israel	76.65			Peru	61.5
UAE	74.2			Seychelles	59.05
Spain	74.75			Sudan	NA
				Trinidad and Tobago	58.1
				Uganda	47.85
				Uzbekistan	NA
				Zambia	46.25
Average	75.3		67.89		55.4

Source: Global Competitiveness Report 2019 published by World Economic Forum
*Top 15 markets: Top 15 origin countries of FTAs in Kerala in 2018 and 2019
**Intermediate markets: Origin countries contributing 5000-10000 tourists to Kerala in 2018 and 2019
***Smaller markets: Origin countries contributing 100-1000 tourists to Kerala in 2018 and 2019 and with the population of at least 10 million

3.3.5. Land area of the source markets

Being a potential determinant of market size, land area could drive more tourist arrivals in Kerala from the larger countries in terms of land area (Samuelson and Nordhaus, 2002). It is found that only a few nations are notably bigger in size. The US, Saudi Arabia, Australia, Russia and Canada are geographically larger and constitute 21 per cent of average annual FTAs in Kerala during 2002-2019. It should be noted here that 51 per cent of Kerala's average FTAs is contributed by other top source markets in the list of top 15 that are geographically smaller (below 0.6 million sq km as per the data accessed from World Bank (2020f). It is clear from the correlation analysis that geographical size has not been a factor driving Kerala's international tourism demand. It was just 0.266 with the statistical significance at 1 per cent level (see Table 3.14). However, it was positively related to Kerala's international tourism demand. It indicates that both are merely mildly related and fully fall in line with Samuelson and Nordhaus (2002).

3.3.6. Population of the source markets

Size of population, being another potential determinant of market size could drive more arrivals of tourists from populous countries (Samuelson & Nordhaus, 2002 and Song & Turner, 2006). Smaller population of top source markets of Kerala tourism including Maldives, Australia, Oman, Israel and UAE (below 25 million) and larger population of some other top source countries like the US, the UK, France, Germany and Russia (above 67 million) show the irrelevance of population in driving Kerala's foreign tourist arrivals. At the same time, Kerala tourism's smaller markets of Nigeria, Myanmar, Ethiopia and Colombia are larger in terms of population, with above 50 million (World Bank, 2020g). It was, however, found that population has nothing to do with Kerala's international tourist arrivals as the coefficient of correlation was nearly zero (0.14). (see Table 3.14). Like land area, size of population also remains irrelevant while explaining foreign tourist arrivals in Kerala as against the theoretical presumption of Samuelson and Nordhaus (2002).

3.3.7. Global economic crisis

Global economic meltdown during 2008-2009 resulted in the reduced tourist arrivals in Kerala and India in 2009 just like the fall in tourist arrivals across the world. Impact on Kerala was deeper when compared to India as Kerala witnessed 7 per cent fall in arrivals of overseas tourists (0.599 million in 2008 to 0.557 million as per Kerala Tourist Statistics) while India registered a milder negative 2 per cent growth rate (5.28 million in 2008 to 5.17 million as per India Tourist Statistics). Global international tourism demand was also severely affected in 2009. World's total foreign tourist arrivals plummeted by nearly 4 per cent as per World Bank's data. As per the data accessed from World Bank (2022d), global tourism witnessed a rare case of shortfall of 60.1 million tourists in 2009 owing to the global economic crisis. 1.663 billion tourist arrivals in 2008 fell to 1.602 billion in 2009. International tourism expenditure plummeted by $100 billion from $1080 billion in 2008 to $980 billion in 2009 (World Bank, 2022c). This negative association between international tourism demand and global economic crisis reflects the positive role of income and employment in effecting the demand for tourism. This is in line with several studies done on effect of economic crisis on international tourism demand reviewed by Tang and Tan (2015). However, the impact of global economic crisis on the tourist arrivals was not long lasting as the number of arrivals of tourists resurged to pre-crisis level and beyond after 2009.

3.4. Origin-cum-destination Based Variables

3.4.1. Availability of direct flights and foreign tourist arrivals in Kerala

Availability of direct flights between the source markets and destination could make the travel easy and reality. Tourist arrivals could then be maximum as well. In line with this presumption, all the top source markets of Kerala's international tourism have had direct flight operations with India in 2018 and 2019 while only four out of fourteen smaller markets had the same. Six out of ten intermediate markets operated direct flights to and from India at the same time. Nearly 90 per cent of overseas tourist arrivals in Kerala in 2017 were from the origin countries with which India had direct flight operations. (see Tables 3.8 and 3.9). Availability of direct flights between origin countries and destination acted as a factor driving overseas tourist arrivals in Kerala. This could go hand in hand with Cetin et al. (2016) who found significant tourist arrivals in Turkey with the commencement of direct flights by Turkish Airlines with

several countries. Arranging direct flights to potential source countries is not practical and economical always. It requires either minimum number of regular visitors from and to the destination country or presence of diaspora in destination country or source country. It can be observed that India operated direct flights to the developed/high income countries, neighbouring countries or countries with which India maintained better bilateral relation (Ministry of External Affairs, 2020). The developed/high income countries, where India operated direct flights, are home to huge Indian diaspora as well (Ministry of External Affairs, 2023).

Table 3.8. Direct flight operation between origin countries and India during 2018 and 2019

Top 15 markets*		Intermediate markets**		Smaller markets***	
Country	Yes/No	Country	Yes/No	Country	Yes/No
UK	Yes	Kuwait	Yes	Afghanistan	Yes
US	Yes	Philippines	No	Algeria	No
France	Yes	New Zealand	No	Cameroon	No
Germany	Yes	Bahrain	Yes	Colombia	No
Saudi Arabia	Yes	Denmark	Yes	Ethiopia	No
Maldives	Yes	Poland	No	Ghana	No
Australia	Yes	Austria	Yes	Hong Kong	Yes
Italy	Yes	Ukraine	No	Iraq	Yes
Russia	Yes	Sri Lanka	Yes	Macedonia	No
Canada	Yes	Qatar	Yes	Malawi	No
Malaysia	Yes			Myanmar	Yes
Oman	Yes			Nigeria	No
Israel	Yes			Peru	No
UAE	Yes			Seychelles	No
Spain	Yes			Sudan	No
				Trinidad and Tobago	No
				Uganda	No
				Uzbekistan	No
				Zambia	No
	15/15		6/10		4/14

Source: Response from Air India on RTI query regarding direct flight operations
*Top 15 markets: Top 15 origin countries of FTAs in Kerala in 2018 and 2019
**Intermediate markets: Origin countries contributing 5000-10000 tourists to Kerala in 2018 and 2019
***Smaller markets: Origin countries contributing 100-1000 tourists to Kerala in 2018 and 2019 and with the population of at least 10 million

Table 3.9. Tourist arrivals in Kerala from the designated countries having direct flight with India in 2018 and its share of total arrivals

Tourist arrivals in Kerala from the designated countries	Overall foreign tourist arrivals in Kerala	Share (%)
965,845	1096407	88.09

Source: Author's calculation on the basis of data collected from Kerala Tourist Statistics and RTI response from Air India

3.4.2. Air distance/air transportation cost and foreign tourist arrivals in Kerala

Transportation cost measured by air distance has surprisingly nothing to do with overseas tourist arrivals in the state. This is the generalization reached in the cross sectional correlation between air transportation cost measured by air distance and Kerala's international tourist arrivals. With the correlation coefficient of nearly zero (-.06), Kerala's foreign tourist arrivals are seemingly independent of air transportation cost or air distance (see Table 3.14). However, the estimate was not even statistically significant at 10 per cent level. Arrivals from several neighbouring countries were even below 1,000 in 2019 while over 52,000 tourists had arrived from the nearby Maldives and nearly 12,000 tourists from China. At the same time, although far away Latin American nations had negligible share of Kerala's overseas tourist arrivals (below 300), the US and Canada belonged to top source markets of Kerala's international tourism with the arrivals of 109,859 and 27,228 tourists respectively as per the data accessed from Kerala Tourist Statistics (Department of Tourism, 2022). Brazil had a decent share of 3,116 at the same time. Mexico and Argentina are the other major source markets with around 1,900 tourists each. It is clear from the data that both categories of faraway markets and neighbouring source markets had both massive share on one side and scant share on the other in Kerala's tourist arrivals. Some major source markets are the neighbouring countries while some others are faraway nations. It does not have a clear pattern in terms of mere air distance between source markets and destination in case of Kerala's international tourism. However, it is found that all far away nations sending tourists to Kerala in large volume are high income and advanced economies. The US, Canada, Australia, New Zealand and several European nations are the examples. This is compliance to 'gravity' in international tourism. It implies that no clear pattern was identified in terms of foreign tourist arrivals in Kerala by air distance. Air transportation

cost measured by air distance remains irrelevant to explain overseas tourist arrivals in Kerala as against several studies (Dhariwal, 2005; Algieri, 2006; Divisekara & Kulendran, 2006; Sharma, 2016; Song et al., 2003; Masiero & Nicolau, 2012; Malec & Abrham, 2016 and Roget & Gozalez, 2006). The similar is the case for Kerala's top 15 source markets too. Only four nations, that are relatively close to Kerala (within 3,000 km) are included in the list viz Malaysia, Oman, the UAE and Maldives. The relatively far away nations (above 7,000 km) such as the UK, the US, France, Germany, Australia, Italy, Canada and Spain had almost 50 per cent share of total Kerala's overseas tourist arrivals overall in 2019. So to say, only distance will not be a barrier for the entry of overseas tourists. Geographical closeness only will not drive the overseas tourist arrivals either. (Department of Tourism, 2022 & https://www.distance.to/, 2020).

3.4.3. Relative Temperature and foreign tourist arrivals in Kerala

Winter season across the top source markets of Kerala's international tourism especially the Western world where extreme cold weather is common in the winter are found to be a factor driving tourist arrivals in Kerala. Kerala received massive arrivals from the top 5 source markets in the months of November, December, January, February and March during 2002 to 2019. Average low temperature is minimum in all the top five origin markets these months. It is even around zero during December, January and February. Average monthly share of the top five markets is maximum these months too. So to speak, winter season of the Western nations happened to be peak season of Kerala's international tourism. Kerala's lowest but still comfortable and stable temperature while Europe and North America experience arctic weather during December, January and February helped attract arrivals of overseas tourists in the state in greater volume. Source markets' lowest temperature during December-February coupled with Kerala's comfortable and stable temperature maximised overseas tourist arrivals in the same months during 2002-2019. Kerala received nearly 40 per cent of the overall tourist arrivals in the months of December, January and February when average low temperature in the top five origin markets is minimum. At the same time, May, June, July and September witnessed lowest overseas tourist footfalls with just 18 per cent as a whole on an average during 2002 to 2019. The average low temperature is maximum in the same months as well in the top five source markets too. (see Table 3.10 & Appendix 6). Apart from this, serial correlation analysis found that there exists high negative correlation (-0.5) between relative temperature (Europe's & North America's

temperature / Kerala's temperature) and overseas tourist arrivals in Kerala. It shows that lower the relative temperature, higher the tourist arrivals in the state from the advanced economies in the West and vice versa (see Tables 3.10 & 3.14). At the same time, guests from Saudi Arabia mostly arrive during Kerala's Monsoon period according to stakeholder analysis adopted in chapter 6 of this thesis. Saudi guests turn out largely in Kerala when they experience hot climate during May to September period. The result is exactly in line with Salman et al. (2021) who found beautiful weather attracted thousands of visitors to Penang Hill in Malaysia every year.

Table 3.10. Average low temperature (^{0}C) in the capital cities of top five source markets and monthly average share of overall foreign tourist arrivals in Kerala

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
A	3	3	4	6	9	12	14	14	12	9	6	3
B	-2	-1	3	8	14	19	22	21	17	10	6	0
C	2.7	2.8	5.3	7.3	10.9	13.8	15.8	15.7	12.7	9.6	5.8	3.4
D	-3	-2	0	4	8	12	13	13	10	6	2	-1
E	9	11	15	20	25	27	28	28	25	20	15	10
*	**13.59**	**13.07**	**10.01**	**7.49**	**4.13**	**3.63**	**5.6**	**7.08**	**5.53**	**7.53**	**9.93**	**12.4**

Source: www.holiday-weather.com (2021, July 04)

A=UK; B=US; C=France; D=Germany & E=Saudi Arabia

*Average monthly share of overall foreign tourist arrivals in Kerala from 2002 to 2019 in percentage

3.4.4. Presence of Malayalee diaspora

Kerala's expatriates in different countries especially in the Middle East and English-speaking countries have created some positive impact on foreign tourist arrivals in Kerala. This is clear from the data shown in table 3.11 that 1.6 out of 2.1 million Malayalee expatriates in 2018 were from eight of top 12 source markets of Kerala's international tourism. So to speak, great majority of foreign tourist arrivals in Kerala were from the nations where stock of Malayalee expatriates is bigger. However, foreign tourist arrivals are not perfectly in line with the stock of Malayalee expatriates. While the high income economies of the Middle East had the bigger share of Malayalee expatriates on an aggregate basis and relatively lower share of tourist arrivals, English speaking nations especially the UK and the US had relatively lower share of expatriates and bigger share of tourist arrivals when compared to each other. One thing is clear, however; tourists arrive in Kerala in large number from the nations where the number

of Malayalee expatriates is significant. It could comply with Shafiulla et al. (2019) who found that migration has had significant effect on international tourism demand. At the same time, this is not a perfect determinant in effecting tourist arrivals as France and Germany had greater share in arrivals but insignificant share of Malayalee diaspora as per Kerala Migration Survey 2018 (Rajan & Zachariah, 2019). Similarly, the UAE, the twelfth nation in the list of top source markets had massive share of Malayalee diaspora with half of designated 1.6 million Malayalee population abroad in 2018.

Table 3.11. Malayalee population in top 12 source markets of Kerala's international tourism in 2018

Top 12 source markets	Malayalee population
UK	38023
US	46535
France	NA
Germany	NA
Saudi Arabia	487484
Oman	182168
Maldives	6243
Australia	30078
Russia	NA
Malaysia	NA
Canada	15323
UAE	830254
Total	**1,636,108**

Source: Rajan & Zachariah (2019) and Department of Tourism, Government of Kerala (2022)

NA: Not available

3.4.5. Bilateral relations

ANOVA result presented in table 3.13 shows that there exists mean difference between some groups categorised on the basis of number of mutual visits by the state heads of India and the source countries of Kerala's international tourism. This is proved by significant F statistic (F = 7.408 and p = .001). At the same time, there exists significant mean difference only for lowest visit countries category compared to other categories of mutual bilateral visits. No significant difference was found for the mean difference among higher visited countries categories. It implies that main markets of Kerala's international tourism are the ones that belong to higher visited categories (5-9 visits; 9-14 visits and 15 visits and above). No significant mean difference was found among those categories. But the fact is that lowest visited countries remained smaller markets of Kerala's international tourism (see Table 3.13). It was also clear from the data

accessed from the Ministry of External Affairs, GoI (2020) that India maintained warm and active bilateral relation with Kerala tourism's top source markets when compared to intermediate markets and smaller markets. Sri Lanka and Afghanistan (under non-Taliban rule) with active bilateral relation with India were the only exceptions among the intermediate markets. The visits of state heads of Kerala's top source markets especially the US, France, Germany and Russia to India and Indian President's/Prime Minister's visit to each of these countries have crossed 10 in total during 2002-2019. The UK, Maldives, Australia, Malaysia, the UAE, Saudi Arabia and Canada had also considerable number of visits by state heads to and from India among the top source markets. Myanmar and Uganda, among the smaller markets of Kerala's international tourism have made decent relation with India with the mutual state-head visits of 5 and 4 respectively during the period. Generally, the top source markets for Kerala's international tourism have maintained warm relations with India and have actively fostered bilateral ties over the past two decades. In contrast, intermediate and smaller markets have generally had weaker bilateral relations with India, with Afghanistan, Sri Lanka, and Myanmar being the exceptions. Although not perfectly related, India maintained warmer and better relation with the main source countries in line with Minardi et al. (2020) and Palerea & Sengupta (2017).

Table 3.12. ANOVA on bilateral visits by state heads to and from India and foreign tourist arrivals in Kerala in 2019

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	20668038851.262	3	6889346283.754	7.408	.001
Within Groups	35337850026.857	38	929943421.759		
Total	56005888878.119	41			

Source: Author's estimates

Table 3.13. Multiple Comparisons of post hoc test on bilateral visits by state heads to and from India and foreign tourist arrivals in Kerala in 2019

Dependent Variable: FTAsKL

LSD

(I) visit_cate (category on the basis of number of visits)	(J) visit_cate	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Below 5	5-9	-47610.82143[*]	12225.18682	.000	-72359.4183	-22862.2246
	10-14	-45424.57143[*]	22320.03530	.049	-90609.1206	-240.0222
	15 and above	-46735.57143[*]	16300.24909	.007	-79733.7006	-13737.4423
5-9	Below 5	47610.82143[*]	12225.18682	.000	22862.2246	72359.4183
	10-14	2186.25000	24108.39353	.928	-46618.6412	50991.1412
	15 and above	875.25000	18674.28133	.963	-36928.8561	38679.3561
10-14	Below 5	45424.57143[*]	22320.03530	.049	240.0222	90609.1206
	5-9	-2186.25000	24108.39353	.928	-50991.1412	46618.6412
	15 and above	-1311.00000	26409.42192	.961	-54774.0796	52152.0796
15 and above	Below 5	46735.57143[*]	16300.24909	.007	13737.4423	79733.7006
	5-9	-875.25000	18674.28133	.963	-38679.3561	36928.8561
	10-14	1311.00000	26409.42192	.961	-52152.0796	54774.0796

*. The mean difference is significant at the 0.05 level.
Source: Author's estimates on the basis of data regarding outgoing visits and incoming visits: Ministry of External Affairs, Government of India

3.4.6. Trade relations of the source markets with India

Trade volume is positively correlated to the country-wise tourist arrivals in Kerala in 2019. It implies that higher the trade volume with India, higher the tourist arrivals in Kerala from the respective country. However, it was only moderately correlated with the coefficient of .44 with the statistical significance at 1 per cent level (see Table 3.14). Top source markets of Kerala's international tourism remained India's main trade partners too. As per the data accessed from the Ministry of Commerce, GoI (2022), India has made the trade transactions of minimum of $10 billion in 2019 with each 9 of Kerala's top 15 source markets. Seven of the 9 such source markets have been involved in minimum of $15 billion trade transaction each with India. The US, UAE, Saudi Arabia, Germany, Malaysia, the UK, Australia are those major trade partners. Among the intermediate source markets, only Qatar have made the trade transaction of above

$10 billion with India. Kuwait and Sri Lanka were the other main trade partners of India in the list of intermediate markets with the transaction of above $5 billion. All other 7 intermediate source markets of Kerala's international tourism are India's minor trade partners with the transaction of mere $1 – 3 billion in 2018-19. Contrary to the common presumption, tourist arrivals in Kerala from India's main trade partners like Hong Kong, Iraq and Nigeria remained just nominal as per the data accessed from Ministry of Commerce, GoI, (2022). It is obvious that trade volume has been positively but only moderately related to the foreign tourist arrivals in Kerala. The results are, however, not against Dhariwal (2005) who found that foreign tourist arrivals surged in India when its economy was opened up to the outer world alongside the new economic policy.

3.4.7. Nominal exchange rate

It is obvious that India's nominal exchange rate has depreciated and Kerala's foreign tourist arrivals have increased overtime. Exchange rate of Indian Rupee (INR) in terms of US Dollar (USD) was 48.61 in 2002 on an average hiked to 70.39 in 2019 with varied rates of growth (BookMyForex.com, 2020). However, there are situations in which tourist arrivals increased even when Indian Rupee appreciated against US Dollar. In line with the general presumption, nominal exchange rate of Indian Rupee in terms of US Dollar was highly correlated to foreign tourist arrivals in Kerala (.6) with the statistical significance at 1 per cent level (see Table 3.14). In line with Sharma and Pal (2021) and Xie (2020), the overall depreciation of Indian Rupee against US Dollar has made India's international tourism more competitive and so is India's export of tourism. At the same time, Xie (2020) was unable to establish significant relation between the two variables in the case of Japan.

Hypothesis testing result: Among the economic determinants, income and trade were moderately but significantly related to foreign tourist arrivals in Kerala while international tourism expenditure and nominal exchange rate were strongly and significantly related. Null hypotheses of no relations of these variables were rejected in light of this correlation analysis. However, another economic determinant air transportation cost (measured by air distance) was not related to Kerala's tourism demand and no significance was found either. Semi or non-economic variables viz. migrant stock, rainfall and relative temperature were strongly and significantly related. Other such variables such as internet, land area and global competitiveness were

moderately bu significantly related. Null hypotheses on no bivariate relation between each of these variables with tourist arrivals in Kerala get rejected as they are statistically significant no matter how strongly they are related. Among the semi or non-economic variables, population and human development were nearly not related and statistically insignificant. The results show that there are some variables belonging to all three categories of variables with statistical significance. Among the three categories, origin-cum-destination based variables stay dominant with most significantly related variables. The null hypothesis of no relation can be rejected as significant effect was found at least on a few among all the three variables categories.

Table 3.14. Correlation between foreign tourist arrivals in Kerala and economic, climatic & tourism related variables

Variable	r	Sig.(1-tailed)	N	Mean	Std. Deviation
FTAsKL*			148	7707.5270	21796.90534
GDPpc	.35	.000	148	24015.1041	22791.55134
Airtrcost	-.06	.241	148	7938.4819	4420.29686
Internet	.31	.000	148	62.1284	26.68518
Ppn	.14	.047	148	40154.2390	124343.14848
Land	.266	.001	148	21796.90534	3186433.638
HDI	-.02	.424	148	5.9036	62.82199
Trade	.44	.000	148	5836.0561	13026.92212
ITE	.68	.000	148	8200.7957	19654.30998
GCI	.42	.000	127		
FTAsKL**			216	58709.1574	35710.39556
Rainfall	-.5	.000	216	253.1310	246.80189
RelTemp	-.5	.000	216	.3366	.23319
Exchg	.6	.000	216	53.5279	9.97668
DTAsKL***			216	253.1310	246.80189
Rainfall	-.14	.021	216	817895.8	334646.8365

* Foreign tourist arrivals from 148 countries in Kerala in 2019 (total); **Monthly foreign tourist arrivals in Kerala during Jan 2002 to Dec 2019 (total); ***Domestic tourist arrivals in Kerala (total); r: Pearson correlation coefficient

GDPpc: GDP per capita on PPP basis ($); Airtrcost: Air transportation cost proxied by air distance between Kochi and origin country's capital (km); Migrant: migrant stock of the origin countries (total); internet: % of internet usage of the origin countries; ppn: Size of population ('000); land: Land area of the origin countries (sq km); HDI: human development index; trade: trade volume of origin countries with India in 2018-19 ($ million); ITE: international tourism expenditure of the origin countries ($ million); GCI: global competitiveness index; FTAsIND: Foreign tourist arrivals in India in '000 (Jan 02-Dec 19); rainfall: Rainfall in Kerala proxied by rainfall in Kochi (mm); RelTemp: Relative temperature (Europe's and North America's average monthly temperature/Kerala's temperature); exchg: Nominal exchange rate (USD/₹) & DTAsKL: Domestic tourist arrivals in Kerala

Table 3.15. Summary of effects of variables on foreign tourist arrivals in Kerala

	Strongly related	Moderately related	Weakly related	Not related
Origin based variables	(NIL)	Income; Global competitiveness; Global economic crisis	Internet; Land area	Human development; Population
Destination based variables	Rainfall; Air transport infrastructure	Natural calamities	(NIL)	(NIL)
Origin-cum-destination based variables	Availability of direct flights; Relative temperature; Presence of Malayalee diaspora; Nominal exchange rate	Bilateral relation; Trade relation	(NIL)	Air distance

Source: Author's calculation

3.5. Conclusion

Out of the 17 variables that were used in the descriptive analysis on determinants of foreign tourist arrivals in Kerala, six were found to be strongly related, six were moderately related and two were weakly related and three were not related at all. Of the six strongly related variables, two variables such as rainfall and air transport infrastructure belong to destination based variables category. Origin-cum-destination based variables have also been vital in driving foreign tourist arrivals in Kerala as four variables in this category were strongly related to the tourist arrivals. Availability of direct flights, relative temperature, presence of Malayalee diaspora and nominal exchange rate were those variables. It is obvious from the analysis that destination based variables and origin-cum-destination based variables are more relevant to Kerala's international tourism when compared to origin based variables. Origin based variables are either moderately related or less related to the foreign tourist arrivals in the state.

It is important to note that income remained just moderately related to Kerala's international tourism. However, categorical data on income has been highly related to it as all top 15 source markets except 3 remained high income countries. The rest 3 origin countries belong to upper middle income country category. More importantly, there exists significant mean difference on tourist arrivals from high income economies when

compared to economies belonging to other categories. There has not been any significant mean difference among categories other than high income economies. At the same time, air transportation cost measured by air distance between source countries and Kerala remained irrelevant to Kerala's international tourism as air distance does not have any clear pattern in sending the tourists to Kerala. Internet usage, land area, size of population and human development are the other weakly related or non-related factors in affecting overseas tourist arrivals in Kerala. The descriptive analysis applied in this chapter cannot not make a comprehensive view and unable to suggest a conclusive finality on international tourism of Kerala. Econometric approaches were adopted in the next two chapters to estimate Kerala's international tourism demand and explain the factors driving the overseas tourist arrivals in Kerala.

Chapter 4

KERALA'S INTERNATIONAL TOURISM DEMAND: ARDL AND LINEAR REGRESSION ESTIMATIONS

CONTENTS

4.1. Introduction

It is crucial to identify the factors influencing foreign tourist arrivals in Kerala, given that the state relies significantly on international tourism compared to many other states in the country. It is clear from chapter 2 that Kerala enjoys a notable position among other Indian states in terms of number and growth of arrivals of overseas visitors. It is understood from chapter 3 that there are variables that are highly related while several other variables are moderately related or less relevant in explaining Kerala's international tourism. The achievement made by Kerala in terms of international tourism is, however, yet to be saturated as larger part of the state remains hugely non-visited by the foreign tourists which is also described in the previous chapter. Identifying the factors driving foreign tourist arrivals could throw light on the problems and prospects associated with Kerala's international tourism. The present chapter makes an attempt to develop ARDL (Autoregressive distributed lag) model on overall foreign tourist arrivals in Kerala (from Jan 2002 to Dec 2019) and CLRM (Classical linear regression model) on country-wise arrivals of tourists in Kerala in 2019.

4.2. Month-wise trend of Kerala's foreign tourist arrivals (Jan 2002 to Dec 2019)

Before entering the time series regression analysis, the line diagram showing the month-wise foreign tourist arrivals in Kerala could help the readers understand quickly the trend and immensity of Kerala's international tourist arrivals. Although it is well known that Kerala witnessed steady growth of foreign tourist arrivals for the past few decades, year-wise and month-wise data give us a different picture. Seasonality and trend are represented in figure 4.1 on month-wise data while only trend is represented in figure 2.1 on annual data on foreign tourist arrivals in Kerala. The month-wise data exhibited in figure 4.1 reveals seasonal ups and downs with varied growth rates are complying with the data presented in table 2.3 which shows that around 60 per cent of Kerala's foreign tourists who arrive in the months of January, February, March, November and December of each year on an average. The months of May, June and July see lowest footfalls of overseas tourists with overall share of mere 13 per cent on an average. However, foreign tourist arrivals in the state show an overall upward trend. While seasonal time of tourist arrivals since 2002 (November-March) reaches the peak of around 40,000-80,000 per month before 2010, post 2010 sees monthly footfalls grew

to 100,000-160,000 per month in the same period (see Figure 4.1 & Appendix 1). At the same time, in line with similar growth, offseason arrivals (May-July) were around 10,000-20,000 before 2010 and 20,000-40,000 in the post 2010 period.
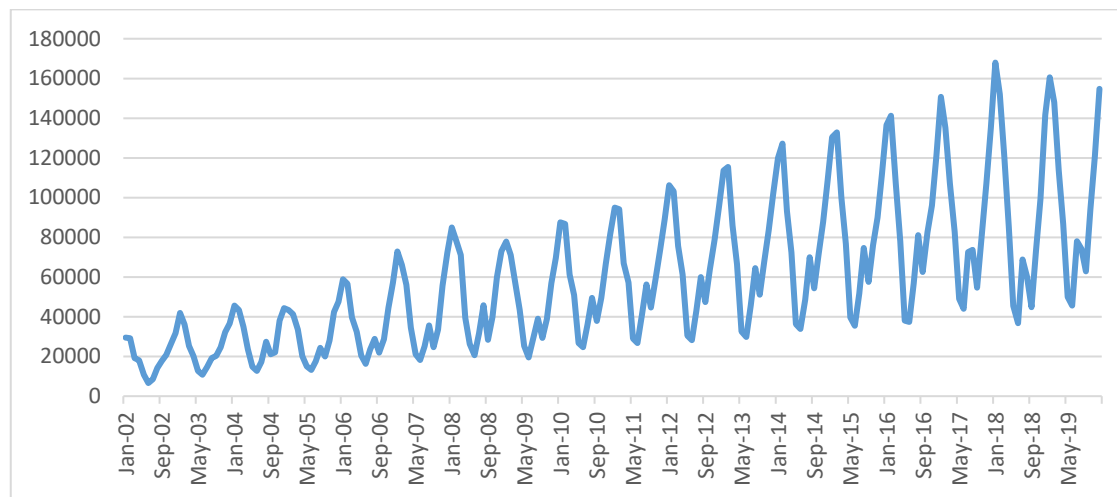
Figure 4.1. Month-wise foreign tourist arrivals in Kerala (Jan 2002-Dec 2019)

Source: Department of Tourism, GoK (2022)

4.3. Potential determinants of Kerala's international tourism demand

The study was carried out to find out the determinants of international tourism demand in Kerala by relying entirely the tourist arrivals segment. The same is followed in the current chapter too in line with several studies in tourism economics (examples: Song et. al., 2003; Naude & Saayman, 2015; Vu & Turner, 2006 and Gani & Clemes, 2017). They used to proxy tourism demand by tourist arrivals instead of adopting other segments of tourism demand viz. tourist overnight stays and tourist expenditure. In the present study, the dependent variable that proxies tourism demand is foreign tourist arrivals in Kerala from January 2002 to December 2019. All the potential variables re grouped as three type of variables viz. origin-based variables, destination-based variables and origin-cum-destination based variables. The variables are either economic or non-economic in nature as well.

4.3.1. Origin-based variables

The variables that are purely related to the origin countries of the foreign tourist arrivals in Kerala or markets of Kerala's international tourism could purely be the push factors or external determinants of Kerala's international tourism demand. The variables categorised under this group are income, Europe's international tourism season,

international tourism expenditure, internet usage, global competitiveness, immigrant stock and size of population (See review of literature: pp. 18-24).

4.3.2. Destination-based variables

The factors that are purely internal to the international tourism of Kerala are its pull factors that could attract overseas visitors to its destinations. Rainfall is the only variable listed under this category as the climatic factor in the present chapter. (See review of literature: pp. 24-27)

4.3.3. Origin-cum-destination based variables

There are some variables that are related to both origin countries and destination in tandem. Variables under this category are comparative features of the origin markets and destination. Nominal exchange rate (\$/₹), relative temperature (Source country's temperature/Destination's temperature), presence of Malayalee diaspora abroad, air transportation cost measured by air distance between Kerala and source country's capital city and trade relations of the source countries with India are the potential driving factors of Kerala's international tourism demand. (See review of literature: pp. 27-31)

4.4. ARDL Estimation of Kerala's International Tourism Demand (Section 1)

4.4.1. Analytical framework for section 1

ARDL approach is employed in section 1 of the current chapter to identify cointegration relationship amongst the selected variables and estimate Kerala's international tourism demand. This is complying with Pesaran et al. (2001) and Narayan (2004).

Model specification: Based on the variables selected in consistent with previous empirical studies on tourism demand, the proposed model for Kerala's international tourism demand is written as:

$$In\text{FTA}_{ij,t} = \beta_0 + \beta_1 In\text{Inc}_j + \beta_2 In\text{Exc}_j + \beta_3 In\text{Rain}_j + \beta_4 In\text{EUN}_j + \epsilon_j \quad (1)$$

Where i=source markets of Kerala's international tourism; FTA_{ij} is the log of monthly foreign tourist arrivals in Kerala during Jan 2002 to Dec 2019; Inc_j is the log of income of the source markets measured by US imports; Exc_j is the log of nominal exchange rates (USD/₹); $Rain_j$ is the log of rainfall in Kerala (mm). Rainfall recorded in Kochi is taken as the proxy for the rainfall in Kerala as Kerala experiences similar climate almost across the state. Another predictor EUN_j is the log of tourist overnight stays of Europe which is Kerala international tourism's major market; e_j is the error term; and β_1, β_2, β_3 and β_4 are the elasticities to be estimated.

The data on monthly foreign tourist arrivals in Kerala from January 2002 to December 2019 were collected from 'Kerala Tourist Statistics' being published by Department of Tourism, Government of Kerala (2022). 'Eurostat' (2021) was depended for Europe's tourist overnight stays while exchange rate data was collected from the web link availed from bookmyforex.com (2020). Kerala's rainfall data were collected from India Meteorological Department (2021).

Cointegration test: It is supposed that, with respect to our model, theory predicts that there is a long-run relationship among InFTAj, InInc$_j$, InExc$_j$, InRain$_j$ and InEUN$_j$. In the absence of prior information about the direction of the long-run relationship among the variables, the following unrestricted error correction regressions are estimated, considering each variable in turn as a predicted variable:

$$\Delta In\text{FTA}_{ij,t} = \beta_{0\text{FTA}} + \sum_{p=1}^{n} bpFTA \Delta In\text{FTA}_{ij,t-p} + \sum_{p=0}^{n} cpFTA \Delta 1 In\text{Inc}_{i,t-p} + \sum_{p=0}^{n} dpFTA \Delta 1 In\text{Exc}_{ij,\ t-p} + \sum_{p=0}^{n} epFTA \Delta 1 In\text{Rain},\ _{t-p} + \sum_{p=0}^{n} fpFTA \Delta 1 In\text{EUN}_{i,\ 1-p} + \lambda 1_{\text{FTA}} In\text{FTA}_{ij,t-1} + \lambda 2_{\text{FTA}} In\text{Inc}_{j,t-1} + \lambda 3_{\text{FTA}} In\text{Exc}_{ij,\ t-1} + \lambda 4_{\text{FTA}} In\text{Rain},\ _{t-1} + \lambda 5_{\text{FTA}} In\text{EUN}_{i,\ t-1} + \epsilon 1t$$

(2a)

$$\Delta In\text{Inc}_j = \beta_{0\text{Inc}} + \sum_{p=1}^{n} bp_{\text{Inc}} \Delta 1 In\text{Inc}_{i,t-p} + \sum_{p=0}^{n} cp_{\text{Inc}} \Delta In\text{FTA}_{ij,t-p} + \sum_{p=0}^{n} dp_{\text{Inc}} \Delta 1 In\text{Exc}_{ij,\ t-p} + \sum_{p=0}^{n} ep_{\text{Inc}} \Delta 1 In\text{Rain},\ _{t-p} + \sum_{p=0}^{n} fp_{\text{Inc}} \Delta 1 In\text{EUN}_{j,\ 1-p} + \lambda 1_{\text{Inc}} In\text{FTA}_{ij,t-1} + \lambda 2_{\text{Inc}} In\text{Inc}_{i,t-p} + \lambda 3_{\text{Inc}} In\text{Exc}_{ij,\ t-p} + \lambda 4_{\text{Inc}} In\text{Rain}_{i,\ t-p} + \lambda 5_{\text{Inc}} In\text{EUN}_{j,\ 1-p} + \epsilon 2t$$

(2b)

$$\Delta In\text{Exc}_{ij,t} = \beta_{0\text{Exc}} + \sum_{p=1}^{n} bp_{\text{Exc}} \Delta 1 In\text{Exc}_{ij,t-p} + \sum_{p=0}^{n} cp_{\text{Exc}} \Delta 1 In\text{Inc}_{i,t-p} + \sum_{p=0}^{n} dp_{\text{Exc}} \Delta In\text{FTA}_{ij,t-p} + \sum_{p=0}^{n} ep_{\text{Exc}} \Delta 1 In\text{Rain}_{j,\ t-p} + \sum_{p=0}^{n} fp_{\text{Exc}} \Delta 1 In\text{EUN}_{j,\ 1-p} +$$

$\lambda 1_{Exc} In\text{FTA}_{ij,t-1} + \lambda 2_{Exc} In\text{Inc}_{i,t-1} + \lambda 3_{Exc} In\text{Exc}_{ij,\ t-1} + \lambda 4_{Exc} In\text{Rain}_{i,\ t-1} + \lambda 5_{Exc} In\text{EUN}_{j,\ t-1} +$

ϵ_{3t}

(2c)

$\Delta\ In\text{Rain}_{j,t} = \beta_{0Rain} + \sum_{p=1}^{n} bp_{\ Rain}\ \Delta\ 1In\text{Rain}_{j,t-p} + \sum_{p=0}^{n} cp_{\ Rain}\ \Delta\ 1In\text{Exc}_{ij,t-p} +$

$\sum_{p=0}^{n} dp_{\ Rain}\ \Delta\ 1In\text{Inc}_{i,t-p} + \sum_{p=0}^{n} ep_{\ Rain}\ \Delta\ In\text{FTA}_{ij,t-p} + \sum_{p=0}^{n} fp_{\ Rain}\ \Delta\ 1In\text{EUN}_{j,\ 1-p} +$

$\lambda 1_{Inc} In\text{FTA}_{ij,t-1} + \lambda 2_{Rain} In\text{Inc}_{i,t-1} + \lambda 3_{Rain} In\text{Exc}_{ij,\ t-1} + \lambda 4_{Rain} In\text{Rain}_{i,\ t-1} + \lambda 5_{Rain} In\text{EUN}_{j,\ t-1} +$

ϵ_{4t}

(2d)

$\Delta\ In\text{EUN}_{i,t} = \beta_{0EUN} + \sum_{p=1}^{n} bp_{\ EUN}\Delta\ 1In\text{EUN}_{i,\ 1-p} + \sum_{p=0}^{n} cp_{EUN}\Delta\ 1In\text{Rain}_{j,t-p} +$

$\sum_{p=0}^{n} dp_{EUN}\Delta\ 1In\text{Exc}_{ij,t-p} + \sum_{p=0}^{n} ep_{EUN}\Delta\ 1In\text{Inc}_{i,t-p} + \sum_{p=0}^{n} fp_{EUN}\Delta\ In\text{FTA}_{ij,t-p} +$

$\lambda 1_{EUN} In\text{FTA}_{ij,t-1} + \lambda 2_{EUN} In\text{Inc}_{i,t-1} + \lambda 3_{EUN}\ In\text{Exc}_{ij,\ t-1} + \lambda 4_{EUN}\ In\text{Rain}_{i,\ t-1} + \lambda 5_{EUN}\ In\text{EUN}_{j,}$

$t-1 + \epsilon_{5t}$

(2e)

The attempt on cointegration among various variables could reach by using F-tests. It helps us know whether there exists long-run relationships. The null hypothesis states that there exists no cointegration amongst the variables in the equations (2a to 2e) as against the alternative hypothesis of the prevalence of cointegration amongst the variables.

Long-run and short-run elasticities: In line with Narayan (2004), equation (1) is estimated using ARDL modelling provided there exists a long-run relationship amongst the variables:

$In\text{FTA}_{ij,t} = \beta 0 + \sum_{p=1}^{n} \beta 1 In\text{FTA}_{ij,\ t-p} + \sum_{p=0}^{n} \beta 2\ In\text{Inc}_{i,t-p} + \sum_{p=0}^{n} \beta 3\ In\text{Exc}_{ij,t-p} +$

$\sum_{p=0}^{n} \beta 3 In\text{Rain}_{j,\ t-p} + \sum_{p=0}^{n} \beta 4 In\text{EUN}_{i,\ 1-p} + \omega 1$ (3)

Short-run elasticities can also be estimated when there exists cointegration. It is possible by constructing an error correction model in the following form:

$\Delta In\text{FTA}_{ij,t} = \beta 0 + \sum_{p=1}^{n} \beta 1\Delta\ In\text{FTA}_{ij,t-p} + \sum_{p=0}^{n} \beta 2\ \Delta\ In\text{Inc}_{i,t-p} + \sum_{p=0}^{n} \beta 3\ \Delta\ In\text{Exc}_{ij,t-p} +$

$\sum_{p=0}^{n} \beta 4\ \Delta 1 In\text{Rain}_{j,\ t-p} + \sum_{p=0}^{n} \beta 5\ \Delta 1 In\text{EUN}_{i,\ t-p} + \varphi ECM_{\ ij,\ t-1} + \vartheta_t$ (4)

where $ECM_{\ ij,t}$ is the error term defined as:

$$ECM_{ij,t} = In\text{FTA}_{ij,t} - {}^\beta 0 - \sum_{p=1}^{n} {}^\beta 1 In\text{FTA}_{ij,t-p} - \sum_{p=0}^{n} {}^\beta 2 In\text{Inc}_{i,t-p} - \sum_{p=0}^{n} {}^\beta 3\, In\text{Exc}_{ij,t-p} -$$

$$\sum_{p=0}^{n} {}^\beta 3 In\text{Rain}_{j,t-p} - \sum_{p=0}^{n} {}^\beta 4 In\text{EUN}_{i,t-p} \tag{5}$$

Here Δ is the difference operator; beta values are the coefficients relating to the short-run dynamics of the model's convergence to equilibrium, and φ is used to measure the speed of adjustment. All the other representations in the equations are already defined.

4.4.2. Result and Discussion for Section 1

Equations (2a-2e) are estimated as part of the cointegration test prior to the estimation of equation (3). As per the F-statistics reported in table 4.1, there exists cointegration or long-run relationship amongst the selected variables in the dataset. The upper bound critical value 4.57 holds significant at 5 per cent level. This implies that the null hypothesis of no cointegration amongst the variables is rejected and the alternative hypothesis of prevalence of long-run relationship is accepted.

Table 4.1. F-statistics for cointegration relationship

Test statistic	Value	Signif.	$I(0)$	$I(1)$
F-statistic	12.36764	10%	3.03	4.06
K	4	5%	3.47	4.57
		2.5%	3.89	5.07
		1%	4.4	5.72

Source: Author's estimates

Econometric results for the long-run international tourism demand of Kerala are shown in table 4.2. The results were obtained after normalising on overall foreign tourist arrivals in Kerala. All variables are correctly related to the tourism demand complying with the theory and expectation. Income is positively related to Kerala's international tourism demand in line with the demand theory. It stands essentially in line with previous studies in tourism demand as well (Dhariwal, 2005; Xie, 2020; Algieri, 2006; Roget & Gozalez, 2006; Malec & Abrham, 2016 and Narayan, 2004) One per cent change in income of source countries could lead to 2.1 per cent change in the arrivals of tourists in Kerala from abroad. However, income measured by US' imports does not have statistical significance even at 10 per cent level.

Exchange rates remained a negative force of the tourism demand as long-run depreciation of Indian Rupee in terms of US Dollar increased Kerala's export competitiveness of tourism. It is complying with various studies in tourism demand

(Sharma, 2016; Xie, 2020; Song et al., 2003 and Dhariwal, 2005). One per cent rise in nominal exchange rate leads to nearly 15 per cent fall in the visitor arrivals in the state. This may not hold true as the same does not have statistical significance even at 10 per cent level. Its estimate is least significant as well amongst other variables. This statistical insignificance of the effect of exchange rate on tourism demand is line with Xie (2020) who found that Japan's exchange rate is related to tourism demand of Norway with no significance. However, the negative relation of the exchange rates on tourism demand is in line with the widely accepted presumption of the inverse relation between demand and relative prices.

Rainfall in Kerala and tourist overnight stays of Europe remained negative forces as expected. Europe has been the major source market of Kerala's international tourism for a long period of time. One per cent rise in rainfall and Europe's tourist overnight stays could lower Kerala's international tourists by 1.1 per cent and 2.1 respectively. The negative effect of rainfall on the tourism demand falls in line with the findings of Alegre et al. (2011) who found that climate played a significant effect in driving Spain's tourism demand. Tourism seasonality of the source market acted as a negative force to Kerala's international tourism demand. It was found that tourists from Kerala's major source markets from Europe (the UK, France and Germany) and North America (the US) turn out massively to Kerala especially at a time when Europe and North America experience extreme winter (see Table 3.11). The negative relation of Europe's tourist overnight stays implies that Kerala's international tourism season starts when offseason begins in Europe and vice versa. However, none of these variables was statistically significant even at 10 per cent level. Hence, we do not have statistical proof to make sure that Kerala's international tourism has been affected by income of the source markets, exchange rates, rainfall in Kerala and Europe's overnight stays of the tourists.

It is interesting to note that all the variables are insignificantly related to the international tourism demand of Kerala in the long run. Thereby, the null hypotheses of no relation between the dependent variable and independent variables are accepted in case of the effect of income, exchange rate, rainfall and Europe's tour nights.

Table 4.2. Econometric results for the long-run model (foreign tourist arrivals in Kerala from Jan 2002 to Dec 2019 is the dependent variable)

Variable	Coefficient	Std. error	t-statistic	Prob.
Income (Inc)	2.083249	2.189179	0.951612	0.3424
Exchange rate (Exc)	-14.74503	117.4243	-0.125571	0.9002
Rainfall (Rain)	-1.071411	2.277218	-0.470491	0.6385
Europe's tour nights (EUN)	-2.09E-05	3.22E-05	-0.648089	0.5176

Source: Author's estimates

The results of the error correction model for overall foreign tourist arrivals in Kerala are presented in table 4.3. Exchange rates remained the only factor drives Kerala's international tourism demand in the short run as per the ARDL estimation among the selected variables. It makes some impact on Kerala's international tourism demand in the short run while other variables do not make any impact. In the short run, exchange rate was significantly related to the tourist arrivals in Kerala at 5 per cent level. Coefficients of other variables were not obtained owing to its lack of relevance in the short run. R squared value of 0.25 shows that 25 per cent of the Kerala's international tourism demand in the short run can be explained by exchange rates. The error correction results imply that the null hypotheses of no relation between dependent variable and independent variables stand accepted in case of all independent variables except nominal exchange rate.

Among the diagnostic tests to the error correction model, no autocorrelation prevails as Durbin-Watson statistic is nearly 2. The F statistic 23.8 is significant at 1 per cent level. The lagged error correction term Coint Eq(-1) is negative and significant at 1 per cent level. The coefficient of -0.4672 implies a decent rate of convergence to equilibrium and lies in the acceptable limit with the statistical significance at 1 per cent level. Akaike information criterion (AIC), Bayesian information criterion/Schwarz criterion and Hanna-Quinn criterion were the three alternative criteria for model selection. Lower the scores, more fits the model.

Hypothesis testing result: No variables (except nominal exchange rates in the short run) as per the ARDL estimation were significantly related to Kerala's international tourism demand. Hence, null hypotheses stand accepted on all the cases except nominal exchange rate as per the error correction model in the short run. It implies that only

origin-cum-destination based variables are relevant among the predictor variables used to develop ARDL model on overall foreign tourist arrivals in Kerala. That too is an economic variable showing the relative relevance of a few economic variables while most economic and all non-economic variables are found irrelevant and insignificant in explaining Kerala's international tourism demand.

Table 4.3. Error correction model for the overall foreign tourist arrivals in Kerala

Variable	Coefficient	Std. error	t-statistic	Prob.
C	7749.252	1076.050	7.201574	0.0000
@TREND	173.7602	21.96574	7.903315	0.0000
D(EXC)	-548.0329	219.3997	-2.497874	0.0133
Coint.Eq(-1)	-0.467205	0.058847	-7.939341	0.0000
R^2	0.252989		SD	4320.109
S.E of regression	3760.311		Akaike criterion	19.32082
Sum squared resid.	2.98E+09		Schwarz criterion	19.38353
Log likelihood	-2072.988		Hannan-Quinn criter.	19.34616
F-statistic	23.81971		Durbin-Watson stat	2.059498
Prob(F-statistic)	0.0000			

Source: Author's estimates

It is true that ARDL estimation failed to prove significant relationship between tourism demand and several factors with the exception of significant short-run impact of nominal exchange rates. ARDL approach was initiated as part of the three inferential analytical techniques for estimating and explaining the factors responsible for the arrivals of overseas tourists in Kerala. Although most coefficients were insignificant statistically, the estimation could bring out the role of lagged values of several economic and non-economic factors (in the short run and long run) in impacting the foreign tourist arrivals in Kerala overtime. While it was found mostly insignificant, double log linear regression was applied to analyse the arrivals of tourists in Kerala from the top source countries (Chapter 5). The next section will also give an idea on how source countries' factors and origin-cum-destination based factors affect the tourism demand of Kerala (in 2019).

4.5. Linear Regression Estimation of Kerala's International Tourism Demand: A Cross-sectional Analysis (Section 2)

4.5.1. Analytical Framework for Section 2

Cross-sectional regression technique was employed to find out the determinants of international tourism demand in Kerala from the designated 148 origin countries in 2019. The variables or potential determinants chosen for the analysis are purely origin-based variables and variables related to origin-cum-destination. Cross-sectional regression was run given all the conditions such as linearity, normality, no autocorrelation, no multicollinearity and homoscedasticity. It was designed to form a valid regression model at the end of the analysis.

The general demand equation for international tourism in Kerala in 2019 can be written as:

$$FTA_{2019} = FTA \ (OBVs, ODVs)$$

Where: FTA_{2019} = Foreign tourist arrivals in Kerala in 2019

$OBVs$ = Origin-based variables

$ODVs$ = Origin-cum-destination based variables

International tourism demand in Kerala in 2019 is a combination of the two kinds of variables. Thus the international demand for tourism in Kerala in the cross-sectional research is explained by the factors that are either purely external or partially internal and partially external to the destination.

The cross-sectional regression model for the international demand for Kerala tourism in 2019 can potentially be written as:

$$FTA_{2019} = \beta_0 + \beta_1 Y + \beta_2 ATC + \beta_3 MD + \beta_4 DF + \beta_5 ITE + \beta_6 INU + \beta_7 Tr + \beta_8 Ppn + \epsilon_j$$

Where:

FTA_{2019} = Predicted value of the dependent variable: Foreign tourist arrivals in Kerala in 2019 from 148 designated countries

β_0 = Constant value or T intercept

β_1, β_2,....., β_8 are regression coefficients that measure a unit change in the outcome variable when predictor variable changes.

Y = Income measured by GDP per capita on PPP basis in 2019 at current US $ (World Bank, 2022a)

ATC = Air transportation cost proxied by air distance from the capital city of the origin nation to Cochin International Airport, Kerala in kilometre (www.distance.to)

MD = Presence of Malayalee diaspora in origin countries: Dummy variable with the value of 1 for Keralite population of 10,000 and above and 0 for otherwise. (Rajan & Zachariah, 2019).

DF = Availability of direct flight between tourist sending countries and India: Dummy variable with the value of 1 for yes and 0 for otherwise (Air India RTI document)

ITE = International tourism expenditure of the source countries at USD million in 2019 (World Bank, 2022c)

INU = Percentage of internet users of the source countries in 2019 (World Bank, 2022b)

Tr = Trade relation of the source countries with India in 2018-19 ($ million) (Ministry of Commerce, 2022)

Ppn = Size of population of the source countries ('000) (World Bank, 2022g)

ϵ_j = Error term in the model

4.5.2. Result and Discussion for Section 2

Linear regression was run with one dependent variable and eight independent variables with total of 148 observations for each variable. In the cross-sectional study, country-wise arrivals of tourists in Kerala in 2019 was used as the dependent variable. All the variables in this study are either related to the origin markets or related to origin-cum-destination. (see Table 4.4 for the descriptive statistics on the variables).

Table 4.4. Descriptive statistics of the dataset on determinants of foreign tourist arrivals in Kerala

Variables	Mean	Std. Deviation	N
Foreign tourist arrivals in Kerala in 2019 (total)	7707.5270	21796.90534	148
Income measured by GDP per capita ($ PPP)	24015.1041	22791.55134	148
Air distance between capital city of sending country to Kochi (km)	7938.4819	4420.29686	148
Availability of direct flight (dummy)	.2500	.43448	148
Internet usage (%)	62.1284	26.68518	148
Size of population ('000)	40154.2390	124343.14848	148
trade relation with India (X+M in $ million)	5836.0561	13026.92212	148
International tourism expenditure ($ million)	8200.7957	19654.30998	148
Malayalee diaspora (dummy)	.0946	.29365	148

Source: Author's estimates

Among the potential determinants of Kerala's international tourism demand, presence of Malayalee diaspora abroad, availability of direct flights and international tourism expenditure remain highly relevant in explaining the country-wise arrivals of tourists in Kerala in 2019. They make stronger impact on the dependent variable than the other variables with higher standardised beta values. While the standardised beta value of the presence of the diaspora and direct flight availability were 0.335 and 0.16 respectively, international tourism expenditure makes stronger effect on the tourism demand with the beta value of 0.627. They were statistically significant too at 1 per cent level or 5 per cent level with correct signs. Trade relations between India and origin countries of Kerala's international tourism make negative impact on the foreign tourist arrivals in Kerala in 2019 in contrast to the findings of Chaisumpunsakul and Pholphirul (2018) and expectation. The estimate is only significant at 10 per cent level. However, it cannot be considered as relevant as only positive effect can make some sense. The estimation shows that, impact of international tourism expenditure on Kerala's international tourism demand was stronger as countries making greater expenses for international tourism send more tourists to Kerala and vice versa. This is exactly in line with Corluka (2018). The role of migration in Kerala's international tourism demand has also been duly recognised in line with Shafiullah et al. (2019).

Although Shafiullah et al. (2019) were focussing on foreign diaspora, migration variable of diaspora abroad also can be relevant in determining the international tourism demand. Higher the strength of the Malayalee diaspora in the origin countries of foreign tourists in Kerala, higher the tourist arrivals from the concerned countries. It would be clearer when we take examples of the UAE, Saudi Arabia, the US, the UK, Germany, Australia, New Zealand, Ireland, Israel, Bahrain, Kuwait, Oman, Malaysia, Singapore and Maldives. Major share of the visitor arrivals in Kerala in 2019 was from these countries that carry larger expatriates from Kerala. Higher beta value, statistical significance at 1 per cent level and greater t value reflects the positive impact of Malayalee diaspora in driving the tourist arrivals in Kerala. (see Table 4.5).

Income of the tourists and relative tourism prices have been the mostly cited predictor variables of tourism demand (examples, Algieri, 2006; Roget & Gozalez, 2006; Malec & Abrham, 2016; Narayan, 2004; Nguyen, 2021; Naude & Saayman, 2005; Daniel & Rodrigues, 2012; Masiero & Nicolau, 2012; Gani & Clemes, 2017; Sharma, 2016; Xie; 2020; Nguyen, 2021 and Santos et al., 2012). But interestingly, both income measured by GDP per capita (on PPP basis) and air transportation cost measured by air distance were found not relevant in explaining the country-wise visitor arrivals in Kerala in 2019. Both income and air transportation cost are negatively related to Kerala's international tourism demand. While the former was negatively related in contrast to the general presumption, latter was correctly and negatively related. However, both are not statistically insignificant even at 10 per cent level. The negative effect of income is against the common presumption of positive impact of income of the tourists or source markets on tourism demand (Dhariwal, 2005; Xie, 2020; Algieri, 2006; Roget & Gozalez, 2006); Malec & Abrham, 2016 and Narayan, 2004). However, there are studies which found insignificant effect of income on tourism demand (Dhariwal, 2005; Xie, 2020 and Algieri, 2006). Irrelevance of quantitative income in affecting Kerala's international tourism demand can be connected to treatment of income as a developed country determinant by Naude & Saayman (2005). Although air transportation cost is just slightly related, tourist arrivals move in opposite direction in line with the demand theory and tourism research (Selvam, 1989; Dhariwal, 2005; Algieri, 2006; Divisekara & Kulendran, 2006; Sharma, 2016; Song et al., 2003; Masiero & Nicolau, 2012; Malec & Abrham, 2016 and Roget & Gozalez, 2006). According to Masiero and Nicolau (2012), price variables have had

complex relation with the tourism demand. There are situations in which tourism prices make positive effect on tourism demand. Shafiulla et al. (2019) found that rise in transportation cost led to rise in tourism demand in selected regions of Australia. Regardless, due to statistical insignificance and lower t value of the estimate, it is not proved that air transportation costs impacted Kerala's international tourism demand negatively. (see Table 4.5).

Internet was presumably an important factor driving international tourism these days due to multiple reasons. Internet has become an important source of tourism related information. Moreover, bookings for travel, accommodation, sightseeing and much more are highly powered by travel related websites and applications. Having said that, percentage of people using internet is found to be a positive predictor variable in explaining the visitor arrivals in Kerala in 2019. Although positively related, it does not have the statistical significance even at 10 per cent level. Although this finding was not perfectly in line with Naude & Saayman (2005) and Camacho & Pacce (2018), growth of internet has had positive impact on tourism demand. It shows that Kerala gets more tourists from the countries where percentage of people using internet is higher and vice versa. Size of population of the source countries make positive impact on the arrivals of foreign tourists in Kerala with no statistical significance in contrast to the expectation. (see Table 4.5). It implies that more tourists originate from countries where size of population is higher and vice versa. The result was, however, not confirmed as the estimate was not even significant at 10 per cent level.

Hypothesis testing result: The null hypothesis of no effect of predictor variables on foreign tourist arrivals in Kerala in 2019 from the source countries stands rejected in cases of presence of Malayalee diaspora, availability of direct flights and international tourism expenditure of the source countries as the three variables were statistically significant. The alternative hypotheses were accepted instead. However, the null hypotheses stand accepted in cases of income, air transportation cost, trade relations, internet usage and size of population. It implies that effect of only origin based variable (international tourism expenditure) and origin-cum-destination based variable (Malayalee diaspora) was found relevant in explaining Kerala' international tourism demand in 2019. Even though trade relation of the source countries with the destination country was negatively related with 10 per cent level significance, null hypothesis was accepted as no positive effect was observed as against the general presumption.

According to Chaisumpunsakul and Pholphirul (2018), trade openness and international tourism demand are positively related. All economic variables such as income, air transportation cost and trade relation are insignificantly related to the tourism demand out of which income and trade relation were negatively related as against the theory and expectation. In brief, only origin based variable (international tourism expenditure) and origin-cum-destination variables (presence of Malayalee diaspora in the source countries and availability of direct flights) was significantly related to Kerala's international tourism demand in the cross-sectional study. While international tourism expenditure is origin based variable that makes strong impact in Kerala's international tourism demand, origin-cum-destination based factors, which were significantly related to Kerala's tourism demand 2019, were presence of Malayalee diaspora in the source countries and availability of direct flight operations. It is obvious that both economic and non-economic factors that can make stronger effect on Kerala's international tourism demand (see Table 4.5).

Table 4.5. Regression estimates of the country-wise foreign tourist arrivals in Kerala in 2019

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-1668.618	4036.809		-.413	.680		
Y	-.121	.092	-.127	-1.317	.190	.312	3.210
ATC	-.046	.297	-.009	-.154	.878	.797	1.255
DF (Dummy)	8331.263	3719.789	.166	2.240	.027	.525	1.904
INU	65.759	72.296	.081	.910	.365	.369	2.714
PPN	.008	.014	.045	.562	.575	.458	2.185
Tr	-.323	.172	-.193	-1.885	.062	.274	3.643
ITE	.695	.087	.627	7.949	.000	.464	2.153
MD (Dummy)	24894.041	5037.839	.335	4.941	.000	.627	1.596

a. Dependent Variable: Foreign tourist arrivals in Kerala in 2019 (total)
Source: Author's estimates

Y = Income measured by GDP per capita on PPP basis in 2019 at current US $; ATC = Air transportation cost proxied by air distance from the capital city of the origin nation to Cochin International Airport, Kerala in km; DF: Direct flight availability in 2019: Dummy variable 1 for yes and 0 for otherwise; INU = Percentage of internet users

in 2019; Ppn: Size of population of the source countries ('000) in 2019; Tr: Trade relation of the source countries with India in 2018-19 ($ million); ITE = International tourism expenditure at USD million in 2019; MD = Presence of Malayalee diaspora in origin countries in 2019: Dummy variable with the value of 1 for Keralite population of 10,000 and above and 0 for otherwise.

* The estimates are significant at 1 per cent level; *** The estimates are significant at 10 per cent level

Presence of Malayalee diaspora and international tourism expenditure were found to be the stronger determinants of country-wise visitor arrivals in Kerala in 2019 with statistical significance and positive sign in line with expectation. Migrant stock, internet usage and global competitiveness were also positively related to the tourism demand but lacked statistical significance. Air transportation cost was negatively although mildly related to the dependent variable. Income and trade relations, unlike the general presumption, was negatively related to the tourism demand of Kerala with no statistical significance. All the variables in this cross-sectional study are either related to the origin countries or origin-cum-destination in tandem. The F-statistic was, however, significant at 1 per cent level. R^2 value of .59 shows that the present model is 59 per cent responsible for the visitor arrivals in Kerala from abroad. The model is free from auto correlation (D-W: 2.19) and all variables fall in the tolerable collinearity values (above 0.10). (see Tables 4.5 and 4.6).

Table 4.6. Model summary (Section 2)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.774a	.599	.576	14199.45930	.599	25.924	8	139	.000	2.113

a. Predictors: (Constant), Malayalee diaspora (dummy), Size of population ('000), Air distance between capital city of sending country to Kochi (km), Internet usage (%), International tourism expenditure ($ million), Availability of direct flight (dummy), Income meausred by GDP per capita ($ PPP), trade relation with India (X+M in $ million)

b. Dependent Variable: Foreign tourist arrivals in Kerala in 2019 (total)

4.6. Conclusion

Two different analyses were done on estimating Kerala's international tourism demand. For estimating tourism demand measured by overall overseas tourist arrivals in Kerala, ARDL approach was employed while a valid linear regression model was developed for country-wise arrivals of tourists in Kerala. Time series data analysis was employed in the former case while cross-sectional regression was run for the latter. Both time series and cross sectional studies on Kerala's international tourism demand are relevant as both address the issue in different dimensions. While the time series study could

identify all types of variables in equal importance, cross-sectional study tries to identify origin-based and origin-cum-destination factors that may not be attainable in the time series study.

The ARDL estimation found that four variables viz. income, exchange rates, rainfall and Europe's tourist overnight stays are conditionally relevant in explaining Kerala's international tourism demand in the long run as the all variables are related to the dependent variable with expected sign although none of them remains statistically significant in the long run. In consistent with the economic theory, income is positively related and exchange rate is negatively related to the international tourism demand of Kerala (Dhariwal, 2005; Xie, 2020; Algieri, 2006; Roget & Gozalez, 2006; Malec & Abrham, 2016 and Narayan, 2004; Sharma, 2016; Song et al., 2003). It implies that rise in income of Kerala's major markets leads to rise in the arrivals of tourists in the South Indian state. It makes Kerala's international tourism demand a normal good. Similarly, Kerala receives more tourists from abroad when its currency becomes more competitive and vice versa as exchange rates remained negative. Although it stands in line with the theory, both are statistically insignificant. The other variables such as Kerala's rainfall and Europe's tourist overnight stays are negatively related to the tourism demand as expected. However, only exchange rates remained relevant to make an impact on Kerala's international tourism demand in the short run. It is statistically significant at 1 per cent level as well.

A valid linear regression model was developed with eight variables out of which five are purely origin based variables and three are origin-cum-destination based variables. Among the origin based variables, income remains irrelevant in explaining Kerala's international tourism demand as it was negatively related with no statistical significance. It shows that Kerala's international tourism demand is not driven by income (at least quantitative income). Categorical income is relevant to Kerala's international tourism as the major source markets are mostly high income countries. It implies that Kerala's international tourism could be unique. Although air transportation cost is negatively related to the tourism demand which is consistent to the theory, its slight effect lacked statistical significance. International tourism expenditure of the source markets and presence of Malayalee diaspora in the source countries are identified as the positive drivers of Kerala's international tourism demand with the statistical significance at 1 per cent level. Higher the international tourism expenditures,

higher the arrivals of tourists in Kerala from the concerned countries and vice versa. This is a clear pattern shown through the estimates (see Table 4.5). Presence of Malayalee diaspora is also equally relevant in explaining Kerala's overseas tourist arrivals in Kerala. Kerala receives more tourists from the countries where Malayalee diaspora is considerably high and vice versa. Other predictors that are purely related to the source countries viz. migrant stock, internet usage, size of population and global competitiveness are positively related to the predicted variable although none of these variables remained statistically significant. Trade relation between origin and destination also remains not relevant in explaining international tourism demand of Kerala as it was found negatively related in contrast to the expectation. Quantitative analyses on Kerala's overseas tourist arrivals in this chapter are truly complemented by log-linear regression on the arrivals of tourists in the state from its top three source countries in the next chapter.

Chapter 5

DEMAND FOR KERALA'S INTERNATIONAL TOURISM BY TOP THREE SOURCE MARKETS: A COMPARATIVE ANALYSIS

CONTENTS

5.1. Introduction

Autoregressive distributed lagged (ARDL) and linear regression models were developed on the factors driving foreign tourist arrivals (FTAs) in Kerala in the previous chapter. This chapter aims to develop double log regression models on the tourist footfalls from top three source markets of Kerala's international tourism. The top three origin countries of foreign tourists who use to visit Kerala during 2003-2019 period are identified as the United Kingdom, the United States and France with the annual average share of 18.4 per cent, 8.77 per cent and 8.44 per cent respectively (see Figure 2.6). They have been sending their nationals to Kerala on consistent basis throughout the period unlike the recent phenomenal surge in arrivals of tourists in Kerala from Saudi Arabia, Oman, Russia, the UAE, Malaysia, Canada and Australia. The present chapter not only helps identify the determinants of Kerala's international tourism demand from top three origin markets but also powers a comparative analysis on the determining factors of Kerala's international tourism demand.

5.2. Month-wise trend of Kerala's foreign tourist arrivals from top source markets

Month-wise arrivals of tourists from the top source markets of the UK, the US and France during Jan 2014-Dec 2019 are plotted in the figure 5.1. Unlike the data illustrated in figure 4.1, which shows the month-wise trend of overseas month-wise tourist arrivals in Kerala from Jan 2002 to Dec 2019, ups and downs of tourist arrivals without overall upward trend can be seen overtime from Jan 2015 to Dec 2019 in figure 5.1, although seasonality remains prevalent. It shows that tourist arrivals from the top source markets look nearly saturated although Kerala's overall tourist arrivals were growing positively until the outbreak of Covid in 2020. The emergence or phenomenal growth of tourist arrivals in Kerala from the Middle East (Saudi Arabia, Oman and the UAE), Russia, Malaysia, Canada and Australia in the recent period were largely accounted for the growth of Kerala's inbound international tourism (see Figure 2.5). However, it is still clear that tourist arrivals from the top three origin markets peaked during November-March period as we have seen in figure 4.1 in the previous chapter. While the UK remains dominant market for Kerala's international tourism with little ups and downs (the blue line), the US and France remained second and third largest markets off and on (orange line for the US and silver line for France). May to July

remained absolutely offseason for FTAs in Kerala from the top source markets similar to the overall arrivals. Monthly arrivals remained even below 3,000 this period for the five consecutive years prior to Covid. Seasonal monthly arrivals peaked to 15,000 – 20,000 from the US and France and 25,000-35,000 from the UK (during December and January). (see Appendix 7).
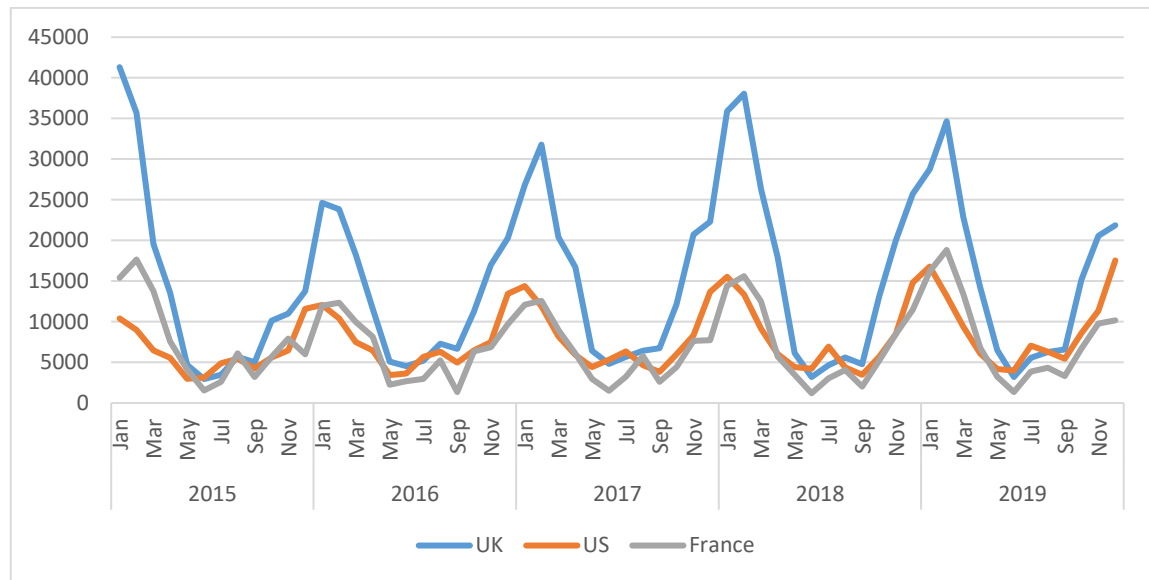
Figure 5.1 Month-wise foreign tourist arrivals in Kerala (total) from the UK, the US and France (Jan 2015-Dec 2019)

Source: Department of Tourism, Government of Kerala (2022)

The present study aims to estimate international tourism demand of Kerala with respect to tourist arrivals in the state from the top three source markets of the UK, the US and France. The tourist arrivals data are taken as the proxy to estimate tourism demand out of the three widely recognised segments viz. tourist arrivals, tourist expenditure and tourist overnight stays. Several studies on tourism demand were conducted on tourism demand (examples: Narayan, 2004; Papatheodorou & Song, 2005; Naude and Saayman, 2005; Alegre et al., 2011; Marcussen, 2011; Kim et al., 2011; Vu & Turner, 2006; Gani & Clemes, 2017 and Song et al., 2003). The attempt is being made to measure Kerala's international tourism demand from the top three source markets viz. the UK, the US and France using log linear regression models. All the potential variables are grouped as three viz. origin-based variables, destination-based variables and origin-cum-destination based variables.

5.3. Analytical method and variables

Log-log regression was run to estimate Kerala's international tourism demand from the top three source markets (the UK, the US and France). The dependent variable and five independent variables were transformed into logarithmic form to fix the issue of no stationarity as the original data are seasonal. It could enable the dataset fit for the proper time series analysis. Time series analysis with log-transformed dataset could estimate the elasticities or sensitiveness of tourism demand to change in income of the origin markets, relative prices, destinations' rainfall, relative temperature and seasonality of the origin markets. Being the mostly cited variables in tourism economics literature, income and prices are used as the primary independent variables (examples: Downward & Lumsdon, 2003; Uysal & Crompton, 1984; Daniel & Rodrigues, 2012; Gani & Clemes, 2017; Narayan, 2004 and Zamparini et al., 2017). While income is the origin based variables, relative price is an origin-cum-destination based variable. Rainfall was the only destination based variable used in this study while relative temperature (temperature of the source markets/destination's temperature) was another climatic data that belongs to origin-cum-destination based variables (Xie, 2020; Salman et al., 2021; Gani & Clemes, 2017 and Alegre et al., 2011). Another predictor variable viz. seasonality of the source markets belongs to origin based variable (Corluka, 2018 and Andriotis et al., 2007). While income is the only predictor which is expected to impact the tourism demand positively, all the other predictors in the model are expected to affect the tourism demand negatively.

5.4. Analytical Framework

The dependent variable and all potential independent variables were transformed into logarithmic forms to develop valid linear multiple regression models. Three models were developed each for measuring the determinants of tourist arrivals in Kerala from the top three source markets of the UK, the US and France. Linear regression was run after transforming the entire dataset into logarithmic form to form a valid model by ensuring stationarity and normality of the dataset. The month-wise data were collected on one outcome variable and a number of response variables for the time span of 60 continuous months from January 2015 to December 2019.

Month-wise arrivals of foreign tourists in Kerala from January 2015 to December 2019 can possibly be due to the combination of five types of the selected

variables. The multiple linear regression model for the determinants of foreign tourist arrivals (FTAs) in Kerala from the UK with the log-transformed data can potentially be written as:

Models 1, 2 & 3: $\log(Y_{,i,j,k,t}) = \beta_0 + \beta_1 \log(X_{1,i,j,k,t}) + \beta_2 \log(X_{2\,i,j,k,t}) + \beta_3 \log(X_{3\,i,j,k,t}) + \beta_4 \log(X_{4\,i,j,k,t}) + \beta_5 \log(X_{5\,i,j,k,t}) + \beta_6 \varepsilon i$

Where:

$\log(Y_{,i,j,k,t})$ = Logarithm of FTAs in Kerala from the UK, the US and France to the base 10 for the period starting from Jan 2015 to Dec 2019

β_0 = Constant value or T intercept

$\beta_1, \beta_2, \ldots, \beta_5$ are log transformed regression coefficients that measure percentage change in the outcome variable when predictor variable changes by 1 per cent.

i: the UK; j: the US, k: France and t: period starting from Jan 2015 to Dec 2019

$\log(X_{1,i,j,k,t})$ = Logarithm of origin country's consumer price index/India's consumer price index to the base 10 (TheGlobalEconomy.com, 2021a,b,c)

$\log(X_{2\,i,j,k,t})$ = Logarithm of Income to the base 10 using imports of the source markets in USD million as proxy (TheGlobalEconomy.com, 2020).

$\log(X_{3\,i,j,k,t})$ = Logarithm of rainfall in Kerala (mm) to the base 10 (IMD, 2021).

$\log(X_{4\,i,j,k,t})$ = Logarithm of source countries' temperature/Kerala temperature (^{0}C) to the base 10 (National Oceanic and Atmospheric Administration, 2020)

$\log(X_{5\,i,j,k,t})$ = Logarithm of source markets' tourism season proxied by tourism season (total) to the base 10 (Eurostat, 2021 and National Travel & Tourism Office, 2020).

$\beta_6 \varepsilon i$ = Trend factor of tastes (ε = base of natural logarithms)

In this constant elasticity demand function of Kerala's international tourism demand, β_1 is the price elasticity of tourism demand; β_2 is the income elasticity of tourism demand; β_3 is the rainfall elasticity of tourism demand; β_4 is the elasticity of tourism demand to relative temperature and β_5 measures the elasticity of origin country's seasonality to tourism demand.

Taking the partial derivative of the above function with respect to X_1 (Relative prices)

$$\frac{\partial \log Y_{i,j,k,t}}{\partial \log X1} = \beta_1$$

The change of the logarithm of a variable equals the proportionate change of the variable. Applying this to the above partial derivative, we get:

$$\partial \log Y \; i, j, k, t = \frac{\partial Y i, j, k, t}{Y i, j, k, t} \; and \; \partial \log X1 = \frac{\partial X1 i, j, k, t}{X1 i, j, k, t}$$

$$\therefore \quad \frac{\partial \log Y_{i,j,k,t}}{\partial \log X1} = \frac{\partial Y i,j,k,t}{Y i,j,k,t} \Big/ \frac{\partial X1}{Xi} = \beta_1$$

or $\quad \frac{\partial Y i,j,k,t}{X1 i,j,k,t} \; X \; \frac{X1 i,j,k,t}{Y i,j,k,t}$

It is proved here that β_1 is the price elasticity of Kerala's international tourism demand from the UK, the US and France during Jan 2015 to Dec 2019. It represents the percentage change in quantity demanded of tourism services due to percentage change in relative tourism prices.

In the similar way, it is possible to estimate β_2 as income elasticity of tourism demand by taking the partial derivative of the above function with respect to X_2 (Income of the source markets)

$$\frac{\partial \log Y_{i,j,k,t}}{\partial \log X2} = \beta_2$$

The change of the logarithm of foreign tourist arrivals in Kerala equals the proportionate change of income of the source markets. Applying this to the above partial derivative, we get:

$$\partial \log Y \; i, j, k, t = \frac{\partial Y i, j, k, t}{Y i, j, k, t} \; and \; \partial \log X2 = \frac{\partial X2 i, j, k, t}{X2 i, j, k, t}$$

$$\therefore \quad \frac{\partial \log Y_{i,j,k,t}}{\partial \log X1} = \frac{\partial Y i,j,k,t}{Y i,j,k,t} \Big/ \frac{\partial X2}{Xi} = \beta_2$$

or $\quad \frac{\partial Y i,j,k,t}{X2 i,j,k,t} \; X \; \frac{X2 i,j,k,t}{Y i,j,k,t}$

β_2 is proved to be income elasticity of tourism demand. It represents the percentage change in quantity demanded of tourism services due to percentage change in income of the source markets.

It is possible to estimate β_3 as elasticity of tourism demand to percentage change in rainfall in Kerala. Taking the partial derivative of the above function with respect to X_2 (Income of the source markets).

$$\frac{\partial \log Y\,i,j,k,t}{\partial \log X3} = \beta_3$$

The change of the logarithm of foreign tourist arrivals in Kerala equals the proportionate change of rainfall in Kerala. Applying this to the above partial derivative, we get:

$$\partial \log Y\ i,j,k,t = \frac{\partial Yi,j,k,t}{Yi,j,k,t}\ and\ \partial \log X3 = \frac{\partial X3i,j,k,t}{X3i,j,k,t}$$

$$\therefore \qquad \frac{\partial \log Y\,i,j,k,t}{\partial \log X3} = \frac{\partial Yi,j,k,t}{Yi,j,k,t} \Big/ \frac{\partial X3}{Xi} = \beta_3$$

or $\qquad \dfrac{\partial Yi,j,k,t}{X3i,j,k,t} \times \dfrac{X3i,j,k,t}{Yi,j,k,t}$

β_3 is proved to be a coefficient showing the sensitiveness of Kerala's international tourism demand (from the top three source countries) to percentage change in relative temperature in Kerala.

In the similar way, β_4 (elasticity of Kerala's international tourism demand to relative temperature) is calculated as follows:

$$\partial \log Y\ i,j,k,t = \frac{\partial Yi,j,k,t}{Yi,j,k,t}\ and\ \partial \log X4 = \frac{\partial X4i,j,k,t}{X4i,j,k,t}$$

$$\therefore \qquad \frac{\partial \log Y\,i,j,k,t}{\partial \log X4} = \frac{\partial Yi,j,k,t}{Yi,j,k,t} \Big/ \frac{\partial X4}{Xi} = \beta_4$$

or $\qquad \dfrac{\partial Yi,j,k,t}{X4i,j,k,t} \times \dfrac{X4i,j,k,t}{Yi,j,k,t}$

β_5 is proved to be a coefficient showing the sensitiveness of Kerala's international tourism demand (from the top three source countries) to percentage change in tourism seasonality of the origin country.

$$\partial \log Y \ \text{i}, \text{j}, \text{k}, \text{t} = \frac{\partial Yi, j, k, t}{Yi, j, k, t} \ and \ \partial \log X5 = \frac{\partial X5i, j, k, t}{X5i, j, k, t}$$

$$\therefore \quad \frac{\partial \log Y \text{ i,j,k,t}}{\partial 5} = \frac{\partial Yi,j,k,t}{Yi,j,k,t} \Big/ \frac{\partial X5}{Xi} = \beta_5$$

or $\quad \frac{\partial Yi,j,k,t}{X5i,j,k,t} \ X \ \frac{X5i,j,k,t}{Yi,j,k,t}$

5.5. Result and Discussion

Role of standard economic determinants: Income makes a mild but significant impact on Kerala's international tourism demand in the log-log regression analysis employed in the present chapter making little departure from the econometric approach adopted in the previous chapter. The tourist arrivals in Kerala from the UK was positively related to income with statistical significance at 5 per cent level in consistent with the economic theory (Samuelson & Nordhaus, 2002). At the same time, income makes mere slightly negative impact in the US model and slightly positive impact in the France model with no statistical significance even at 10 per cent level. It implies that UK tourists were more sensitive to income when compared to the US and France. One per cent change in income would follow 0.12 per cent change in the arrivals of UK tourists in Kerala. It indicates that positive economic growth of the UK leads to rise in arrivals of tourists from the UK with significant effect. This is not true for the tourist arrivals in Kerala from the US and France, at the same time. Income of the tourists from the US and France were clearly not making considerable effect on Kerala's international tourism demand. Income elasticity of tourism demand remains higher according to the studies of Roget and Gozalez (2006), Nguyen (2021), Algieri (2006) and Lee (1996). The present study does not go hand in hand with that. The insignificant relation of income of the US and France to tourism demand cannot be surprising as Dhariwal (2005) and Xie (2020) argued that insignificant relation between income and tourist arrivals is possible. Regardless, income makes positive but mild impact on the arrivals of tourists in Kerala from the UK, the US and France. Percentage change in

income leads to less than one per cent change in the tourist arrivals in all the three models while only the UK model stands significant. (see Table 5.1).

Tourism price measured by origin country's price level compared to that of destination (relative prices) is more important in explaining Kerala's tourism demand from the top source markets than income. This is true as relative prices were negatively related to the arrivals of tourists in the Indian state of Kerala from the UK and the US with statistical significance at 1 per cent level which falls in line with the economic theory (Samuelson & Nordhaus, 2002). Among the top three source markets of Kerala's international tourism, US tourists remained highly sensitive to prices followed by the UK tourists. With one per cent change in relative prices, tourists from the US and the UK change by nearly 0.40 per cent and 0.23 per cent respectively with one per cent significance level in both cases. At the same time, tourists in Kerala from France were only slightly related to relative prices and statistically insignificant as well. There are studies that have confirmed insignificant and unexpected relation between price and tourism demand although most studies in tourism demand found negative and significant relation. Dhariwal (2005), Algieri (2006), Divisekara & Kulendran (2006), Sharma (2016), Song et al. (2003), Masiero & Nicolau (2012), Malec & Abrham (2016) and Roget and Gozalez (2006) found in their studies that prices are negatively and significantly related to tourism demand. Significant negative effect of prices on tourism demand was confirmed with the tourist arrivals from the UK and the US. It implies that tourists in Kerala from the UK and the US are relatively more sensitive to prices while French tourists are least sensitive. Being more sensitive to prices, tourism competitiveness of Kerala's international tourism has to be kept a better level. There are studies too that haven't confirmed positive effect of prices on tourism demand (Shafiulla et al., 2019 and Lee, 1996) at the same time. (see Table 5.1).

Role of environmental factors: Although standard demand determinants of income and prices were just selectively and mildly related, environmental factors of destination's rainfall and relative temperature remained highly relevant in explaining the tourist arrivals in the state from all the top three source markets. This is exactly in line with Alegre et al. (2011) who found that climate has been a major factor in determining tourism demand in Spain. Higher level of sensitivity of tourist arrivals to environmental factors was also confirmed by Mathivha et al. (2017) who argue that environmental factors among various factors (social, economic and environmental)

remain fragile to the tourism industry. Both rainfall in Kerala and relative temperature (source country's temperature/Kerala's temperature) were negatively related to the tourism demand in all the three tourism demand models as expected. However, not all tourists were equally sensitive to environmental factors. While both the UK tourists and US tourists remain more sensitive to rainfall and relative temperature, French tourists in Kerala were found less sensitive to both climatic variables. One per cent change in Kerala's rainfall and relative temperature leads to 0.42 per cent and 0.45 per cent change respectively in the arrivals of tourists from the UK. Tourists from the US in Kerala were also highly sensitive to climatic factors when compared to French tourists. One per cent change in rainfall in Kerala and relative temperature lead to change in arrivals of US tourists by 0.48 per cent and 0.39 per cent respectively. The estimates were significant at 1 per cent level too. Both environmental factors were negatively related to the arrivals of tourists from France too although both were statistically significant only at 10 per cent level. The results on the effect of environmental factors imply that the tourist arrivals surge as per the variations in rainfall and relative temperature. Tourism demand rises when rainfall and relative temperature subsides in the state of Kerala. (see Table 5.1).

Effect of tourism seasonality of the source markets: Tourism seasonality of the source countries is supposed to affect Kerala's tourism demand negatively related to from the UK and France as expected. One per cent change in source countries' tourism seasonality causes for the 0.17 per cent and 0.32 per cent change in arrivals of British and French tourists. While tourism seasonality of France was significant at 5 per cent level, seasonality of the UK was significant only at 10 per cent level. Seasonality of the US (tourist departures of the US was taken as the proxy-positive relation was expected-positive impact of tourist departures of the US was considered to be inversely related to US' tourism seasonality- higher the departures, weak the tourism season and vice versa) was slightly and positively related with no statistical significance even at 10 per cent level. As per data presented in table 5.1, tourist departures of the US were negatively (although slightly) related to tourism demand. Hence it is clear that the US tourism seasonality was positively but slightly related to Kerala's international tourism demand. It implies that tourism seasonality of the source market of Kerala's international tourism was only relevant in case of the arrivals of British and French tourists. Regardless, tourism seasonality has been in force of tourism demand across the world, according to

Corluka (2018). Although tourism seasonality of destination measured by environmental attributes were relevant, the present study examines the effect of source countries' seasonality on Kerala's tourism demand. It was found that, this can be held true in cases of arrivals of tourists from the UK and France in Kerala among the top three source markets. (see Table 5.1).

Table 5.1. Results of the log-log regression on Kerala's international tourism demand from top 3 source markets (the UK, the US and France)

		Income (Y)	Relative price (P)	Rainfall (RNF)	Relative temperature	Tourism season
UK model	**Coeff.**	.124**	-.227*	-.416*	-.447*	-.170***
	Std error	.602	1.504	.043	.183	.196
	t	2.067	-3.662	-4.471	-4.115	-1.761
	Sig.	.044	.001	.000	.000	.084
US model	**Coeff.**	-.073	-.405*	-.476*	-.388*	-.042
	Std error	.703	1.486	.030	.046	.243
	t	-.774	-4.174	-4.607	-4.042	-.418
	Sig.	.442	.000	.000	.000	.678
France model	**Coeff.**	.020	-.042	-.249***	-.336***	-.299**
	Std error	.951	1.897	.063	.204	.316
	t	.177	-.375	-1.759	-1.922	-2.074
	Sig.	.861	.709	.084	.060	.043

* The estimates are significant at 1 per cent level; ** the estimates are significant at 5 per cent level; *** the estimates are significant at 10 per cent level.

Hypothesis testing results: While null hypothesis of no effect of both standard economic determinants viz. income and relative prices stands rejected in the UK model, US model remains significantly related only to relative prices among the two standard economic determinants. The null hypothesis gets accepted in the France model in both the variables as no significant relation was found. Overwhelming relevance of environmental factors (relative temperature and rainfall) in affecting the tourism demand leads to the rejection of null hypothesis of no relation in all the three models. Null hypothesis gets rejected on the significant effect of source country's tourism season on Kerala's tourism demand in cases of UK and France models. It stands accepted in US model, at the same time. It can be generalised that there has been significant effect of selected economic and non-economic factors, destination based

variables, origin based variables and origin-cum-destination based variables on Kerala's international tourism.

Among the three models of Kerala's international tourism as per the log-log regression analysis, UK model remains more relevant as its R squared value 0.82 shows greater significance in explaining the tourist arrivals. This is followed by US model with R squared value of 0.74 and France model with the R squared value of 0.63. Since F values are significant at 1 per cent level in all the three models, models are accurate in terms of their predictability. Durbin-Watson values fall in the acceptable range in all the three models. (see Table 5.2).

Table 5.2. Model Summary: UK, US and France models of Kerala's international tourism demand

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.905[a]	.820	.803	.14423	.820	48.259	5	53	.000	1.662
2	.858[a]	.735	.710	.10828	.735	28.908	5	52	.000	1.908
3	.813[a]	.661	.629	.19118	.661	20.646	5	53	.000	2.081

1: UK model; 2: US model and 3: France model

a. Predictors: (Constant), Log transformed data on UK's/US'/France's tourist overnight stays (tourism season of source country)-number of overnight stays, Log transformed data on income measured by UK's/US'/France's total imports ($ million), Log transformed data on relative price (UK's/US'/France's price index/India's price index), Log transformed data on rainfall in Kerala (mm), Log transformed data on relative temperature (UK's/US'/France's temperature/Kerala's temperature in Degree Celsius)

b. Dependent Variable: Log transformed data on foreign tourist arrivals in Kerala from the UK/the US/France-total

5.6. Conclusion

Income of the source markets plays only a moderate but positive impact on Kerala's international tourism demand as income elasticity of tourism demand remains lower (below 1) in all the three models-UK model, US model and France model. This holds true even as income stands significantly related to Kerala's international tourism demand only in the UK model. It is, however, revealed that Kerala's international tourism has not been a luxury product for the tourists from advanced economies in the

West as the tourist arrivals from the top major source markets remains less elastic to income. This is corroborated by the prevalence of greater role of relative prices in influencing the tourism demand.

Relative tourism prices make stronger impact on the tourism demand of Kerala as tourist arrivals from the UK and the US (Kerala's top two source markets of international tourism) were relatively more sensitive to relative prices with statistical significance at 1 per cent level. French tourists in Kerala were not sensitive to prices at the same time. Relative prices being highly relevant compared to income of the source countries, the destination authority has to make sure that Kerala's tourism export competitiveness remains higher for the surged arrivals of foreign tourists in future.

Environmental factors remain more relevant in Kerala's international tourism demand when compared to the standard determinants of income and prices. Both rainfall in Kerala and relative temperature were statistically significant in driving the arrivals of tourists from the UK, the US and France. This is consistent with the notion of seasonality nature of Kerala's international tourism. Tourists in Kerala from its top source markets arrive to experience its comfortable weather and get away from the extreme winter in their home country. At the same time, source markets' tourism seasonality could affect the tourism demand. In line with this notion, French tourists were more sensitive to the seasonality of France with 1 per cent level significance when compared to the tourists from the UK and the US. British tourists in Kerala were more sensitive to source markets' tourism seasonality than the US tourists as the estimate was significant at 10 per cent level. Among the top three source markets of Kerala's international tourism, the elasticities of the UK tourists were relatively higher with greater significance level. This is confirmed by the 'p values' and 'R squared values' presented in tables 5.1 and 5.2.

Owing to technical constraints in estimation of Kerala's international tourism demand using both ARDL and linear regression approaches, a qualitative study could provide some valuable insights. The thematic analysis on Kerala's international tourism using stakeholder interviews and thematic interpretations has been presented in the following chapter.

Chapter 6

STAKEHOLDERS' PERCEPTIONS ON KERALA'S INTERNATIONAL TOURISM: THEMATIC ANALYSIS ON FACTORS DRIVING OVERSEAS TOURIST ARRIVALS IN KERALA'S TOP DESTINATIONS

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6.2. Methodology

6.3. Major themes of Kerala's international tourism

6.4. Stakeholder perceptions on Kerala's international tourism: Theme-wise analysis

6.5. Discussion

6.6. Conclusion

6.1. Introduction

Kerala's international tourism cannot be comprehensively explained by quantitative analysis owing to issues of data unavailability, lack of data accuracy and inability to fulfil assumptions of various statistical tests. Moreover, there are quantitative data that cannot explain foreign tourist arrivals in Kerala as well. Stakeholder analysis was done to complement the quantitative analyses on Kerala's international tourism in line with Amoako et al. (2021), Alvarez et al. (2011), Salman et al. (2021), Nunkoo & Ramkissoon (2013) and Yuksel et al. (1999). The studies attempting to identify factors responsible for the arrivals of overseas tourists in Kerala are extremely less in number although there are a lot of econometric studies on tourism demand in the tourism economics literature. Qualitative research was also not adequately available for explaining the foreign tourist arrivals in Kerala. The thematic analysis could well be enough for identifying and explaining the factors driving overseas tourist arrivals in Kerala. More balanced and well covered conclusions can be reached from the stakeholder analysis compared to econometric analysis as well when perceptions of various stakeholders are used for the analysis. In-depth stakeholder interviews and subsequent analytical process could bring out various themes or factors that are not identifiable in the statistical analysis too.

Various econometric approaches in the tourism economics literature had attempted to estimate and explain international tourism demand (examples: Song et al., 2003; Naude et al., 2015; Dhariwal, 2005; Divisekara & Kulendran, 2006; Deluna & Jeon, 2014; Uysal & Crompton, 1984; Shafiullah et al., 2019, Zamparini et al., 2017, Roget & Gozalez, 2006 and Gani & Clemes, 2017). However, observable data with statistical techniques could not always provide sensible answers regarding the tourist arrivals. As per the review of available literature, it is understood that international tourism demand is influenced by numerous factors including the standard determinants of relative tourism prices, income of the source markets or tourists, transportation costs, nominal exchange rates and various other non-economic factors. Income has been positively related to the international tourism demand with statistical significance (Deluna & Jeon, 2014; Uysal & Crompton, 1984; Gani & Clemes, 2017; Divisekara & Kulendran, 2006 and Zamparini et al., 2017). Although negatively related as per presumption, tourism prices make some occasionally varying effect with negative sign in most cases (Shafiullah et al., 2019). Tourists from some countries were found to be

more sensitive to prices and cost of travel according to Shafiullah et al. (2019). The effect of standard determinants is in fact situational as those remain less relevant for the arrivals of tourists in some regions. Naude and Saayman (2005) point out that level of income in the origin country, the relative prices and the cost of travel in the origin country are not significant in explaining the demand for Africa. Regardless, Dhariwal (2005) and Divisekara & Kulendran (2006) point out that prices or cost of living in the destination has significant negative impact on tourist arrivals. It implies that economic determinants of income and prices make some selective impact on international tourism demand. The stakeholder analysis employed in this chapter attempts to examine primarily the role of relative prices and income of the tourists in Kerala's international tourism. Factors other than income and prices in affecting the tourism demand are also prevalent according to various studies (Garin-Munoz & Amaral, 2011; Divisekera & Kulendran, 2006 and Naude & Saayman, 2005. Cultural diversity and experience play significant role in attracting tourists to Penang Hill, Malaysia as per the stakeholder study by Salman et al. (2021).

The stakeholders who are directly involved in tourism sector of a destination with great amount of knowledge and practical experience can be classified into various groups. The stakeholders identified by Amoako et al. (2021) are employees, government, the society (natives) and the private sector. Every stakeholder plays significant role in their own capacity. More tourists are attracted when employees and natives in the tourism destination are able to ensure the destination is clean, safe and welcoming according to Amoako et al. (2021). Government, being regulator and facilitator of tourism, plays significant role in developing tourism infrastructure and providing financial support along with other roles. According to Jovanovic and Ivana (2016), developing tourism infrastructure forms the basis of tourism development. Private sector being a stakeholder category provides tourism supply in the form of hotels, restaurants and tour companies according to Amoako et al. (2021).

Themes identified in the stakeholder studies on tourism could be both economic as well as non-economic. In a study by Salman et al. (2021), themes are environmental protection, cultural conservation, economic support and activities, awareness and empowerment. Themes identified by Amoako et al. (2021) are categorised as stakeholder roles, industry challenges and ensuring sustainable tourism. Themes could change as per nature of the study. In a study on medical tourism, Alvarez et al. (2011)

identified several 12 themes or coding categories including data, country, regulation, role of government, diaspora and local people. The present study categorised the codes or organising themes under several global themes that are detailed in the coming sections.

It can be understood from the review of the available literature in tourism demand that factors driving international tourism could be both economic as well as non-economic. The adoption of stakeholder analysis increases the relevance still further as the particular method has not been largely employed in explaining international tourism especially in the Indian context. The present study seeks to identify relevant themes and codes associated with Kerala's international tourism.

6.2. Methodology

Thematic analysis was employed in the qualitative research on Kerala's international tourism. For the qualitative analysis of foreign tourist arrivals in Kerala, 28 intensive stakeholder interviews were carried out in Kerala's top four destinations of the foreign tourists except city destinations of Kochi and Thiruvananthapuram. Kochi and Thiruvananthapuram are intentionally exempted as no specific location could not be found for the foreign tourist arrivals in the big cities of Kerala. Size of the purposefully selected sample respondents was limited to 28 as sample size for the stakeholder analysis had reached saturation level. All the 28 stakeholders are highly experienced, knowledgeable and actively involved in their respective fields. Of the 28 stakeholders, 4 belong to Fort Kochi, 8 belong to Kovalam & Poovar, 8 belong to Varkala, 7 belong to Alappuzha and one is a government official in the tourism department of Kerala (see Figure 6.1 for locational view of sample tourist destinations in Kerala & Appendix 10 for iconic images of the top destinations). Stakeholders across the four destinations include auto/taxi drivers, accommodation units (hotels/homestays/resorts), natives and native shop owners, restaurants and tea shops, destination-based employees (Boat owners, tour guide and life guard), foreign tourists and government employee in the tourism department. (see Table 6.1 & Appendix 8). The number of sample respondents from each destination is determined on the basis of sufficiency for identifying maximum themes related to the foreign tourist arrivals. Total sample size and sample size from each destination is fixed in line with the notion of data saturation adopted by Amoako et al. (2021), Faulkner & Trotter (2017) and Fush & Ness (2015). Semi-

structured questionnaires were used to collect data in stakeholder interviews. Each interview which lasted for around 30-40 minutes was audio recorded with oral permission and later transcribed in to English. Codes and corresponding themes were identified from each transcript. After standardising the codes, global themes were identified. Global themes are the broader ones under which codes/organising themes belong to. Major themes and other relevant themes were identified from this process of stakeholder analysis. Relevant quotes by the stakeholders are included in the result section as well. The relevance of codes and themes are examined mostly by the number of responses. They are initially categorised into nine global themes viz. tourism resources, technological factors, social, cultural and psychological factors, economic factors, infrastructural factors, induced arrivals, health factors, geographical factors and climatic factors. Moreover, the identified codes/organising themes are re-categorised into semi-global themes viz. direct tourism resources, income and prices, purposeful arrivals, repeat visits, well-fashioned arrivals, Europe's travel culture, behavioural problems and other negative forces. This re-categorisation would communicate specifically the factors related to Kerala's inbound international tourism.

Table 6.1. Details of stakeholders

Stakeholder No.	Category	Destination	Age	Gender
1	Auto/Taxi	Alappuzha	53	Male
2	Other destination job-boat	Alappuzha	44	Male
3	Other destination job-boat	Alappuzha	31	Male
4	Accommodation unit-homestay	Alappuzha	62	Male
5	Accommodation unit-homestay	Alappuzha	46	Male
6	Native/Native shop owner	Alappuzha	46	Male
7	Restaurant	Alappuzha	38	Male
8	Native/Native shop owner	Fort Kochi	39	Male
9	Accommodation unit-homestay	Fort Kochi	53	Female
10	Accommodation unit-homestay	Fort Kochi	32	Male
11	Native/Native shop owner	Fort Kochi	41	Male
12	Government-Tourism Department (Kerala)	Other*	40	Male
13	Auto/Taxi	Kovalam-Poovar	37	Male
14	Native/Native shop owner	Kovalam-Poovar	52	Male
15	Restaurant	Kovalam-Poovar	43	Male
16	Restaurant	Kovalam-Poovar	57	Male
17	Native/Native shop owner	Kovalam-Poovar	44	Male
18	Auto/taxi	Kovalam-Poovar	36	Male
19	Other destination job-boat	Kovalam-Poovar	58	Male
20	Native	Kovalam-Poovar	22	Male
21	Other destination job-life guard	Varkala	42	Male
22	Accommodation unit-resort	Varkala	28	Male
23	Native/Native shop owner	Varkala	56	Male
24	Other destination job-tour guide	Varkala	48	Male
25	Foreign tourist (from the US)	Varkala	34	Female
26	Foreign tourist (from Germany)	Varkala	77	Male
27	Foreign tourist (from Russia)	Varkala	65	Female
28	Foreign tourist (from Italy)	Varkala	74	Female

Source: Transcripts of stakeholder interviews

*Tourism Department, Government of Kerala
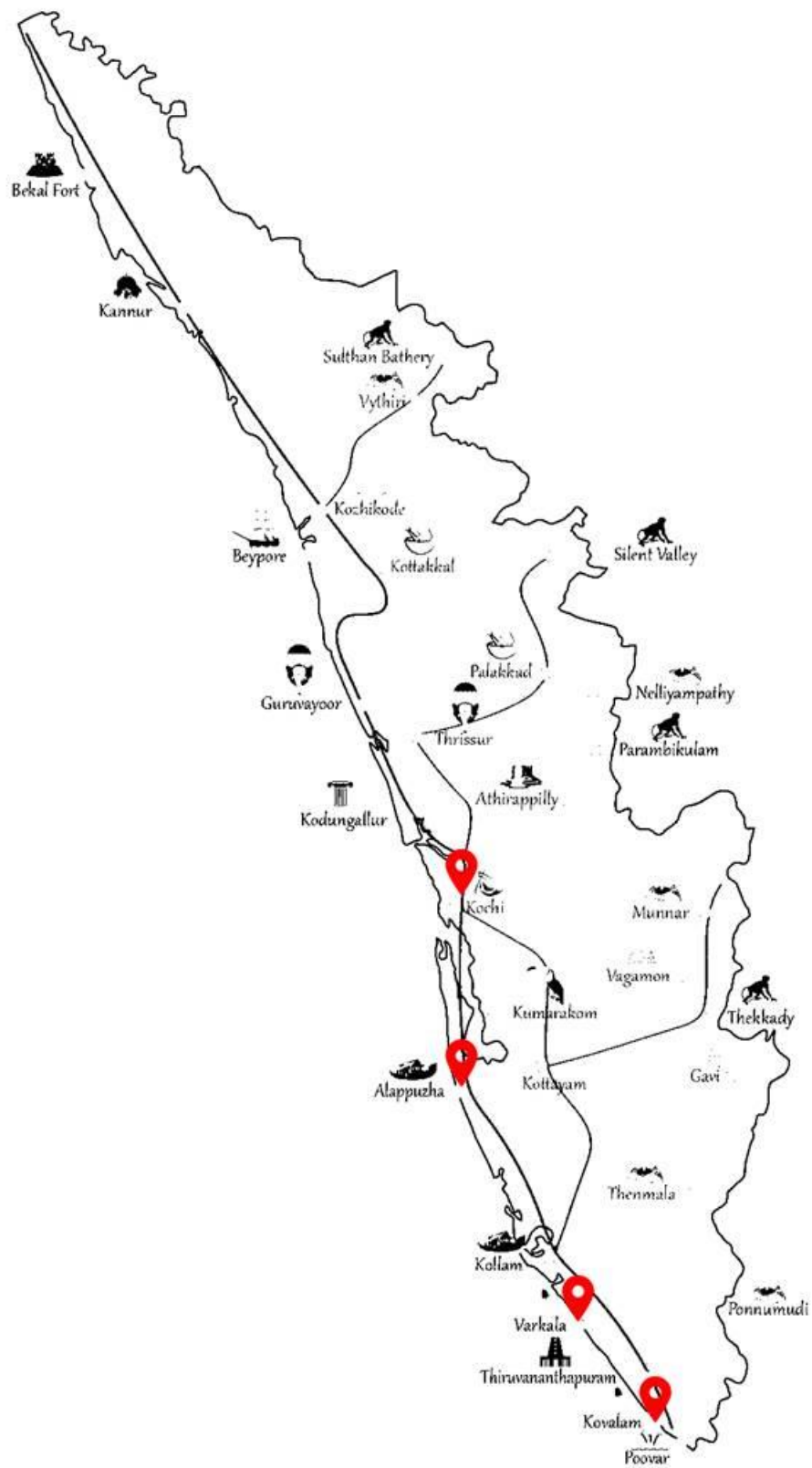
Figure 6.1. Kerala tourism map (Author's illustration)

6.3. Major themes of Kerala's international tourism

It is important to have a quick view first on the broad factors or global themes identified in the thematic analysis on Kerala's international tourism. It could provide clear understanding about the major factors that are deeply associated with the God's Own Country's international tourism sector. The major factors identified in terms of number of responses can be generalised to the entire international tourism arena of Kerala. Kerala's direct tourism resources including beaches, backwaters, heritage, hill stations and adjacent resources in each destination, foreign tourists mostly from advanced economies in Europe, North America and Middle East and presence of complementary destinations are found to be the top organising themes with more than 20 out of 28 responses. Foreign tourist arrivals in the state are majorly contributed by these three factors as per the stakeholder view. Opting low-cost transportation by the foreign tourists, poor waste management in the destinations, intention for leisure, repeat visits by the foreign tourists, sufficiency of government effort for maximising foreign tourist arrivals, seasonality of the arrivals and intention for trying local food are identified as the other major themes with the responses of 16-19 out of 28. Sufficiency of tourism supply by the private entrepreneurs, insufficiency of government effort in attracting the arrivals, tour packages, sunbath for health rejuvenation, Safe and friendly atmosphere, guests are mostly not rich and disturbed by noise and overcrowding are the other important themes with the responses of 14 and 15. See table 6.2 for the better understanding of the major themes identified in the stakeholder analysis on foreign tourist arrivals in Kerala. Detailed analysis of the major themes and other themes with stakeholder views is given in the coming section. (see Appendix 9 for the complete list of themes with responses and nature of effect).

Table 6.2 Major themes, responses and effect (in high to low order)

Organising theme	Responses (Max: 28)	Global theme	Nature of effect on FTAs
Direct tourism resources	27	Tourism resources	Positive
Guests mostly from advanced economies in Europe, North America and Middle East	25	Economic factors	Positive
Multiple destinations as complimentary	23	Tourism resources	Positive
Budget transportation: Auto, bus, bike, bicycle	19	Economic factors	Positive
Poor waste management	18	Social, cultural and psychological factors	Negative
Arrivals for leisure	18	Social, cultural and psychological factors	Positive
Repeat visits	17	Social, cultural and psychological factors	Positive
Sufficient government effort	16	Induced arrivals	Positive
Seasonal arrivals	16	Climatic factors	Positive
Culinary tourism: fresh fish, sea food, local food & globalization of food	16	Social, cultural and psychological factors	Positive
Investment by private entrepreneurs: resorts and guest houses, restaurants and tea shops, souvenir shops, and grocery stores	15	Infrastructural factors	Positive
Insufficient government effort	15	Induced arrivals	Negative
Tour packages	14	Induced arrivals	Positive
Sunbath for health rejuvenation	14	Health factors	Positive
Safe and friendly atmosphere	14	Social, cultural and psychological factors	Positive
Guests are mostly not rich	14	Economic factors	Positive
Disturbed by noise and overcrowding and need calmness	14	Social, cultural and psychological factors	Negative

Source: Transcripts of stakeholder interviews

Social, cultural and psychological factors remained the top global theme with the total responses of 232 followed by economic factors with 140 responses. Tourism resources became the distant third with 80 responses followed by induced arrivals with 70 responses, health factors with 57 responses and climatic factors with 47 responses. Infrastructural factors with 37 responses, technological factors with 25 responses and geographical factors with 12 responses are the other global themes (see Figure 6.2). However, the sum of responses by themes may not represent the top organising

themes/codes. The sum of responses is contributed not only by relevance but by number of organising themes identified under each global theme also. Hence, top themes by number of responses are not necessarily be the global themes representing top organising themes. In light of this finding, it is obvious that social, cultural and psychological factors and economic factors are widely prevalent in explaining Kerala's international tourism. These two have emerged as the major global themes of Kerala's international tourism as larger number of codes are identified under both themes. The prevalence of these two themes is exactly in compliance with Minj and Mishra (2019) who point out that many researchers in tourism economics analysed the role of social, cultural, psychological, personal and economic factors in influencing travel decisions apart from internal as well as external factors. Effect of income, education and health factors are also analysed by Minj and Mishra (2019).
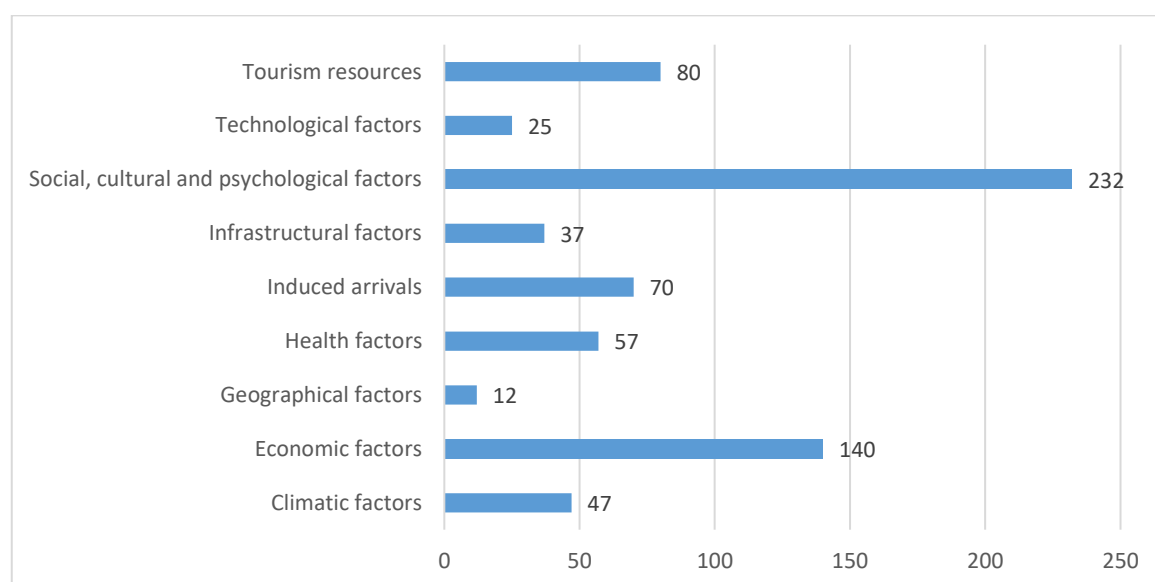
Figure 6.2. Sum of responses by global themes

Source: Transcripts of stakeholder interviews

6.4. Stakeholder perceptions on Kerala's international tourism: Theme-wise analysis

6.4.1 Role of tourism resources

Tourism resources of Kerala are supposed to have affected foreign tourist arrivals in the state positively or negatively. As the sufficiency of tourism resources could lead to increased arrivals and insufficiency leads to decreased arrivals, foreign tourist arrivals in the state will be the net effect of these two contrasting forces. Presence of direct

tourism resources in the state in the form of beaches, backwaters, heritage sites and adjacent resources in the destinations is found to be the most relevant and common organising theme with 27 responses. Beaches and backwaters have been prevalent in Kerala's international tourism. While Fort Kochi is known for its heritage, beach, backwater and Chinese fishing nets, Kovalam and Varkala are purely the beach destinations and Alappuzha is a beach-cum-backwater destination. 27 out of 28 stakeholders were of the opinion that arrivals of overseas tourists in the state are to experience and enjoy Kerala's direct tourism resources (see Table 6.3). It implies that foreign tourist arrivals in Kerala are primarily and explicitly benefited from the presence of Kerala's rich and diverse tourism resources and products.

Direct tourism resources: Among the direct tourism resources, beaches remain one of a few dominant ones in the state. Stakeholder 13 (37 yr; auto driver) says *"beach is the main attraction in Kovalam. They take sunbath regularly on the beach in the morning up to 10-11 am. They like to see sunset too. They want to experience sunlight and take sunbath"*. Stakeholder 21 (42 yr; other destination job-life guard) says *"if foreign tourists visit Kerala, they will definitely visit couple of famous beaches including Varkala and Kovalam"*. Backwaters is another dominant tourism resource of Kerala that attracts foreign tourists in large number. Stakeholder 2 (44 yr; other destination job-boat) responds *"favourite destinations of the foreign tourists are located here. They are attracted by backwaters. They say Alappuzha backwaters is the main destination in the world. There is no other place as beautiful as this. That is why they visit here"*. Stakeholder 7 (38 yr; restaurant) says *"Alleppey's advantage is its backwater and beach. Houseboats attracted more foreign tourists here overtime"*. Beaches and backwaters play a decisive role in attracting foreign tourists in Kerala in voluminous number. This is true at least in three top sample destinations except Fort Kochi where tourists are highly attracted by its rich heritage. In the words of stakeholder 8 (37 yr; native shop owner), *"Heritage dominates all attractions as far as Fort Kochi and Mattancheri are concerned. Foreigners (especially Europeans) are interested in the history of Fort Kochi and Mattancheri since 1500 AD. Their tradition is deeply rooted here too including those of the Portuguese, the Dutch and the British"*. Other stakeholders' perceptions are also not different. So it is obvious that Kerala's foreign tourist arrivals are majorly and apparently attracted by beaches, backwaters and heritage. These dominant tourism resources are complemented by adjacent and minor

resources situated in various destinations such as Chinese fishing nets, estuary, wildlife, hill stations and waterfalls (see Table 6.3).

Complementary destinations: Presence of multiple destinations in the vicinity as complementary destinations to each other could lead to increased arrivals of foreign tourists in the state. Top destinations of overseas tourists in the central and south Kerala are highly accessible for the tourists. According to 23 out of 28 stakeholders, foreign tourists visit multiple destinations in central Kerala and south Kerala. They visit more than one destination mostly. Those who visit Fort Kochi, will go to Alappuzha, Munnar, Thekkady, Varkala and Kovalam. Kerala's top destinations for the foreign tourists are mostly situated in a tourism circle. Stakeholder 12 (40 yr; tourism department) says "*Kerala international tourism is becoming Central-Kerala focused as there is a package connecting Mathurai, Thekkady, Ernakulam and Alappuzha*". In the words of stakeholder 2 (44 yr; other destination job-boat) "*Foreign guests not only visit here. They visit Munnar, Thekkady, Thiruvananthapuram and Ernakulam too. Kovalam and Varkala beaches are their major destinations*". Some of the foreign tourists arrive from Tamil Nadu through Thekkady after visiting Mathurai and other destinations according to some stakeholders (see Table 6.3).

Other organising themes under tourism resources: Presence of substitute destinations, reputed destinations and lack of night life are the other codes identified in the analysis. The former is relatively important one among the three. Due to certain advantages existing in Kerala's destinations and advantages of its substitute destinations in Sri Lanka and Malaysia where similar climate prevails, Kerala's potential tourists could go to its substitute destinations according to 9 stakeholders. It could have a negative effect on Kerala's international tourism. Tourists arrive in Fort Kochi and Kovalam in large number as both are internationally reputed destinations, according to 5 stakeholders. Lack of night life in Kerala's destinations is the least important organising theme with mere two responses (see Table 6.3).

Table 6.3. Organisation of themes on tourism resources

Sl No	Organising themes	Responses	No. of responses (max: 28)
1.1	Direct tourism resources	Foreign tourists in Kerala are attracted by beaches, backwaters and heritage of Kerala, duly complemented by adjacent and minor resources like Chinese fishing nets, estuary, wildlife, hill stations and waterfalls	27
1.2	Substitute destinations	Some of the potential tourists choose countries like Sri Lanka, where climate is similar to that of Kerala, instead of Kerala as their destination. Varkala in Kerala has become a substitute destination for Kovalam which is on the descend.	9
1.3	Complementary destinations	Tourists visit multiple destinations in Kerala and Tamil Nadu one after the other.	23
1.4	Reputed destination	Kerala has a couple of destinations including Fort Kochi, Kovalam which are well known and reputed ones among international tourists over a long period of time.	5
1.5	No night life	There is nothing in Kerala's destinations which entertain tourists at night	2

Source: Transcripts of stakeholder interviews

6.4.2 Role of climatic factors

Kerala's international tourism is obviously seasonality-driven as tourists arrive massively in a few months (see Table 2.3). According to 16 stakeholders, foreign tourist arrivals reach maximum in December and January after season starts in August. Extreme cold in the origin country and Kerala's comfortable climate happened to be the next relevant code with 12 responses. Vacation in the source markets, lower foreign tourist arrivals and monsoon tourism remain less relevant organising themes. (See Table 6.4).

Seasonal arrivals and relative climate: Kerala's international tourism season starts in August, progresses in October and reach its peak in December and descends in February. The peak season is characterised by the prevalence of extreme cold climate in the Western countries and comfortable climate in Kerala. Stakeholder 9 (53 yr; accommodation unit) responds "*Season starts from August onwards. Onam and snake boat race festivals are being celebrated here in August. After a slow growth in September, number of foreign tourists surges from October onwards again. They have extreme cold weather in their countries this time*". According to stakeholder 17 (44 yr; native shop owner), "*foreign guests visit mostly in October, November, December,*

January, February and March". It implies that large number of foreign tourists turns out in Kerala in large number during October-March period when the source markets experience extreme cold climate and Kerala enjoys comfortable climate (see Table 6.4).

Other climatic factors: Number of arrivals is lower in the rainy season according to 6 stakeholders. At the same time, 5 stakeholders responded that tourists from various countries especially the Middle East largely turn out in the rainy season. Stakeholder 10 (32 yr; accommodation unit) says "*Arabs visit here when they have hot climate and we have rainy season in June-July months. They want to experience rain. During rainy season, Arabian guests (from the Middle East) dominate foreign tourists in Kerala. Tourists from other countries in the rainy season are rare. When winter vacation starts in European countries especially France, we have busy season here*". It implies that Arabs largely turn out in the rainy season when the tourists from the West especially Europe is largely off the destinations. It shows monsoon tourism is prevalent among guests from the Middle East. The quotes also imply that European guests visit mainly during winter season when they have vacation at home country. European guests dominate overall tourist arrivals in Kerala as well. (see Table 6.4).

Table 6.4 Organisation of themes on climatic factors

Sl No	Organising themes	Responses	No. of responses (Max:28)
2.1	Extreme cold in origin and comfortable climate in destination	Foreign tourists choose destinations in Kerala to get away from extreme cold weather in the source countries and enjoy comfortable and stable weather in Kerala.	12
2.2	Seasonal arrivals	Foreign tourist arrivals reach maximum in December and January. The season starts in August, progresses in October and reach its peak in December and descends in February.	16
2.3	Lower arrivals during rainfall	Rainy season is offseason for foreign tourist arrivals in Kerala with the exception of increased inflow of tourists from the Middle East during the monsoon.	6
2.4	Vacation	Kerala receives maximum arrivals during vacation in the source countries during the extreme winter.	8
2.5	Monsoon tourism	Middle east guests arrive largely in the rainy season as against less number of arrivals from the major source markets (Western countries).	5

Source: Transcripts of stakeholder interviews

6.4.3 Role of economic factors

Six organising themes under the global theme of economic factors are relatively more relevant in terms of higher number of responses. Guests mostly from advanced economies with 25 responses, dependence on low-cost transportation with 19 responses, guests mostly not rich with 14 responses, lower relative prices with 13 responses, greater currency value and shopping with 11 responses each are highly relevant ones among the identified economic factors. According to a total of 6 stakeholders, tourism prices have become higher in Kovalam compared to other destinations in Kerala, regular pension to the aged foreign tourists and bargaining and cautious spending by the tourists are the other important themes. All the other 12 organising themes are less relevant ones with less than five responses. (see Table 6.5).

Guests from the advanced economies: Twenty five stakeholders responded that foreign tourists in the state are mostly from the advanced and high income economies of Europe and North America and the Middle East. This is in compliance with Kerala's foreign tourist arrivals data as well (Department of Tourism, GoK, 2022). Tourists from developed economies of Europe (especially the UK, France, Germany, Italy, Switzerland and Netherlands), tourists from affluent North America (the US and Canada) and high income economies of the Middle East (especially Saudi Arabia, Oman and the UAE) outnumber tourist arrivals in the state from the rest of the world as per official statistics (see Figure 2.5). Stakeholder 4 (62 yr; accommodation unit) responds "*mainly, Europeans come here to escape themselves from the extreme cold climate in their home countries*". Stakeholder 6 (46 yr; native shop owner) says "*There are not much tourists in Kerala from non-European countries. There are lot of tourists from the US too. Tourists are mostly from the UK followed by the US, France, Germany and other European countries*". In the recent period, it is observed that while the stakeholders from Fort Kochi and Alappuzha generally pointed out the presence of the Middle East guests, stakeholders in Kovalam and Varkala mentioned the recent surge in arrivals of Russian tourists. It indicates overseas tourists who arrive in Kerala, at least in the top four destinations, have been majorly from the developed and high income economies in the Western Europe, North America and the Middle East. (see Table 6.5). To add with the stakeholder views, tourists from Australia, Malaysia and Maldives, Russia and Israel are also massively arriving Kerala's destinations (see Figure 2.5 and Appendix 2). Regardless, it is obvious that great majority of the source countries of

Kerala's international tourism are developed or high income economies. A few source countries such as Russia, Malaysia and Maldives belong to upper middle income categories at the same time (see Table 3.2).

Dependence on low-cost transportation: Foreign tourists in Kerala's destinations mostly prefer low-cost city travel options of auto/motorbike/bicycle/walking. According to stakeholder 4 (62 yr; accommodation unit) "*foreign tourists hire mostly auto for city ride. Someone takes scooter on rent. Some properties (accommodation units) even provide scooter for free use on friendship basis. They like bicycle more*". Nineteen of the 28 stakeholders are of similar opinion. It implies that foreign guests in the state prefer to spend lower. They bargain for the auto fare according to some stakeholders. This must be read along with the view of stakeholder 15 (43 yr; restaurant) who said "*foreign tourists spend less for the tourism services in the destinations*".

Guests are mostly not rich: Foreign tourists in Kerala are mostly not rich although many of them hail from the advanced economies of Europe, North America and the Middle East. They are mostly common men doing normal works in their homeland. Then how do they arrive here in large numbers and why do they get seemingly greater purchasing power? This is due to lower relative tourism prices in Kerala compared to the source markets and greater currency value they get on major international currencies including US Dollar and Euro. According to stakeholder 24 (48 yr; other destination job-tour guide) "*everyone misunderstands that all foreign guests are rich. Not all are rich. There are rich guests who stay in Varkala only for a week. Others stay here longer*". Stakeholder 22 (28 yr; accommodation unit) "*all guests are not rich. They are mostly common men engaged in normal jobs. Once, I met a German young lady in Munnar when I work in a hotel there. She works in a coffee shop in Germany. She gets ₹1,000 per hour. She saves those money and travel*". It shows that normal guests work and save money across the year and travel in the winter season mostly. They stay longer duration too.

Lower relative prices and greater currency value: In line with the consumer demand theory, lower tourism prices could drive larger arrivals of foreign tourists. According to stakeholder 9 (53 yr; accommodation unit), "*foreign tourists can lead a lavish life here as cost of living is well below their home country*". Stakeholder 15 (43 yr; restaurant)

responds "*with one-month pension, they can stay here 3 months extravagantly as tourism goods and services are cheaper*". Winter period witnesses surged arrivals from the countries where extreme cold climate is prevalent. Cost of living rises that period in such countries too. They visit countries like India where prices are relatively lower. It shows their income has greater purchasing power in developing countries like India where prices are relatively lower. This is relevant as great majority of the tourists belong to advanced economies where cost of living could be relatively higher. Thirteen of the 28 stakeholders believe that lower relative prices in Kerala's destinations happened to be a driving force for the arrivals of overseas tourists in the state. In short, lower cost of living and tourism prices in developing countries compared to advanced economies drive arrivals of tourists in Kerala from Western Europe and North America.

Foreign tourists in Kerala are able to spend huge amount of money (₹60,000/- on an average according to the tourism department employee of Kerala and stay longer as international currencies including US Dollar, Euro, Pound Sterling, Swiz Franc, Australian Dollar and Canadian Dollar have greater value in terms of Indian Rupee. This is facilitated by lower cost of living in Kerala compared to home countries of tourists in the state. Being guests from the advanced economies, they are relatively high income people too as they get greater purchasing power in Kerala. Stakeholder 21 (42 yr; other destination job-life guard) responds "*although foreign guests are not that much rich, they have higher real income as their currencies have greater value in Kerala in terms of Indian Rupee*". "*Affordability and greater value of the currencies (international currencies) are the main reasons for the arrivals of foreign tourists in Kerala*" according to Stakeholder 3 (31 yr; other destination job-boat). This was mentioned by 11 of 28 stakeholders.

Shopping: Eleven stakeholders opined that foreign tourists would like to do shopping in Kerala's destinations. However, not all tourists spend a lot. Stakeholder 4 (62 yr; accommodation unit) responds "*foreigners won't spend that much. They like to buy antiques and handicrafts mainly. They are not much interested in other items. Someone takes spices to their places. They are interested in Kerala style costumes especially set-saree*". According to Stakeholder 17 (44 yr; native shop owner) "*they buy souvenirs and handicrafts. They don't buy fancy items. They buy quality items only*". Stakeholder 27 (65 yr; foreign tourist) says "*I like shopping in Kerala. I always get great service*

and good products here". It is clear from these quotes that there are foreign tourists who are interested in shopping souvenirs, handicrafts, spices and Kerala-style costumes.

Other economic factors: Among the other economic factors, four remain relatively relevant. Economic characteristics of ship guests, higher relative prices in Kovalam, regular pension to the aged and bargaining and cautious spending are those four organising themes. Ship guests are the foreign tourists who arrive in Kerala's coast on luxury tour packages. They are mostly aged and rich. They spend only a few days in the destinations. When they arrive in Cochin Port, they spread to various destinations in the state and will be back to the ship as per schedule. Even though they stay just a few days or even a day in a destination, they spend a lot for shopping and other purposes. Ship guests could arrive in any season of the year but need comfortable and peaceful sea for the cruise. Seven stakeholders mentioned these characteristics of ship guests. Six stakeholders pointed out tourism prices in Kovalam are higher when compared to that of other destinations in Kerala. According to them, number of foreign tourists in Kovalam has been decreasing in the recent times as other destinations in Kerala are being chosen as substitute ones in light of surged prices. According to 6 stakeholders, foreign tourist arrivals in the state are being powered by regular monthly pension to the aged guests from the countries in Europe. One-month pension is enough for them to lead lavish life in Kerala for a few months owing to affordability in Kerala and greater value of international currencies compared to Indian Rupee. Bargaining and asking for lower prices is another feature of foreign tourists in Kerala according to 6 stakeholders. They confirm the rate first before auto is being hired for city ride.

There are 11 isolated organising themes too with 4 responses and below each out of 28. Economic spending by long-staying guests and large-scale spending by short-staying guests and doing part-time works are prominent ones among them (see Table 6.5 for other isolated factors).

Table 6.5. Organisation of themes on economic factors

Sl No	Organising themes	Responses	No. of responses (Max:28)
3.1	Guests are mostly not rich	Foreign tourists in Kerala are mostly not rich. They are mostly common men doing normal works.	14
3.2	Guests are mostly rich	Guests are mostly rich in expensive destinations like Poovar	2

3.3	Guests mostly from advanced economies in Europe, North America and Middle East	Although most guests are not rich, almost all guests belong to the advanced and high income economies in Europe, North America, Middle East and Oceania.	25
3.4	Lower relative prices	Compared to high cost of living in the home countries of the guests who belong to Europe, North America and Oceania tourism prices in Kerala is nothing. It enables them to visit and stay longer in Kerala.	13
3.5	Higher prices in Kovalam compared to other destinations in Kerala	Although overall prices are lower in Kerala compared to that of the source markets, cost of living has increased in the recent period in Kovalam for the tourists compared to the other destinations like Varkala. This relative higher prices in Kovalam could lead to substitution effect in favour of Varkala and other beach destinations.	6
3.6	Higher flight fare	More tourists would have been arrived if flight fare is lower than existing.	2
3.7	Greater currency value	Greater value of currencies including Euro and US Dollar in exchange for Indian Rupee enables the tourists to visit and spend more in Kerala.	11
3.8	Economic crisis	Tourism spending reduced significantly after the global economic recession in 2008	1
3.9	Regular pension to the aged	Aged guests who constitute a larger percentage of total foreign tourists in Kerala and belong to advanced economies receive sufficient amount as monthly pension.	6
3.10	Aged guests are rich	Most of the aged guests who arrive in Kerala are rich. They arrive in luxury ships as part of world-wide tour package.	2
3.11	Shorter stays by rich guests and longer stays by normal guests	Rich guests won't stay longer as rich guests who mostly arrive by luxury ships won't leave the destination in one or two days.	2
3.12	Economic spending by long staying guests and large scale spending by short staying guests	Average daily expenditure by the long staying guests is lower than that of short staying guests.	4
3.13	High spending by aged	Senior citizens among the foreign tourists spend a lot for accommodation and shopping	2
3.14	Shopping	Foreign tourists spend a lot for shopping	11
3.15	Ship guests: rich guests, luxury stays, short stays, aged persons	The guests who arrive by luxury ships as part of package tours are rich guests. They are aged persons as well. They stay shorter.	7
3.16	Flight guests are common people	Flights are being chosen by common guests. Rich guests choose ships as part of package tours.	2
3.17	Budget transportation: Depend auto, bus,	Foreign tourists mostly prefer to depend low cost city travel options including auto/motorbike/bicycle/walking.	19

	bike, bicycle		
3.18	Bargaining and cautious spending	They ask and confirm the rate when an auto is being hired.	6
3.19	Part-time work	Tourists who don't have much money in possession do some part-time works.	3
3.20	Rate discrimination	Various goods and services are sold to foreigners at a price higher than the price levied from the citizens.	2
3.21	Property ownership	Someone buys properties in destinations for domestic or commercial purposes.	2

Source: Transcripts of stakeholder interviews

6.4.4. Role of social, cultural and psychological factors

Six organising themes under social, cultural and psychological factors are highly relevant among 29 total such codes with 14 and more responses. Poor waste management, arrivals for leisure, repeat visits and culinary tourism remained more relevant with 16-18 responses each out of 28. Disturbed by noise and overcrowding and safe and friendly atmosphere are the other two relevant codes with 14 responses each. Travel planning with 12 responses, travel mania of Europeans, language as advantage and barrier with 11 responses each, special events and effective policing with 10 responses each, Experiencing destination's culture and village life, trust building and beach-side stays with 9 responses each are the other main codes identified under the broad theme (see Table 6.6).

Poor waste management: Waste management in Kerala's destinations is identified as one of the most dominant negative forces under social, cultural and psychological factors. Kerala's destinations remain unhygienic and makes foreign tourists uncomfortable and disgusting according to 18 stakeholders. According to stakeholder 5 (46 yr; accommodation unit) "*Destinations should be kept clean and hygienic to improve tourism. Now it remains unhygienic. Nobody is bothered about it. We cannot blame government and politicians. Everyone is responsible. Foreign tourists don't like our unhygienic conditions. Our people put waste carelessly. They (foreign tourists) don't do that. This is cultural difference*". It implies that unhygienic nature of Kerala's destinations makes foreign tourists uncomfortable. Concerted effort is required to get away from this crisis. In the words of stakeholder 26 (77 yr; foreign tourist) "*what I find, what disturbs me mostly is even here in Varkala, tourism place is so dirty. Everywhere, especially when I watch three-four days ago, there were many Indians on the beach as groups. Then they dismantle the plastic bags after the use. I watched these*

people, every party there was a group of five-six-eight people sitting by the sea. Every party buys the food in the plastic bags and eat it. Afterwards, they just fold down the plastic bags and throw in to the beach". It implies that stakeholders including foreign tourists are of such an opinion and thus hikes the importance of wastes for being effectively managed (see Table 6.6).

Arrivals for leisure: According to stakeholder 3 (31 yr; other destination job-boat), "*foreign tourists (who arrive in Kerala) are here to enjoy their vacation and relieve from their busy life*". Stakeholder 12 (40 yr; government-tourism department) says "*major intention of the foreign tourists here is leisure and recreation*". Stakeholder 25 (34 yr; foreign tourist) "*I love beaches. I love swimming. I want to relax in my vacation*". Eighteen of the 28 stakeholders were of the same opinion. These all imply that most foreign tourist want to enjoy their vacation and get relieved from their hectic schedule at their home country (see Table 6.6).

Repeat visits: Visit by the foreign tourists again in Kerala's destinations has been a common pattern. This was recognised by 17 stakeholders. Stakeholder 28 (74 yr; foreign tourist) says "*I come here every year. I do Ayurvedic treatment every time I come. I visit Varkala cliff every time*". There was another foreign tourist, who is aged 77, participated in the interview who has been visiting Varkala beach every year for the past 40 years. Stakeholder 23 (56 yr; native shop owner) responds "*There are so many tourists who repeat. There are guests who come regularly all the years as they like here. They are fond of this place. It may be due to the calmness here (in beach destinations)*". Due to the emotional bond they develop with the destination and people in the destination, they want to come over and over again. (See table 6.6). The category of repeat visits constitutes nearly one-third of the total foreign tourist arrivals in Kerala as per 'Kerala Continuous Tourism Report 2019' (Datamation Consultants Pvt Ltd, 2022).

Culinary tourism: According to 16 stakeholders, foreign tourists would like to try local food. Someone takes local food on regular basis. But most foreign tourists try local food sometimes. Stakeholder 25 (34 yr; foreign tourist) says "*I loved Kerala food. There are so many restaurants here. I eat Indian food all the time*". According to stakeholder 23 (56 yr; native shop owner) "*There are guests who walk to Varkala town and have masala dosa. Beach-side restaurants are expensive here. Mostly they take*

their own food. They taste Kerala food too although rare". Stakeholder 17 (44 yr; native shop owner) states "*they include Kerala food in their cuisine as it is less expensive. Our Dosa and Appam are available at less prices*". Stakeholder 8 (39 yr; native shop owner) responds "*they prefer fish items here. Both foreigners and north Indians prefer sea food. It is unique in Fort Kochi that they can take fishes after being bought from here itself and gave it for cooking. It is rare in Kerala. Guests can purchase the favourite fish caught using Chinese fish nets-all fresh*". According to stakeholder 7 (38 yr; restaurant) "*They try Kerala food but not on regular basis. They like Indian curries. Our Mughal chicken. They like it*". All these responses show that foreign tourists would try local food items including seafood, Dosa etc although they take continental food majorly. They get continental food from the restaurants located by the sea in the beach destinations. Local food items are affordable too compared to the continental items. They are excited to taste fresh fish caught from the backwaters and sea (see Table 6.6).

Disturbed by noise and overcrowding: Exactly half of the stakeholders believed that disturbance due to noise and overcrowding in the destination have been affecting foreign tourists negatively. They also suggested setting calm atmosphere in the destinations to the tourists. Stakeholder 6 (46 yr; native shop owner) says "*They (foreign tourists) like silence. They don't like noisy conditions unlike us*". Stakeholder 10 (32 yr; accommodation unit) describes "*They don't like making noises unlike us. We play music loudly. They use headsets for hearing music, not to make others uncomfortable. They don't like making public announcements on the roads (using microphone) of political parties and various events*". According to stakeholder 16 (57 yr; restaurant) "*Every foreign guest need calm and quite place. That is why all of them stay inside a little far from crowded beach area. They want to be free from crowds and nuisance*". It is clear from the responses that foreign tourists feel disturbed by noisy and crowded atmosphere. They just need calm and quite places where they can relax with privacy all day. So they keep themselves away from main beaches especially in the peak hours according to stakeholder 7 (38 yr; restaurant). (see Table 6.6).

Safe and friendly atmosphere: According to 14 stakeholders, destinations remained almost free from abuses and assaults on foreign tourists. Natives are accommodative and friendly as well. Stakeholders, however, accept that there could be isolated instances of misbehaviour towards foreign tourists. Stakeholder 27 (67 yr; foreign

tourist) says "*I like Indian people. They are very positive and always smiling. In this difficult time, the Indians treat the Russians well. I haven't seen anything negative from them. The Kerala police effectively intervene for the tourists. We are not stressed by anything and do not bring any difficulties. I really like that there are women's police here. I feel safe in Kerala*". Stakeholder 3 (31 yr; other destination job-boat) responds "*There are only isolated incidents of bad behaviour from natives on foreign tourists. Everywhere there will be a few bad people. We cannot generalise it. Police interfere effectively in such situations. They won't have to face other issues*". Although 14 stakeholders argued Kerala's destinations are mostly safe and people are friendly, there are a few stakeholders including a foreign tourist who mentioned non-friendly behaviour of the people and unsafe nature of the destinations. It indicates that Kerala's destinations are mostly safe and people are generally friendly. However, isolated instances of misbehaviour on foreign tourists make some disturbances. (see Table 6.6).

Travel planning: According to 12 stakeholders, every foreign tourist has their own travel plan while they arrive. They do only whatever they want to do. Mostly, they have a fixed budget as well across the stay duration. They won't blindly trust destination's people to spend money for various tourism goods and services. According to stakeholder 10 (32 yr; accommodation unit), "*foreign tourists have a fixed budget to spend in a year. They will spend the entire amount of money as per their schedule and budget*". Stakeholder 24 (48 yr; other destination job) responds "*foreign tourists have a time table. They have a planning of what to see and what to spend. They plan to spend a fixed amount of money every day. When they spend higher for a thing, they give up other spending to balance their budget. When they drink tender coconut, they give up Pepsi, for example. They know how much to spend for room a day and what to eat*". The responses on the travel planning codes has been summarised in table 6.6.

Other social, cultural and psychological factors: Among the other factors, seven are relatively relevant with 9-11 responses each. Travel mania of Europeans, language as advantage and barrier with 11 responses each, special events and effective policing with 10 responses each, experiencing destination's culture and village life, trust building and beach-side stays with 9 responses each are those other relevant factors. Eleven stakeholders mentioned about the travel mania of the Europeans. Europeans start travel in their childhood days itself according to stakeholders. They are free to travel anytime in their opinion. This assumes significance as great majority of Kerala's international

tourists are from Europe. Kerala receives tourists from both English speaking and non-English speaking countries. English speaking countries feel comfortable in mingling with natives and shop owners as they can speak English. Language is an advantage as far as English speaking guests are concerned. It's a barrier for non-English speaking guests at the same time. Multilingual travel guides could accompany the group of such tour groups. Foreigners are excited to experience special events of temple festivals, 'Kochi-Muziris Biennale' and boat race which happen seasonally. Ten stakeholders specially mentioned the eagerness of the foreign tourists to experience those events. 10 stakeholders pointed out effective intervention of Kerala Police in setting safe and friendly atmosphere to the foreign tourists in the destinations. Stakeholder 8 (39 yr; native shop owner) says "*frankly speaking, foreign tourists during carnival time in the past had to encounter a few issues. Many outsiders will come that time. They had abused women. Now the things won't worsen as the police take strong position. Now the things have changed*". According to stakeholder 21 (42 yr; other destination job), "*tourism police on main beach will actively interfere if there is any issue*". The responses imply that due to the effective intervention by the police, things have changed favourably. The destinations have become safe and friendly as police take timely and effective actions.

Foreign tourists in the state want to experience village life and culture according to 9 stakeholders. Another equally relevant theme is 'trust building' which is a natural process developing amid regular and repeated foreigner-native interactions. Once trust building happens, foreigner accepts the advices and directions of the natives. They may financially help those natives too. According to 9 stakeholders, beach-side stay is pretty much common among the foreign tourists. It's comfortable for them as they want to do sunbath twice a day regularly. There are a lot of beach-side properties too for the stay as well. Long-staying guests prefer beach-side properties for the stay too. Reviews and mouth publicity helped for surged arrivals of overseas tourists in the state according to 7 stakeholders. Accommodation units try to improve guest reviews by improving the quality of hospitality in their view. Likelihood of tourists for being cheated by someone is still not over. According to 7 stakeholders, foreign tourists are extremely bothered about being cheated. They expect they are likely to be cheated unless and until trust building happens. Misbehaviour towards foreign tourists is identified as another equally

relevant issue in Kerala's international tourism. Foreign tourists look uncomfortable and irritated with the staring and unnecessary questions. (see Table 6.6).

Table 6.6. Organisation of themes social, cultural and psychological factors

Sl No	Organising themes	Responses	No. of responses (Max:28)
4.1	Disturbed by noise and overcrowding and need calmness	Foreigners are irritated by noise. They choose deserted areas instead of crowded ones in the destinations as they always need calmness and privacy.	14
4.2	Experiencing destination's culture and village life	Foreign tourists are excited to experience destination's life style especially in village life.	9
4.3	Poor waste management	Foreigners are extremely uncomfortable with poor waste management systems in the destinations. They are unhappy with the way in which locals and domestic tourists dispose the wastes.	18
4.4	Arrivals for leisure	Foreigners arrive mostly for leisure and spend vacation.	18
4.5	Culinary tourism: fresh fish, sea food, local food & globalization of food	Foreigners would like to try local food as part of experiencing destination's culture. They are mostly excited to take fresh backwater fish and seafood. Someone tries other local food items sometimes. There is someone else who regularly take local food in the destination. Their home food is available here too as food is also globalized.	16
4.6	Trust building	Trust building is a natural process amid regular and repeated foreigner-local interactions. Once trust building happens, foreigner accepts the advices and directions of the local. They may financially help those locals too.	9
4.7	Cheating	They don't like to be cheated. They expect they are likely to be cheated unless and until trust building happens.	7
4.8	Emotional bond	They always want to visit the same destination where they visited earlier. They want to stay in the same room where they stayed earlier.	5
4.9	Repeat visits	Most tourists are repeat visitors as they are satisfied and comfortable in the destinations. They are emotionally attached too to the destination, its people and hotel where they stayed in the previous visits.	17
4.10	Safe and friendly atmosphere	Destinations are almost free from abuses and assaults on foreign tourists. There could be only a few instances of such misbehaviour just like other locations. Natives are accommodative as well.	14
4.11	Not safe and friendly atmosphere	Destinations look unsafe as there were a few instances of misbehaviour towards foreign tourists.	3
4.12	Travel mania of	Europeans normally travel extensively throughout	11

	Europeans	their lifetime. Even at their younger age, they are free to travel irrespective of gender.	
4.13	Enjoying art forms	Foreigners especially those who belong to the Western countries are excited to enjoy various art forms.	5
4.14	Language: barriers for non-English speaking guests	Although guests from English speaking countries feel comfortable on communication, other guests feel uncomfortable as they are unable to communicate easily in the destinations.	11
4.15	Age: No age difference except package tour guests who are mostly aged	All guests who arrive by luxury ships as part of package tour are aged. No age difference can be seen on flight guests.	3
4.16	No gender disparity in arrivals	No gender difference can be seen on foreign tourist arrivals in Kerala.	2
4.17	Pilgrim tourism	Some tourists spend time visiting temples, churches and hermitages.	5
4.18	Reviews and mouth publicity	Accommodation units try to improve guest reviews by improving the quality of hospitality.	7
4.19	Special events: festivals, biennale, boat race	Foreigners are excited to experience the events of festivals, biennale, boat race which happens seasonally.	10
4.20	Travel plan and budget of the guests	Everyone has their own travel plan while they arrive. They do only whatever they want to do. Mostly, they have a fixed budget as well across the stay duration.	12
4.21	Effective policing	Police effectively interfere to avoid situations of misbehaviour on foreign tourists.	10
4.22	Unnecessary regulations	Strict regulations are imposed on timing of destinations and activities of tourists.	6
4.23	Misbehaviour towards foreign tourists: staring and unnecessary questions	Local tourists look starring at foreign tourists due to excitement. Sometimes, they ask unnecessary questions to them too.	7
4.24	A few instances of guests' involvement in Illegal activities	Although not normal, some tourists are involved in drug dealings with natives.	4
4.25	Beach-side stay: more and longer	Is pretty much common among the foreign tourists. It's comfortable for them as they want to do sunbath twice a day regularly.	9
4.26	Marital relation	Someone comes into contact with natives and enter into marital relations	3
4.27	Uncomfortable with street dogs	Foreign tourists are not comfortable with street dogs	1
4.28	Overcrowding in some destinations	Due to calmness and easy access to beach, foreigners tend to stay longer in the beach-side accommodation units.	5
4.29	Beach-side restaurants	Availability of beach-side restaurants that serve seafood and continental dishes is a plus	2

Source: Transcripts of stakeholder interviews

6.4.5. Role of technological factors

Technological factors remained less relevant compared to other global themes as both number of codes and intensity of responses of the identified codes are lower. Only internet as source of tourism information and method for tourism related bookings and marketing was identified as relatively a relevant organising theme with 11 responses. Stakeholder 2 (44 yr; other destination job-boat) responds "*We, the boat companies do marketing on social media platforms of Facebook and Instagram. We too have websites for the same. Online marketing will be done on these platforms. Marketing videos will be shared on YouTube too*". According to stakeholder 4 (62 yr; accommodation unit), "*with the advent of internet, every information is available online. It is easy to find routes. Tourist arrivals after the entry of internet increased phenomenally. No need to ask anyone for tourism-related information. Various booking sites such as 'Booking.com', 'Agoda', 'Travel Guru' and 'Hostel World' are also used for online booking*". It implies that advent of internet has facilitated the growth of tourist arrivals in the state by the ways of tourism information, online booking of various tourism services and tourism marketing. Responses on other two technological factors remained extremely low. (see Table 6.7).

Table 6.7. Organisation of themes on technological factors

Sl No	Organising themes	Responses	No. of responses (Max:28)
5.1	Internet for tourism information, online booking and marketing	Internet is being extensively used for accessing tourism information, doing and watching tourism advertisements, booking flights, accommodation units and other packages.	11
5.2	Phone booking	Some tourists especially those who visited once in an accommodation unit book the same unit through phone.	5
5.3	Social media contacts	Major service providers including accommodation units, travel agencies, houseboat owners and others maintain regular and continuous contacts with their previous guests.	3

Source: Transcripts of stakeholder interviews

6.4.6. Role of infrastructural factors

Investment by the private entrepreneurs: Sufficiency of tourism supply or voluminous investment by the private entrepreneurs for the provision of various goods and services

to the tourists was identified as the only major infrastructural factor which is relevantly related to Kerala's international tourism. According to 15 stakeholders, Kerala's destinations are blessed with huge amount of investment made by various service providers such as resorts and guest houses, houseboats and other boats, restaurants and tea shops, souvenir shops and grocery stores. Stakeholder 7 (38 yr; restaurant) responds *"North Kerala has tourism potential. What is lacking there is tourism supply. Private players should arrange the facilities there. Government has nothing much to do"*. It implies greater arrivals could be realised if there is enough tourism supply. According to stakeholder 16 (57 yr; restaurant), *"Previously, Kovalam was the place of all issues. Now things have changed a lot. There are lot of hotels, restaurants and homestays in the beach sides and inside"*. Kovalam has been receiving huge number of foreign tourists as tourism supply has surged. In the words of stakeholder 23 (56 yr; native shop owner), *"These properties (resorts, hotels, homestays and restaurants) are completely under private ownership. Even the footpath along the cliff is privately owned. That footpath was built 10-20 years back. There were not much shops that time. Foreigners were arriving that time too. During our childhood days, there was not even a shop here. Everything came after starting their arrivals. Resorts and beer parlours were opened. Taj hotel was opened. Various resorts were opened"*. It indicates that tourism supply (of Varkala) develops with the surge in foreign tourist arrivals. It implies that government alone cannot make any substantial change in tourism industry. Government only wants to regulate the industry effectively and facilitate private investment in the industry.

Investment by private entrepreneurs (tourism supply) remains the lone major infrastructural factor. Lack of basic facilities in the destinations with 10 responses was identified as another important factor under this global theme. Stakeholders including a foreign tourist mentioned lack of hygienic washroom facilities that causes huge discomfort to the foreign tourists. According to 7 stakeholders, there are foreign guests who have been staying in a destination for months choose rented houses as groups for competitive stays. This is termed as residential tourism. They prepare food for themselves too. Russians are the prominent ones among such tourists especially in Varkala. Four other codes including Kochi airport remain less relevant with 5 responses and below. (see Table 6.8).

Table 6.8. Organisation of themes on infrastructural factors

Sl No	Organising themes	Responses	No. of responses (Max:20)
6.1	Lack of basic facilities	Destinations lack sufficient basic facilities so that tourists will find it uncomfortable.	10
6.2	Kochi airport	Foreign tourist arrivals geared up significantly after the establishment of Kochi airport compared to the pre-establishment period.	5
6.3	Residential tourism (long staying guests stay in rented houses)	Longer staying guests those who stay for months in beach destinations choose rented houses for the stay.	7
6.4	Investment by private entrepreneurs: resorts and guest houses, restaurants and tea shops, souvenir shops, and grocery stores	Kerala's destinations are blessed with huge amount of investment made by various service providers such as resorts and guest houses, houseboats and other boats, restaurants and tea shops, souvenir shops, grocery stores.	15
6.5	Insufficient tourism supply	Lack of sufficient tourism facilities causes for the reduced arrivals of foreign tourists in the North Kerala	1
6.6	Sufficient transportation (road)	Kerala has a useful road infrastructure with effective transportation network.	2
6.7	Traffic congestion	Heavy traffic makes the transportation time consuming.	4

Source: Transcripts of stakeholder interviews

6.4.7. Role of health factors

Three codes were identified as the major health factors that are associated with Kerala's international tourism. Sunbath for health rejuvenation, Ayurveda treatment and preference to walk are those relevant themes with 13-14 responses. Yoga and meditation remained next relevant with 9 responses. Other four organising themes remain relatively irrelevant in terms of number of responses.

Sunbath for health rejuvenation: According to 14 stakeholders, foreign tourists spend a lot of time on beaches for sunbath to rejuvenate their health. Stakeholder 7 (38 yr; restaurant) says "*beach lovers are majority among the foreign tourists. Beaches are good for their skin disorder. In their places, they need to get special treatment by spending money. They will be fine here in four-five days after taking sunbath on the beach. Their skin will naturally be rejuvenated. It's an advantage*". According to stakeholder 13 (37 yr, auto), "*Beach is the main attraction here (foreign tourists). They*

take sun bath regularly. They like to see sunset. Up to 10-11 in the morning, they will be on the beach for experiencing sun light and take sunbath. That is why they stay near the beach". The responses imply that enjoying and experiencing beaches for swimming and taking sunbath are important for foreign tourists. Those guests are from the countries where extreme cold weather is prevalent in the winter. (see table 6.9).

Ayurveda treatment: According to 13 stakeholders, there are foreign tourists who undergo serious Ayurveda treatment for wellness. They stay longer and follow diet during the treatment period. Stakeholder 10 (32 yr; accommodation unit) responds "*foreign guests come to get Ayurveda treatment. They come for a fixed number of days and stay in same hotel. They get special food and all as part of the treatment. It is mandatory for guests to have food only from there. Such guests spend at the hotels all the time*". According to stakeholder 12 (40 yr; Government-Tourism Department), "*majority of the foreign tourists seeks Ayurveda treatment. But only a small percentage among them look for serious treatment. A good percentage of tourists considers it as wellness treatment*". The responses imply that most foreign tourists seek Ayurveda treatment in Kerala. Someone takes serious treatment while the others consider it as wellness treatment. (see Table 6.9).

Preference to walk: Foreigners mostly prefer to walk along the city streets and destination places. Of course, it is to reduce the cost of living on one hand and maintain health on the other. According to stakeholder 24 (48 yr; other destination job-Tour Guide), "*They walk through the streets in the destination to enjoy the places. Someone says it is due to lack of money. They take time to walk to the places unlike us*". Stakeholder 25 (34 yr, foreign tourist) says "*I like foot travel. I would also prefer 'tuk-tuk' (auto riskha) or scooter with somebody else*". In the words of stakeholder 5 (46 yr; accommodation unit), "*Foreign guests have exact sleeping time and wake up in a certain time. They go for walking daily and have food at particular time*". It is clear from the responses that, they like to walk along the streets in the destination. As per the stakeholders' view, it is part of their life style. It could also be an effort to control living expenses in the destinations. (see Table 6.9).

Other health factors: Yoga and meditation remained the top organising theme among the relatively less relevant health factors. According to 9 stakeholders, there are foreign tourists who spend time for performing yoga and meditation. "*People (foreign tourists)*

come to learn and practise yoga. People come to undergo Ayurveda treatment too", according to stakeholder 10 (32 yr; accommodation unit). A restaurateur in Kovalam says, "*facility for meditation with mud is available in 'Somatheeram' near Kovalam. It is available only in two places here; one at 'Somatheeram', second at Poovar. Foreign tourists are the major beneficiaries of the facilities*". A group of foreign tourists especially those who prefer Ayurveda practise yoga and meditation. They get such facilities in certain accommodation units. Longer stays during Ayurveda treatment, allopathic treatment for Arabs and fresh air are the rest health factors with 4, 3 and 1 responses respectively. (see Table 6.9).

Table 6.9. Organisation of themes on health factors

Sl No	Organising themes	Responses	No. of responses (Max:28)
7.1	Sunbath for health rejuvenation	Foreigners spend a lot of time on beaches for sunbath to rejuvenate their health.	14
7.2	Yoga and meditation	There are foreign tourists who spend time for performing yoga and meditation.	9
7.3	Ayurveda treatment	Foreigners undergo Ayurveda treatment for wellness.	13
7.4	Allopathic treatment for Arabs	Guests from the Middle East pursue Allopathic treatment. The accompanying family members will go for sightseeing across different destinations in the state.	3
7.6	Longer stays during Ayurveda treatment	Those who undergo serious Ayurveda treatment stay longer in the centres and follow diet as per the direction.	4
7.7	Fresh air	Foreign tourists want to experience fresh air and relax.	1
7.8	Preference to walk	Foreigners mostly prefer to walk along the city and destination places.	13

Source: Transcripts of stakeholder interviews

6.4.8. Role of geographical factors

No geographical factor was identified relevant in explaining Kerala's international tourism. No organising theme among the six ones under this global theme did not even cross 3 responses. That much the theme of geographical factors is least relevant just like technological factors. However, sea erosion in Kovalam has been a negative force for the decreased arrivals of tourists and relative growth of the arrivals in Varkala which is a substitute destination. Three stakeholders from Kovalam were of the same opinion. According to them, Kovalam beach has been witnessing such an alarming situation of

sea erosion and loss of beach area ever since tsunami in 2004. Climate change and works of Vizhinjam port have exacerbated the situation in their opinion. According to these three stakeholders (from Kovalam), Kovalam beach has been dying owing to sea erosion as sea takes away the land sequentially. However, similar issue of sea erosion has not been an issue in Varkala and Alappuzha beaches. (see Table 6.10).

Less deepness of sea in Varkala and Cherai leads to surged arrivals of foreign tourists who like to swim in the sea. Deepness of the sea in Kovalam and other beaches except Varkala and Cherai makes beach loving foreign tourists uncomfortable. Compared to Varkala cliff beach, Kovalam beach has easy access for the aged guests. See table 6.10 for other organising themes and corresponding responses.

Table 6.10 Organisation of themes on geographical factors

Sl No	Organising themes	Responses	No. of responses (Max:28)
8.1	Sea erosion due to tsunami, Vizhinjam project and climate change	Sea has been eroding and a big portion of beach is being lost in various destinations especially Kovalam ever since tsunami. It is connected with climate change. Vizhinjam project exacerbated the situation.	3
8.2	Less deepness of the sea	Several beaches in Kerala are characterised by the presence of deep sea including Kovalam. At the same time, Varkala and Cherai have no deep sea by the beaches.	2
8.3	Flooding	Tourism activities is dull after flooding in 2018.	3
8.4	Access to beach	Foreigners want to stay by the beach or somewhere nearby to access the beach both in the morning and afternoon.	2
8.5	Fresh water in the cliff	Tourists get fresh water from the cliff.	1
8.6	Selective impact of close proximity	Kerala has been receiving good number of arrivals in the recent period from certain neighbouring countries including Maldives, Malaysia and Sri Lanka.	1

Source: Transcripts of stakeholder interviews

6.4.9. Role of induced arrivals

Sufficient government effort, insufficient government effort and prevalence of tour packages are the major codes identified under the theme of induced arrivals with 16, 15 and 14 respectively. Marketing by the government and private entrepreneurs and visa policy are the other relevant ones under this category with 6 responses each.

Sufficient government effort: According to 16 stakeholders, government (state) has been effectively intervening to make the atmosphere safe, provide effective police service, improve transportation infrastructure and do the marketing widely. Stakeholder 4 (62 yr; accommodation unit) responds "*Government has been making good efforts to maximise foreign tourist arrivals. Decisive steps are being taken to introduce changes in tourism in Alappuzha. But our people won't cooperate with that. They irresponsibly dump wastes. They won't obey authorities' orders. People take wastes on scooters and dump. Only government cannot correct everything*". There are people who do not cooperate for keeping the destinations hygienic. So concerted and collective effort are required. According to stakeholder 7 (38 yr; restaurant), "*Tourism department (Kerala) makes effort to promote Kerala tourism effectively. It is one of the best marketing in India, I think. Kerala's ad was aired on metros in European countries even before Covid*". Government's role was appreciated by 16 stakeholders on effort made to maximise tourist arrivals in Kerala's destinations while there are stakeholders who think government effort was insufficient on several other grounds. (see Table 6.11).

Insufficient government effort: Although 16 stakeholders praised government for effective intervention in tourism development, 15 stakeholders believe that the effort put by the government is not enough and not up to the mark. There stakeholders who supported and criticised the government on certain grounds in tandem. Stakeholder 8 (39 yr; native shop owner) says "*Government does not do anything for attracting tourists here, in my opinion. Tourists are attracted by whatever existing in Fort Kochi. Government did not do anything for more arrivals. Need to do more. Facilities like open restaurants, well maintained toilets and sufficient amount of freedom to foreign tourists (without affecting other's freedom) need to be provided. Although Kerala has its own tradition, foreign tourists need bars and all*". He urges government to arrange sufficient facilities provide various services to the foreign tourists in Kerala's destinations. According to stakeholder 20 (22yr; native), "*There are a lot of potential to develop tourism here (Poovar). Space is available here. Not even a waste bin is kept here*". Those who are critical of the government effort pointed out ineffective intervention by the tourism regulator in equipping the destinations with required basic facilities at international standard. Moreover, stakeholders from Kovalam were critical of the immoderate restrictions being imposed by the government in the reputed beach destination of Kovalam. (see Table 6.11).

Tour packages: Both domestic and foreign travel agents conduct package tours to Kerala's destinations including ship guests. Stakeholder 1 (53 yr; auto) responds, "*More group tourists arrive. They come by bus. It is mostly on company booking (tour operators). Such tourists won't hire autos*". They won't contribute much to the local economy in his view. Stakeholder 10 (32 yr; accommodation unit) says, "*We have tie-ups with big companies like Calipso (foreign tour operators) who arrange tours. We arrange their full travel when they arrive at the airport. Such guests hand over the list of their budget and planning to us. It consists of how many guests are there and estimate for each guest, estimate for food. These details will be emailed already to us. So we can plan accordingly. That is how we operate tours*" According to stakeholder 5 (46; accommodation unit), "*Package tours will be arranged on ships. It is the package offered by the ship company. Ship guests are rich. Flight guests are common men. They can enjoy extravagant ship cruise. Ship guests can stay in some destinations too. Then also they can enjoy. They can cover all fourteen districts in Kerala using seashore. They stay only in selected VIP properties. Ship guests won't choose normal hotels/stays. they stay in star hotels only*". It shows 'ship guests' is a special category of foreign tourists who arrive in Kerala's beach destinations on luxury cruise packages. (see Table 6.11).

Other factors: According to 6 stakeholders, larger arrivals of foreign tourists in Kerala are accounted for online and offline marketing by the government and tourism service providers. Visa policy is equally relevant with 6 responses. Number of arrivals and overnight stays depend up on visa policy. Other three codes under this global theme have just 1-3 responses. However, the impact of lack of promotion for international tourism in North Kerala on lower tourist arrivals cannot be ruled out. Three stakeholders pointed out this issue. There are foreign tourists who arrived as part of origin country's travel schemes for employees and students according to 3 stakeholders. Responses on other induced factors are presented in table 6.11.

Table 6.11. Organisation of themes on induced arrivals

Sl No	Organising themes	Responses	No. of responses (Max:28)
9.1	Marketing by government and tourism entrepreneurs	Larger arrivals of foreign tourists are accounted for online and offline marketing by the government and tourism service providers.	6
9.2	Tour packages	Package tours are arranged by domestic and foreign travel agents.	14
9.3	Lack of promotion for international tourism in North Kerala	There have been just scant arrivals of foreign tourists in the North as promotional effort is insufficient.	3
9.4	Sufficient government effort	Government has been effectively intervening to: make the atmosphere safe; provide effective police service; improve transportation infrastructure and do the marketing.	16
9.5	Insufficient government effort	Government failed to provide a comfortable atmosphere for the foreign tourists as: Too much restrictions are imposed; Traffic congestion is still a serious issue and Lack of basic facilities still continues	15
9.6	Complicated procedure and unwanted fees	Foreign tourists face difficulty as they have to undergo strict procedures at the immigration centre and also need to pay various fees on arrival.	1
9.7	Visa policy	Number of arrivals and overnight stays depends on visa policy	6
9.8	Travel schemes (for students and employees)	Larger number of employees and students visit Kerala as part of their regular travel schemes. Employees get vacation with payment exclusively for travel. Students get scholarship or fellowship as part of their study.	3

Source: Transcripts of stakeholder interviews

6.5. Discussion

Global themes: Total of nine global themes and 91 organising themes or codes were identified in the stakeholder analysis on Kerala's international tourism. Out of the nine global themes, social, cultural and psychological factors remained the dominant one with the largest sum of responses (232) and organising themes (29). This was followed by economic factors with 140 overall responses and 21 organising themes. It indicates that Kerala's international tourism is closely associated with or majorly affected by

these two factors. In other words, foreign tourist arrivals in the state is commonly or widely contributed by both the factors. Tourism resources and induced arrivals remained other important themes with 80 and 70 overall responses respectively. There are 5 and 8 organising themes identified under tourism resources and induced arrivals respectively. Sum of responses under each global theme is not only determined by number of organising themes under each global theme but also the relevance of each organising theme. Relevance of each organising theme is shown by respective number of responses out of 28 maximum responses. Health and climatic factors are the next important themes with 57 and 47 overall responses respectively. Technological factors and geographical factors were identified least relevant themes with sum of responses of mere 25 and 12 respectively. Number of organising themes under these two are just 3 and 6 respectively. Infrastructural factors remained little more relevant compared to these two with 37 overall responses and 7 organising themes. Having said these, major organising themes spread across various global themes.

Direct tourism resources: Availability of diversified direct tourism resources in Kerala's destinations is the most dominant and widely responded organising themes with 27 responses out of total 28. There are studies confirming the uniqueness of destination's direct tourism resources happened to be a driving force of international tourism (Thrane & Farstad, 2012; Garau-Vadell & De-Juar-Vigaray, 2017; Salman et al., 2021 and Downward & Lumsdon, 2003). This is exactly in line with the current stakeholder study on Kerala's international tourism. There are various codes identified related to beaches being the most loved place in Kerala by the foreign tourists. Longer beach-side stay, sea erosion in Kovalam and access to beaches are such codes.

Higher relative income and lower relative prices: Second major organising theme is the prevalence of advanced economies among the source markets of Kerala's international tourism. This response has had wide ranging implications on the role of economic factors. This is surely the effect of income on overseas tourist arrivals in the state although foreign tourists in the state are mostly not rich according to 14 stakeholders. The finding of Naude and Saayman (2005) on income being a typical developed country determinant of tourism demand is, however, not exactly the opposite of the stakeholder perception. Stakeholders responded the domination of advanced economies among the overseas tourists in the state only, which is just a categorical income. Although the guests arriving in the state from abroad are, however, relatively

rich when compared to destination's income status. This is powered by greater value of international currencies in terms of Indian Rupee and lower relative prices in Kerala compared to that of the advanced economies. Regardless, income of the foreign tourists or origin countries has always not been significant factor driving tourism demand although income mostly makes the positive impact (Dhariwal, 2005; Xie, 2020 and Algieri, 2006). However, most studies confirm the positive and significant relation between income and tourism (Tang &Tan, 2015). Presence of complementary destinations in the itinerary of the overseas tourists has been found as another highly responded theme. This could be connected with lower average transportation cost for a multi-destination trip as per the study of Santos et al. (2012). It implies that tourists being rational human beings try to visit maximum places and destinations with minimum cost. In short, higher relative income of the foreign tourists, lower relative prices in Kerala and lower average travel cost per destination are identified as the inter-related economic factors making huge impact on Kerala's international tourism. Presence of complementary destinations in the state raises the export competitiveness of Kerala's tourism industry as it reduces the average cost of the foreign travel. In line with this finding, choosing low-cost transportation for city travel was found widely responded theme. Those who choose economic travel options are mostly longer staying guests who want to minimise the cost of living, according to the stakeholders. Longer-staying foreign tourists, according to Masiero et al. (2012) are highly price sensitive. Relevance of categorical income and signs of impact of relative prices should be read together. Foreign tourists who arrive in Kerala are not because they are high income people but because their income gets relatively higher purchasing power in Kerala. Relatively lower cost of living in the South Indian state of Kerala compared to the advanced economies of the West enable them stay and have vacation at lower expense. The view of Naude and Saayman (2005) on income as a developed country determinant of tourism demand does not stand against this observation.

Purposeful arrivals: Arrivals for leisure, culinary tourism, sunbath for health rejuvenation, undergoing Ayurveda treatment, enjoying comfortable destination's weather, shopping, enjoying special events, learn and practise yoga, experiencing village life, stay by the beaches and pilgrim tourism are identified as major purposes of foreign tourists who arrive in Kerala. Foreign tourists are the mostly leisure-seeking ones according to 18 out of 28 stakeholders. This is in line the with studies of

Downward & Lumsdon (2003) and Selvam (1989). Culinary tourism is another important organising theme with 16 responses. It indicates that foreign tourists who arrive in Kerala would like to try local cuisine including backwater fish and seafood. This is complying with the study of Martin et al. (2021) who found iconic food reinforces the effect of perceived value on the intention to repeat the experience, while a generic experience with the local cuisine favours the intention to recommend. Sunbath for health rejuvenation remains the second among the ten codes under purposeful travel. People living in Europe and North America are highly exposed to extreme winter climate as they experience dry and itch skin according to Engebretsen et al. (2016). Foreign guests in Kerala's beach destinations who are mainly Europeans want to do sunbath not just for fun but for health rejuvenation too. Sun and seawater, the necessary ingredients of sunbath have had remarkable role in accelerating the development of world's tourism industry as pointed out by Koca and Yildirim (2018). Beach destinations remain favourite among the foreign tourists who arrive in Kerala (Johny, 2002). It implies that Kerala's tourism has benefited a lot from the 580 km long beach along Kerala's western boundary. This is true for Kerala's international tourism too as beach destinations remain the top destinations for the foreign tourists in the state. Average number of stay by the foreign tourists in Kerala's beach destinations was found greater compared to other destinations. It is also found in the stakeholder analysis that foreign tourists would like to stay in the beach area as they want to experience and enjoy beaches. They want to swim in the sea and do sunbath daily when beaches are not overcrowded. Beaches need to be easily accessible and free from overcrowding. Those who stay in the beach destinations need calmness always. Among the direct tourism resources, beaches play a significant role, offering Western tourists sunbathing opportunities for health rejuvenation and longer beachside stays. The issue of sea erosion, particularly in Kovalam, arguably attributed to factors such as the 'Tsunami,' 'Vizhinjam International Seaport,' and climate change. Exclusive beach-related organizing themes encompass beachside restaurants and access to the beach. Since, beaches are the main attractions of tourism, all the attributes of marine tourism could fuel overall tourism demand (Paula et al., 2021). This is true at least in places where beaches are the main attractions of tourists. However, as pointed out by Paula et al. (2021), erosion of Kovalam beach could lead to its ruination in future and could redefine the pattern of tourism in the state.

Another intention of the tourists who arrive in the state is Ayurveda treatment according to 13 stakeholders. Foreign tourists seek Ayurveda treatment as wellness while someone approaches it seriously. There are large number of foreign tourists who arrive in the state of Kerala to experience Ayurveda as traditional nature-based treatment according to Padmasani (2015) and Louis (2018). As Kerala receives maximum arrivals in the winter season (according to 16 stakeholders), it is obvious that tourists from the Western countries who turn out largely to visit Kerala are to experience comfortable temperature (according to 12 stakeholders). Gani & Clemes (2017), Zamparini et al. (2017) and Falk (2014) have already confirmed the role of comfortable climate in tourism demand. Falk (2014) identified non-linear relation between temperatures and tourism demand as well. Winter witnesses extreme cold weather in the countries of the West where great majority of Kerala's foreign tourists originate from. It is clear from the stakeholder analysis that, foreign tourist arrivals in the state are seasonal as foreign tourists massively arrive in the months of December and January although season starts in October and ends in March. April to September remains lean period in terms of the arrivals. This is true both in terms of quantitative studies attempted in the previous chapters and qualitative analysis based on stakeholder perceptions being attempted in the present chapter. Seasonality is a significant factor driving tourist arrivals according to Corluka (2018) and Andriotis et al. (2007). Guests from the developed economies of Europe and North America majorly choose the winter to visit Kerala for experiencing relatively comfortable weather. Other intentions of the travel, although relatively less relevant by number of responses, are shopping, enjoying special events, learn and practise yoga, experiencing village life, stay by the beaches and pilgrim tourism.

Repeat visits, emotional bond and reviews: The codes identified regarding repeat visits, emotional bond and reviews are interrelated. Repeat visitors is a big category of foreign tourists in Kerala according to 17 stakeholders. Repeat visits are fuelled by emotional bond of the tourists and trust building develops between the tourists and natives/service providers. Among the repeat visitors, there are regular visitors in Kerala according to the stakeholders over the past many years. Reviews and mouth publicity are clear reflection of the level of satisfaction of the tourists. Repeat visit is a widely prevalent category among the foreign tourists across the destinations according to Moniz (2012), Darnell (2001) and Correia et al. (2015).

Well fashioned arrivals: Various organising themes are identified under the sub-global theme of well fashioned arrivals. Sufficiency and insufficiency of government effort on different grounds, impact of tour packages, investment by private entrepreneurs, marketing by both government and tourism entrepreneurs, visa policy and unnecessary regulations in some destinations are such organising themes. Both sufficiency and insufficiency in government effort on different grounds are identified relevant in explaining Kerala's international tourism. It is concluded from the stakeholders' views that government is effectively intervening to make the destinations safe on one side, government fails to provide adequate basic facilities in the destinations on the other. It casts light on to the need for judicious role of government in regulating and facilitating tourism development. It shows that government effort obviously is inevitable for the growth of tourism according to Retnosary and Salleh (2020). Nevertheless, this perspective aligns with Javed and Tuckova (2020), who contend that the government's role in the tourism development process, aimed at enhancing tourism competitiveness, is indeed crucial. However, they emphasize the importance of maintaining control over such involvement. Foreign tourists arrive in Kerala through various tour packages according to 14 stakeholders. Package tours play significant role in developing the destinations by attracting more foreign tourists into the state according to Liao and Chuang (2019). Djordjevic and Hristov (2016) point out that tour packages offered by tour operators have had significant role in effecting the arrivals of pleasure seeking tourists across the world. It is understood from the stakeholder analysis that two kinds of tour packages happen in Kerala according to the stakeholders. One is the package tours that are executed both by travel agents inside and outside the country. Destination-based tour entrepreneurs in the state make regular contact with the travel agents. Second category of tour package in the state is ship guests who arrive on luxury cruise ships on Kerala coast especially Cochin coast. Such 'ship guests' are being brought in by ship companies cum tour operators according to various stakeholders. This is in compliance with Djordjevic and Hristov (2016). While the former kind of package tours are chosen normally by guests who are not necessarily affluent and the latter kind of packages (ship guests) are chosen by only affluent guests who are mostly aged people too. Package tours encourage the development of destinations by increasing their attractiveness to global visitors according to Liao and Chuang (2019). Private entrepreneurs put great effort to develop sufficient facilities for the tourists including accommodation units, restaurants, souvenir shops and other shops, different modes of

transportation. There are stakeholders who respond that governments cannot provide sufficient facilities in the destination and only private players are able to meet this requirement. Lack of sufficient tourism supply in the Northern Kerala has been a reason for the reduced presence of foreign tourists according to stakeholders. It could be the effect of the lean arrivals of the foreign tourists there as well. It implies that Northern Kerala has been trapped in the grip of 'vicious cycle' of lower tourist arrivals alongside insufficient tourism supply. Growth of tourism entrepreneurship is closely connected and mutually related with growth of tourism demand (Alhammad, 2020).

The other organising themes under well fashioned arrivals category are marketing by both government and tourism entrepreneurs, visa policy and unnecessary regulations in some destinations with 6 responses each. Cochin International Airport Limited has had significant impact on foreign tourist arrivals in Kerala ever since its commencement of international operations according to stakeholders (Thachil, 2010). The same has been confirmed in the present study too. It is found by Doerr et al. (2020) that new commercial airports promote tourism and regional economic development. These are all associated with Kubickova (2016) who pointed out the significant role of destination's government in tourism development. At the same time, acts of governments of the source countries also encourage arrivals of the foreign tourists. Regular monthly pension to the aged guests (from European countries) and special travel schemes for the employees and students are such codes mentioned by a few stakeholders.

Destination's safety measures: Safety of the destinations for the tourists has made significant impact on the international tourism according to Vadell and De-Juar-Vigaray (2017). Fourteen stakeholders believed that destinations in Kerala are safe and almost free from instances of misbehaviour. It is clear that this safety situation was made possible by effective policing as pointed out by 10 stakeholders. However, strict policing along with various other factors has affected tourist arrivals negatively in Kovalam where foreign tourist arrivals have decreased in the recent period even before the advent of Covid.

Travel culture of the Europeans: Majority of the foreign tourists who arrive in Kerala are from the European countries. Europeans have a tendency to travel around the world even at the younger age according to 11 stakeholders. While travel mania or an

abnormal impulse to travel of the Europeans gives a wide-ranging effect on the tourist arrivals in the state, travel planning by the tourists makes a particular pattern for the tourist spending. They follow a fixed budget for the travel according to 12 stakeholders. They won't accept the directions of others to purchase the tourism products unless and until genuine trust building happens. They adhere to their itinerary and budget strictly. They balance their daily expenditure in a manner without affecting their budget for the entire stay duration in Kerala's destinations. Europe's travel culture and European's abnormal impulse to travel is factually proven by the database of World Bank (2022e) as more than half of the world's total international tourist arrivals originate from Europe in 2019 although it accounts for mere 10 per cent of the world's population (Worldometer, 2022). Europe's travel culture is prominent one among other main source markets of Kerala's international tourism. As per the same databank of World Bank (2022e), North America constitutes a relatively smaller figure of 10 per cent of total tourist departures although population of North America accounts for only 5 per cent of world's total population in 2019.

Behavioural problems in the destinations: Misbehaviour against foreign tourists and tourist destinations in the state makes negative effect on Kerala's international tourism. Poor waste management in the destinations is the another widely influencing factor in terms of number of responses. Poor waste management of Kerala's destinations are found to be playing negative role in Kerala's international tourism. It makes the foreign tourists disgusting and extremely uncomfortable according to the stakeholders. Alegre et al. (2011) found similar result in their study on tourism demand in Spain where they found that hygiene has played significant positive role on tourist arrivals. At the same time, waste which mounts with growth of the tourist arrivals in the destinations according to Singer et al. (2019). Concerted collective effort is necessary for properly managing the waste as mentioned by stakeholders. Noise and overcrowding, and misbehaviour towards foreign tourists are other negative forces of Kerala's international tourism. Foreign tourists who arrive in Kerala's destinations can never digest noisy atmosphere according to the stakeholders. They always need calmness and privacy. This observation does not entirely align with Ay and Gunai's (2019) findings, which indicate that certain tourists find comfort and relaxation even in environments with high decibel sounds, which may be considered as noise, while others do not share the same level of comfort. However, foreign tourists who participate in special events of 'boat

race' and temple festivals can digest and adjust the noise associated with such events according to stakeholders. Overseas tourists do not want anybody to interfere in their life unnecessarily. They show discomfort to the staring and unnecessary questions of the local tourists in the destinations, according to 7 stakeholders. There were a few instances of cheating too against the foreign guests in the destinations, according to 7 stakeholders including an aged lady from Italy.

Other negative forces: Apart from the behavioural issues in destinations, stakeholders highlight several other factors negatively impacting international tourism in Kerala. These include insufficient government efforts, language barriers (both as an obstacle and advantage), lack of basic facilities, the presence of substitute destinations, unnecessary regulations, lower arrivals during rainfall, and overcrowding.

According to 15 stakeholders, the government's failure to maximise foreign tourist arrivals is attributed to inadequate basic facilities in destinations. Fafurida et al. (2018) note that foreign tourists are impressed by better facilities and infrastructure. However, Kovalam (beach destination in Kerala, India) faces challenges, such as reduced arrivals and coastal erosion, potentially linked to extreme policing, insufficient government efforts, and higher prices compared to substitutes.

Traffic congestion is another issue affecting foreign tourists, causing discomfort due to significant time losses. The presence of substitute destinations is highlighted by nine stakeholders, who suggest that tourists may opt for alternatives due to various reasons.

While reduced arrivals don't indicate negative growth, they suggest that Kerala receives fewer tourists than its potential. Varkala in Kerala and Sri Lanka emerge as substitute destinations for Kovalam, sharing a similar climate.

Language is viewed as both a boon and bane. Matovic and Civic (2018) suggest that communication barriers due to a lack of language proficiency can be addressed through alternative communication systems. Despite challenges acknowledged by Ka-kan-dee and Nonthapot (2020), English-speaking guests find it easier to communicate in Kerala.

Rainy seasons pose a challenge, leading to reduced arrivals during June-September, with Middle Eastern guests being exceptions. Mathivha et al. (2017) highlight the fragility of the tourism industry, susceptible to environmental, social, and economic factors in a region.

Major codes: Three global themes viz. tourism resources, economic factors and social, cultural and psychological factors are highly relevant both in terms of prevalence of the top organising themes and overall number of responses. Availability of direct tourism resources (27 responses out of 28 stakeholders), guests mostly from advanced economies in Europe, North America, Middle East and Oceania (25 responses), multiple destinations as complimentary (23 responses), opting budget transportation (19 responses), poor waste management (18 responses), arrivals for leisure (18 responses), repeat visits (17 responses) sufficient government effort (16 responses), seasonal arrivals (16 responses) and culinary tourism (16 responses) are identified as top ten organising themes or codes on Kerala's international tourism. Investment by private entrepreneurs, insufficient government effort on certain sectors, prevalence of tour packages, sunbath for health rejuvenation, safe and friendly atmosphere in the destinations, guests are mostly not rich and disturbed by noise and overcrowding and need calmness are also highly relevant in explaining Kerala's international tourism with 14-15 responses each. (see Table 6.2 and Appendix 9).

Major sub-global themes: Apart from the previous categorisation of global themes into nine groups of codes (see Figure 6.2), 10 other different but related sub-global themes were identified by including the same responses to get a different dimension on Kerala's international tourism on the basis of discussion. On the basis of number of responses under each global theme, two themes viz. purposeful arrivals (180 out of 684 codes) and higher relative income of the tourists or lower relative prices in the destination (144 out of 684 codes) are highly relevant and widely prevalent. Nearly half of the total responses belong to these two categories of themes. Direct tourism resources (69 codes) of Kerala also remains a relevant theme as it explicitly attracts visitors. Repeat visits and reviews constitute an important category of foreign tourists in the state with 41 related codes. Emotional bond being developed between tourists and non-tourist stakeholders of the destinations and positive reviews about various tourism services could influence them to visit again. Prevalence of behavioural problems (43), and other negative forces (73) restrict the state in maximising the number of arrivals. It is obvious that prevalence of behavioural problems and other negative forces hamper the growth of Kerala's inbound international tourism. The presence of well-fashioned arrivals (46 codes) among the sub-global themes shows the success of the combined effort of tourism regulators (government) and tourism service providers in attracting

more tourists from abroad. Although less relevant by number of related codes, safety features of tourism destinations in Kerala and European's travel culture help raise foreign tourist arrivals in the state as per stakeholder analysis (with 24 and 11 codes respectively). Role of safety feeling of the tourists in the destinations is crucial without which foreign tourist arrivals in the state would not have been mostly positive. Similarly, being major customers of Kerala's international tourism, travel culture of Europe and European's abnormal impulse to travel play an important role in deciding the destiny of the largely tourism-based economy of Kerala. (see Figure 6.3 and Appendix 11).
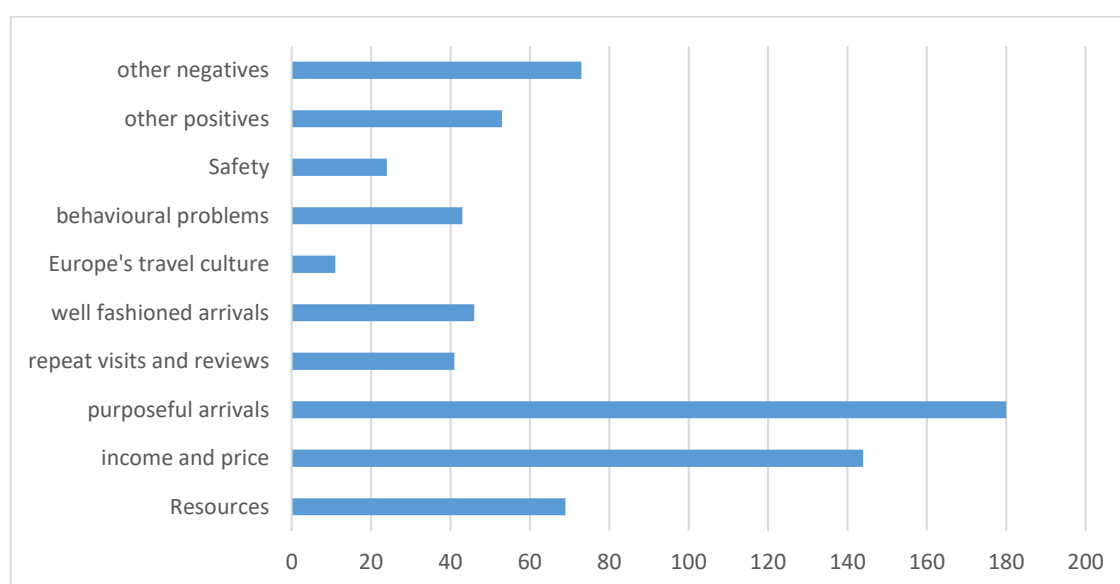
Figure 6.3. Sub-global theme-wise responses by stakeholders

Source: Transcripts of the stakeholder interviews

6.6. Conclusion

The themes and codes identified in the thematic analysis on Kerala's international tourism mainly belong to social, cultural, psychological and economic factors. Various non-economic factors such as direct tourism resources, poor waste management system, overcrowding and noisy atmosphere in the destinations, repeat visits, safe atmosphere in the destinations, arrivals for leisure, culinary tourism and government efforts have been largely affecting the tourist flows into the state of Kerala from abroad. Main economic factors that are found relevant ones are guests mostly from the advanced economies of the West, lower relative prices, low-cost transportation for city travel and guests are not rich and presence of complementary destinations in the nearby areas of South and Central Kerala. Kerala's international tourism, broadly, is in fact the outcome

of these economic as well as social, cultural and psychological factors. Health factors are also relevant as foreign visitors largely seek sunbath for health rejuvenation and Ayurveda treatment for wellness in Kerala's destinations. Climate makes strong impact too on Kerala's international tourism as seasonality drives overseas tourist arrivals in the state. Extreme cold climate in the West in the winter and comfortable stable climate in Kerala in tandem constitute the international tourism season of Kerala. Apart from the seasonality factors and purposeful arrivals, relatively higher export competitiveness of Kerala's international tourism determines its destiny. Greater purchasing power of the income of the foreign tourists from advanced economies in Kerala due to lower cost of living coupled with the presence of complementary destinations and variety of tourism resources and products make Kerala an affordable destination for the foreign tourists. Although most foreign tourists in the state belong to developed economies, many of them are common people. They are here as their income gets greater purchasing power in developing countries like India. Along with this greater export competitiveness of Kerala's international tourism, stable and comfortable climate, government support for making the destinations safe, involvement of tourism entrepreneurs in providing tourism supply, effective tourism marketing, availability of variety of tourism resources and products and emotional attachment they develop with destinations played positive role in attracting foreign tourists to Kerala in voluminous number. At the same time, poor waste management, noisy and crowded atmosphere in destinations, lack of sufficient basic facilities and growth of cheaper substitute destinations in the vicinity raise concern on the growth and sustainability of Kerala's inbound international tourism.

Chapter 7

SUMMARY AND CONCLUSION

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7.1. Introduction

The present study on Kerala's international tourism attempted to analyse tourism demand and stakeholder views. Trends and patterns of foreign tourist arrivals in Kerala were extensively covered before explaining Kerala's international tourism demand. The study attempted to explain the factors associated with Kerala's international tourism on different dimensions. While quantitative techniques were employed to estimate and explain the tourism demand, stakeholder perceptions were analysed using thematic analysis. Findings of the present study are summarised with four sections viz. trends and patterns of foreign tourist arrivals, descriptive analysis on the determinants of foreign tourist arrivals in Kerala, econometric techniques to measure Kerala's international tourism demand from different dimensions and stakeholder analysis on Kerala's international tourism.

7.2. Trends and Patterns of Foreign Tourist Arrivals (FTAs) in Kerala

There has been varied but mostly positive growth of foreign tourist arrivals in Kerala since 1986 when Kerala has become the first Indian state to recognise tourism as an industry. Kerala has managed to raise the number and share of the foreign tourist arrivals when compared to many other states in India. FTAs in Kerala and India increased from 0.05 million and 1.45 million in 1986 to 1.19 million and 10.93 million respectively in 2019 with varied but mostly positive annual growth rates. Both Kerala and India have had unstable growth of foreign tourist arrivals during 1986-2019 period. Kerala's share in total FTAs in India has increased from 3-5 per cent during 1986-1994, 7-10 per cent during 1995-2007, 11-12 per cent during 2008-2016 and slightly fell to 10-11 per cent during 2017-2019. Moreover, Kerala has improved its position from 9th or 10th rank before 2008 to 7th or 8th thereafter among Indian states and Union Territories in terms of share of foreign tourist arrivals. Foreign exchange earnings in Kerala from tourism surged from $49.4 million in 1995 to $14,490.7 million in 2019. From $30,836 million in 1995, foreign exchange earnings in India increased to $298,338 million in 2019.

Kerala's international tourism exhibits a significant seasonality trend, with 60 per cent of overseas tourists arriving in a concentrated period from November to March during the 2002-2019 period. Within this span, 39 per cent of tourists prefer December-

February, contributing to a 10-14 per cent average monthly share. Conversely, May, June, July, and September emerge as lean months, attracting a mere 3-5 per cent average monthly share. March and October record around 10 per cent average monthly share.

On average, two-thirds of foreign tourists visit Kerala from October to March, while only one-third arrives during April to September. This fluctuating monthly share poses challenges to tourism management, leading to disguised unemployment in the industry during the offseason. This situation leaves many individuals unemployed or underemployed in the labour-intensive tourism sector. Despite the potential for difficulties in tourism management during lean months, the consistent and well-known nature of seasonality mitigates some challenges. It's worth noting that the average monthly share of arrivals in India appears relatively stable compared to that of Kerala.

Inbound international tourism of Kerala has been highly unequal in terms of the district-wise and destination-wise arrivals. While 72 per cent of the overseas tourists arrive only in Ernakulam and Thiruvananthapuram districts with the annual average share of 39 and 33 per cent respectively since 2002, the districts of Idukki, Alappuzha and Kottayam receive 5-8 per cent each overtime. Rest nine districts receive mere less than 2 per cent each out of which five districts get only less than 1 per cent share each. However, districts such as Malappuram and Kozhikode saw a surge in arrivals of foreign tourists overtime. This implies that many districts especially in the North Kerala remain largely untapped destinations. It also implies that foreign tourist arrivals have a different pattern compared to domestic tourist arrivals. Ernakulam remains the most favourite destination district in Kerala from all source markets except Maldives and Russia followed by Thiruvananthapuram. Majority of Maldivians and Russians and a big percentage of Italians (40%) choose destinations in Thiruvananthapuram. The majority of the guests from the US, Saudi Arabia, Oman, Australia and the UAE and a big percentage of the Canadian tourists (45%) are concentrated in the destinations of Ernakulam. Similarly, nearly half of the foreign tourists who arrive in Kerala (46%) are concentrated in mere three destinations viz. Kochi city, Kovalam and Fort Kochi during 2009-2019 period, on an average. Varkala, Alappuzha and Thiruvananthapuram city remain the other top destinations with around 6-8 per cent share. Several other favourite destinations for the domestic tourists in Kerala such as Wayanad and Guruvayur are not

even included in the list of top 10 favourite destinations for the foreign tourists in the state.

Around 72 per cent arrivals of foreign tourists in Kerala on an average are only from the top 15 source countries which are mostly the advanced economies. Among the top source markets, 43 per cent of the foreign tourist arrivals in Kerala since 2002 on an average are only from the UK, the US, France and Germany. The tourist arrivals in the state from other major markets such as Saudi Arabia, Maldives, Australia, Italy and Russia constitute around 3-4 per cent each. Europe remains Kerala's top source market with nearly 50 per cent share of the arrivals overtime followed by the Middle East, North America and Oceania. It is clear that Kerala's international tourism sector has been benefited a lot from the travel culture of the Europeans as over one-fourth of the international tourist departures originate from Europe as per the data accessed from World Bank (2022). Developed economies being the major source markets, developing regions of the world such as Africa, South America and Asia except Middle East, Maldives and Malaysia remain hugely untapped potential source markets of Kerala's international tourism. However, it is to be noted that advanced economies in the West and emerging economies in the Middle East stand to be the major source markets.

As per Kerala Continuous Tourism Report 2019 prepared by 'Datamation Consultants Pvt Ltd' (2022) and submitted to Department of Tourism, GoK, male tourists among the total foreign tourist arrivals were accounted for two-third of the total arrivals in Kerala while percentage share of female tourists was just over 40 per cent in India. While education looks not relevant in explaining Kerala's international tourism, age and employment are seemingly relevant as foreign guests are overwhelmingly both youth and middle aged (25-55). Regarding employment, majority of the foreign tourists are self-employed or running own enterprises. Providing all the tourism related information both online and offline assumes greater significance in Kerala as websites and tourism information centres remained top sources of information for the foreign tourists in the state. Although most guests are first time visitors, repeat visit category also has significant room in Kerala's international tourism. Share of repeat visitors in India was even bigger with over 40 per cent of the total. Food and accommodation remained major items of tourism expenditure in Kerala followed by transportation as bigger share of money was spent on these items compared to other items such as recreation and shopping. Culinary tourism remained a major segment of Kerala's

international tourism as South Indian food especially Kerala food are preferred by many foreign tourists in the state. Level of satisfaction of the foreign tourists in the state was greater on quality of food consumed and accommodation units stayed. Lack of sufficient information outlets, absence of toilet facilities, absence of walkways, lack of proper maintenance, absence of drinking water facilities were identified as the major problems faced by foreign tourists in Kerala.

7.3. Determinants of Foreign Tourist Arrivals in Kerala: Descriptive Analysis

Kerala's international tourism was found to be strongly contributed by destination based variables and origin-cum-destination based variables. Among the origin-cum-destination based variables, the strongly related factors were availability of direct flights, relative temperature (Average temperature of Europe and North America/Kerala' average temperature), presence of Malayalee diaspora abroad and nominal exchange rate (₹/$). Kerala receives most foreign tourists in the months from December to February when Europe and North America experience icy climate. Only migrant stock of the source markets among the origin based variables remained strongly related to the international tourist arrivals in Kerala. Among the destination based variables, rainfall and air transport infrastructure were the strongly related variables to foreign tourist arrivals in Kerala.

Among the strongly related factors, several factors are the ones that make a clear pattern on Kerala's international tourism. Firstly, rainfall in Kerala lowers foreign tourist arrivals only as free movement of visitors could be disrupted in the rainy season. Relative temperature is the other climatic factor which is negatively and strongly related to the overseas tourist arrivals in the state. Kerala gets maximum arrivals in the winter when the top source countries in the West experience extreme cold climate and Kerala has stable and comfortable climate. Availability of direct flights between India and source markets leads to increased arrivals of tourists from abroad in Kerala. Countries with greater migrant stock are the major source markets of Kerala's international tourism. Commencement of commercial operations of the Cochin International Airport Limited, Kochi was found to have caused for the surged arrivals of foreign tourists in the state especially in Ernakulam district. It is interesting to observe that categorical income only drives Kerala's international tourism strongly while continuous data on

income of the source markets remains less related to the dependent variable. Being a long-term depreciating currency, Indian Rupee in terms of US Dollar has made Kerala's international tourism competitive so that the tourist arrivals surged overtime as per the result. It implies that Kerala's international tourism has been flowered not because tourists are rich but because tourism industry is competitive in the state. However, it is important to note that most foreign tourists in the state have been from the advanced economies of the West and Middle East.

Several factors remain just moderately related to the foreign tourist arrivals in Kerala. Income, global competitiveness and global economic crisis are such variables belonging to the origin based variables. Although continuous data on income of the source countries remain unrelated, categorical income is strongly related to the foreign tourist arrivals in Kerala with positive effect as major source markets of Kerala's international tourism are overwhelmingly high income countries. One-way ANOVA result shows that there has been significant mean difference between arrivals of tourists from high income countries and other categories. At the same time, it was found that this is not held true for mean difference between any other categories. Natural calamities (destination based variables), bilateral relations and trade relations (origin-cum-destination based variables) were the other mildly related factors. At the same time, internet usage, land area, population and human development of the source markets remain weakly related or not even related to the dependent variable. Continuous data on internet usage remains weak in affecting the tourist arrivals even though travel related bookings and information were facilitated by websites and mobile apps. Both global economic crisis and Kerala's flooding make only moderate but negative effect on Kerala's international tourism as tourist arrivals surged back to pre-crisis soon after one year of distress in 2009. Effect of Kerala's flooding in 2018 and 2019 made shorter but negative impact as the number of foreign tourist arrivals fell in August to November period on year-on-year basis. The number of arrivals surged back to pre-flooding level after that before plunging the international tourist arrivals in 2020 and 2021 in the wake of deadly Covid 19 pandemic.

7.4. Determinants of Foreign Tourist Arrivals in Kerala: ARDL, Linear Regression and Log-Linear Regression Estimations of International Tourism Demand of Kerala

Three types of econometric models were developed on different datasets of foreign tourist arrivals in Kerala. Auto-regressive distributed lagged (ARDL) model was developed on overall month-wise foreign tourist arrivals in Kerala from Jan 2002 to Dec 2019 using seasonality adjusted variables while a linear regression model was developed on country-wise arrivals of tourists in Kerala in 2019. Both models found different but non-contradictory factors that are related to Kerala's international tourism. It shows both models (time series and cross-sectional models) are complementary to each other. In addition to the two, three log linear regression models were also developed on the arrivals of tourists in Kerala from the UK, the US and France.

ARDL model was developed with four predictors such as income measured by US imports, nominal exchange rate ($\$/₹$), rainfall in Kerala and Europe's tourist overnight stays. In the long run, all the four variables are found related to Kerala's international tourism demand while only exchange rate makes some impact on the tourism demand of Kerala in the short period as per the ARDL estimation. In consistent with economic theory, income makes positive effect on Kerala's international tourism demand with the coefficient of 2.1 indicating 1 per cent change in income leads to nearly 2 per cent change in overseas tourist arrivals in Kerala in the long run. Nominal exchange rate, complying with the general presumption, was found negatively related with least significant level. The rest two predictors such as Kerala's rainfall and tourist overnight stays of Europe (Kerala's major source market of international tourism) are found negatively related to the tourism demand, in line with the expectation. Although all four predictors are related to the tourism demand of Kerala in the long run, no factor remains significantly related even at 10 per cent level. Regardless, the F statistic of the model remains statistically significant at 1 per cent level.

In the classical linear regression model on country-wise arrivals of tourists in Kerala in 2019, two predictors viz. presence of Malayalee diaspora abroad and international tourism expenditure drives the tourism demand of Kerala. Both of them are statistically significant at 1 per cent level. While change in international tourism expenditure of the source countries by one million USD, international tourist arrivals in

Kerala change by 0.617. Presence of Malayalee diaspora in the source countries make relatively lower, but still significant, impact on Kerala's international tourism demand with the standard beta value of 0.377. These are related to the tourist arrivals in Kerala with correct sign. The other predictors viz. internet usage, migrant stock and global competitiveness of the source markets are also positively related to the dependent variable. Air transportation cost measured by air distance was slightly but negatively related to the tourism demand in line with economic theory at the same time. But surprisingly, income of the source markets was negatively related to Kerala's country-wise arrivals of tourists in Kerala in 2019. This is not consistent with the economic theory. Internet usage of the source countries does not make any significant effect on Kerala's inbound international tourism although it is slightly and positively related with no statistical significance. However, none of the factors other than Malayalee diaspora and international tourism expenditure remain statistically significant.

Tourists from the UK and the US, the top two source markets of Kerala's international tourism, remain relatively more sensitive to percentage change in relative prices when compared to income of the source markets. French tourists who arrived in Kerala were not sensitive to change in relative prices, at the same time. Specifically, one per cent change in relative prices leads to 0.23 per cent and 0.41 per cent change in arrivals of tourists in Kerala from the UK and the US respectively. It implies that price related variables are still relevant in explaining Kerala's international tourism demand in line with the economic theory although air transportation cost (as per linear regression model) and exchange rates (as per ARDL model) were insignificantly related. However, prices remain negatively related in all the cases. Income, at the same time, was found to be more selective in affecting Kerala's international tourism demand as only the UK tourists were relatively more sensitive to income compared to the guests from the US and France. Environmental factors remain more relevant in explaining Kerala's international tourism as both rainfall in the destination and relative temperature were negatively and significantly related to the tourist arrivals from all the top three source markets. Tourism seasonality of the source markets remains relevant to the arrivals of tourists from the UK and France while it stands unrelated to the US tourists. As argued by Naude and Saayman (2005), income remains a developed country determinant in Kerala's case as quantitative income was not an important factor as income stands not significantly related in most cases of econometric approaches.

However, tourists from the UK were relatively sensitive to income with statistical significance as per log linear regression while income remains irrelevant for the US and French tourists. The analysis shows that Kerala's international tourism has not been luxury as income elasticity of Kerala's tourism demand remains lower than one in all the models. The relevant variables that are related to Kerala's international tourism demand (in the regression analyses) are majorly origin based variables and origin-cum-destination based variables. Destination based variables, at the same, make relatively lesser impact on the arrivals of overseas tourists in Kerala.

7.5. Stakeholders' Perceptions on Kerala's International Tourism

Social, cultural and psychological factors and economic factors dominated the global themes of stakeholder analysis on Kerala's international tourism in terms of both number of organising themes and number of responses. While the former leads with 232 overall responses and 28 organising themes, the latter is also relevant with 140 overall responses and 21 organising themes. These are followed by tourism resources, induced arrivals, health factors and climatic factors with 80, 70, 57 and 47 overall responses respectively. Infrastructural factors come next with only 37 overall responses. Technological factors and geographical factors look even less relevant with mere 25 and 12 overall responses respectively. It implies that Kerala's international tourism is primarily associated with social, cultural, psychological and economic factors. Every other factor will come only secondary. It is obvious from this broader view that Kerala's international tourism is driven by social, cultural, psychological and economic factors rather than climatic, technological, geographical, infrastructural, induced and health reasons.

However, the above results stand incomplete as some highly responded organising themes were identified from certain relatively less relevant global themes also. Availability of direct tourism resources including beaches, backwaters, heritage, hill areas, wildlife, waterfalls so on and so forth which belong to the global theme of tourism resources is an example. All stakeholders who took part in the survey except one emphasised the availability of diverse direct tourism resources and products of the state as the apparent reason for the foreign tourist arrivals in Kerala. Presence of complementary destinations in and out of Kerala has also played in favour of Kerala's international tourism according to 23 out of 28 stakeholders. This is another example. It

implies that availability of various suitable destinations in the vicinity is significant in the growth of international tourism. It is obvious that availability of complementary destinations in the nearby locations could minimise the average cost of the international travel for tourism that makes Kerala's international tourism economic and competitive. However, presence of some substitute destinations of Kerala including Sri Lanka and Malaysia put some threat to the growth of Kerala's international tourism. It makes Kerala's destinations price sensitive as Kerala's potential tourists choose Sri Lanka and Malaysia where similar climate and tourism resources are available.

Among the economic factors, two organising themes are more relevant. One, foreign tourists who arrive in Kerala are mostly from the advanced economies of Europe, North America and Middle East. It implies that Kerala's international tourism is heavily dependent on income status of the source countries and so is the better standard of living of the guests even though most guests are not rich. This is in compliance with the findings reported in chapter 3 (see section 3.3.1). Among the top source regions, Europe dominates total foreign tourist arrivals during the winter season followed by North America. Guests from the Middle East largely turn out in the monsoon season. They arrive mostly as part of seeking treatment from Allopathic and Ayurveda centres of Kerala. It shows that medical tourism is prevalent among the Arab guests in the state. Western guests largely seek Ayurveda treatment either as part of serious treatment or just for wellness. Second relevant economic factor is opting budget transportation modes for the city travel. Foreign tourists, according to 19 stakeholders, always look for low-cost travel and bargain for lower fare. Although most guests are from the advanced economies and they have higher purchasing power and lower cost of living in the destinations of Kerala, they want to lead relatively low-cost life in Kerala's destinations for a longer period of time. It is known that most guests from the West want to stay outside the country during extreme cold weather. Someone chooses Kerala's destinations as their home away from home for weeks or even months in the winter regularly as they have icy climate in the winter in their home countries. Cost of living in their home country is big as they have to keep the rooms and work spaces warm at extra cost. It is obvious here that income of the foreign tourists is not the factor driving Kerala's international tourism but greater purchasing power of the income received by the people of advanced economies (in the West) in Kerala's destinations makes the difference. It is to be noted here that Western tourists who undergo serious

Ayurveda treatment stay longer in the same guest house or hotel where the treatment takes place. It is obvious that tourists from the West turn out largely in the winter also because of the availability of academic or industry vacation. Seasonality of Kerala's international tourism is primarily contributed by winter of the West and comfortable climate of Kerala, higher cost of living in the West during the winter and lower cost of living in Kerala at the same time and availability of vacation.

Among the social, cultural and psychological factors, there are positive forces as well as negative forces. Most tourists are pleasure seekers and want to spend vacation. Apart from seeking leisure and enjoying vacation, foreign tourists in Kerala are involved in experiencing village life, tasting food variety, enjoying art forms and participating in the special events of festivals. Seeking medical treatment is another purpose for travel as foreign tourists who choose beach destinations mostly do sunbath for health rejuvenation. There are foreign guests too who learn and practice yoga and undergo Ayurveda treatment. However, intentions for travel could be overlapping as type of leisure could vary from person to person. Every intention is contributed for the tourism demand. Many stakeholders mentioned the travel-culture of the Europeans. They start travelling at their younger age and mostly they don't have any familial commitments unlike Indians. According to 17 out of 28 stakeholders, repeat visits are common in Kerala's destinations. It could be contributed by emotional bond with which foreigners develop with destinations and stakeholders. Trust building between foreign guests and natives or service providers, good reviews and mouth publicity about various tourism services in the destinations play crucial role in repeat visits. No one will be able to influence them without mutual trusts as they stick on their travel budget and continue to follow their plan. Globalisation of food and availability of seafood and local dishes make foreigners happy according to 16 stakeholders. Being people fond of travel and comfortable and safe at their stays, Europeans come again. Some of them have been arriving in Kerala as regular visitors. Effective policing in the destinations and realisation of natives about the livelihood from international tourism has greater role in making the atmosphere safe and friendly. Kerala's culture and village life have always been exciting for the foreign tourists according to 9 stakeholders. They are also excited to watch various events including boat races, temple festivals and 'Kochi-Muziris Biennale'. Guests from the English speaking countries feel comfortable on communication as natives and various service providers are able to communicate in

English. However, guests from the non-English speaking countries especially Russia cannot easily communicate. But there are some experienced stakeholders in the destinations who are able to communicate with such non-English speaking guests too.

Apart from the above mentioned language barrier, there are several serious behavioural issues in Kerala's international tourism. Being unable to communicate with foreigners is a challenge but not a threat. At the same time, Kerala has had lower than potential arrivals because of the behavioural issues. According to majority of the stakeholders, overcrowding and noisy atmosphere and poor waste management in the top destinations make foreign tourists uncomfortable and irritating. Foreign tourists who arrive in Kerala need always calmness and privacy. Joint efforts of the government and people are required to keep the destinations hygienic. Regular overcrowding in a destination means the consolidation or stagnation stage has arrived and due to decline in future before it gets rejuvenated according to the tourism area life cycle (TALC) theory (Butler, 1980). However, foreign tourists choose less crowded areas where they get privacy and calmness in the destinations. Cheating and misbehaviour against foreign tourists is another issue according to a few stakeholders. But most stakeholders pointed out the isolated instances of cheating and misbehaviour towards the guests. Foreign tourists, however, are cautious and well aware about being cheated.

Apart from the behavioural issues, Kerala's destinations struggle from lack of basic facilities according to 10 stakeholders. Insufficiency of government effort along with sufficiency in arranging the destinations properly were mentioned by stakeholders in equal numbers. It implies that there is mixed response from the stakeholders regarding the effort of the tourism regulator. While government effort is regarded by the stakeholders as sufficient to make destinations safe through effective policing, government is being criticised on the ground of insufficiency in equipping the destinations with basic facilities. Government is acting both as tourism regulator and promotor mainly as tourism supplies are made by private entrepreneurs in both organised and unorganised sectors. Promotional efforts are made both by government and industry personnel online and offline at the same time.

Geographical factors remain largely irrelevant in explaining Kerala's international tourism. However, three stakeholders pointed out the declining stage of Kovalam. According to them, Kovalam is on the verge of ruination due to multiple

reasons according to them. Sea erosion, which is caused by climate change, and incursion by private properties into the sea together reduced the beach area. Ongoing construction of 'Vizhinjam Port' at Thiruvananthapuram has arguably exacerbated the serious threat of coastal erosion. However, the so called declining stage of Kovalam in terms of number of foreign tourist arrivals has also been contributed by higher relative tourism prices compared to Kerala's other destinations according to stakeholders from Kovalam. Kovalam may have arrived at declining stage as postulated by Butler (1980) in his tourism area life cycle theory.

Internet has of course made its impact on Kerala's international tourism in some way or the other. Internet is extensively used by the foreign tourists for booking various tourism services including overnight stays and travel and accessing tourism information according to 11 stakeholders. However, repeat visitors mostly book hotels directly using phone as hoteliers are familiar to the tourists and direct booking is cheaper.

'Ship guests' is a main category of foreign tourists who arrive in Kerala coasts especially Cochin port as part of luxury tour packages. Those packages are mostly participated by aged guests who are rich. Although they are short-staying guests, they spend huge amount of money for shopping various goods and services. Although Kerala's international tourism is seasonality driven in one sense, ships arrive irrespective of seasons. Travel agents in and out of Kerala's destinations arrange tours apart from ship package tours. In line with the view on aged guests who arrive on luxury cruise packages, there are stakeholders who argue that younger guests spend less during their stay while senior citizens spend lavishly for various tourism services.

7.6. Conclusions of the Study

Most tourist destinations in the world have largely been driven by seasonality (Connel, 2015; Yildirim & Coskun, 2016, and UNWTO, 2004). In line with this view, Kerala's international tourism has also been mostly driven by seasonality, as tourists from the advanced economies of Europe and North America turn out massively in the period from November to March when they experience extreme winter in their home countries. Europe and North America remain the major markets for Kerala's international tourism, along with the Middle East. Guests from the high-income economies of the Middle East mostly choose the monsoon time to visit Kerala when they experience hot climate. The role of relative temperature (temperature of Europe and North America/Kerala's

temperature) and Kerala's rainfall in shaping Kerala's international tourism seasonality has been decisive. It falls in line with Salman et al. (2021) and Gani & Clemes (2017) who noted significant effect of climatic factors in driving the tourist arrivals. At the same time, the tourism seasonality of Kerala's international tourist arrivals remains highly uneven when compared to that of India.

Although it was found that quantitative income was not significantly related to Kerala's international tourism demand according to ARDL and cross-sectional techniques, double log regression revealed the significance of income of the top source markets in affecting visitor arrivals from the concerned countries over time in Kerala. However, it was found that the arrivals of tourists in Kerala from the top source markets (the United Kingdom, the United States, and France) have been less elastic to income. It implies that Kerala's international tourism has not been a luxury product for tourists from the advanced economies in the West and may not be significantly impacted by economic slowdown or deceleration in the West. Even an economic boom of advanced economies in the West won't largely benefit Kerala's international tourism. Less impact of income on Kerala's international tourism demand falls in line with Naude & Saayman (2005) who observe income as developed country determinant. Although quantitative income was only selectively related to Kerala's international tourism demand, categorical income was relevant, as the great majority of overseas visitors to Kerala were from designated high-income countries.

Additionally, it has been noted that foreign tourists visit Kerala not solely due to affluence but because Kerala remains an affordable destination to them. This affordability is achieved through lower relative prices, coupled with the greater purchasing power of the tourist income. The greater purchasing power of the income received by people in the advanced economies of Europe, North America, the Middle East, and Oceania largely powers foreign tourist arrivals in Kerala rather than mere nominal income. The lower relative prices and cost of living in Kerala, compared to the advanced economies, have significantly contributed to the increase in arrivals. This is confirmed in both quantitative and qualitative analyses reported in the thesis.

Tourists from the UK and the US remain more sensitive to relative prices in Kerala with statistical significance at the 1 per cent level, in line with economic theory, while French guests were not significantly sensitive to prices. Although statistically

insignificant, French tourists in Kerala were sensitive to relative prices with expected sign. Regardless, price-related themes in the thematic analysis prove the negative effect of prices on tourism demand, as foreign tourists prefer low-cost transportation for city travel. The presence of complementary destinations in nearby locations that reduces the average cost of the foreign trip is also an indication of the inverse relation between prices and tourism demand. According to stakeholders, the recent fall in foreign arrivals in Kovalam (even before the outbreak of Covid) can be attributed to the relative rise in tourism prices in Kovalam compared to other destinations in and out of Kerala. The results imply that income and the cost of travel remain developed country determinants, as argued by Naude and Saayman (2005), while relative prices affect foreign tourist arrivals in Kerala.

The presence of the Malayalee diaspora in the source countries makes a stronger impact on Kerala's international tourism demand, as Kerala witnesses massive arrivals from countries where the Malayalee diaspora is significant. Similar impact was made by the availability of direct flights between source countries and India as more tourists arrive in the state from the countries where India had direct flight operations and vice versa. Although the growth of the internet has apparently facilitated current-day international tourism, the percentage of people using the internet in the source countries was not significant in driving visitor arrivals in the South Indian state. However, the internet remains an important mode of booking tourism services and a source of tourism information. It implies that the effect of the internet on international tourism in Kerala is partly transformational. It is true that modes of accessing tourism information and booking travel-related services have transformed into online mode in the modern era from conventional offline modes in the pre-internet era.

The market size and human development of the source countries were also not relevant in explaining Kerala's international tourism demand, as land area, size of population, per capita GDP, and the human development index of the origin countries were weakly correlated or non-correlated with foreign tourist arrivals in Kerala. Both economic and non-economic variables are found relevant in explaining Kerala's international tourism, while most quantitative data on economic variables are only mildly related. Among the prevalence and strength of groups of variables widely employed in the thesis, origin-cum-destination-based variables have a clear edge on the effect of variables on Kerala's international tourism demand across all analytical

models employed in the thesis. The stronger and wider impact made by factors such as relative prices, nominal exchange rates, relative temperature, presence of Malayalee diaspora abroad, and availability of direct flights. However, only a mild effect was made by other origin-cum-destination-based variables such as air distance, trade relations, and bilateral relations on the tourist arrivals in Kerala.

Major themes identified in the thematic analysis are social, cultural, and psychological factors followed by economic factors, tourism resources, induced arrivals, health factors, and climatic factors. Mostly responded codes identified in the analysis belong to these global themes. Kerala's international tourism is majorly benefited by various organizing themes such as arrivals mostly from advanced economies, presence of complementary destinations, presence of direct tourism resources, availability of low-cost travel options, arrivals for leisure, repeat visits, culinary tourism, investment by tourism entrepreneurs, government's promotional effort, and effort to make destinations safe, availability of tour packages, European travel culture, and possibility for sunbath for health rejuvenation. At the same time, foreign tourist arrivals in the state are below potential, or the foreign guests feel uncomfortable mainly due to poor waste management, the government's inability to provide sufficient basic facilities, and noise and overcrowding in the destinations.

As per the opinion of the stakeholders, lower relative prices in the substitute destinations of Kovalam, such as Varkala (Kerala) and Sri Lanka, fuelled the rise in arrivals of foreign tourists in similar but more competitive destinations such as Varkala in Kerala and Sri Lanka in India's neighbourhood. Kovalam seems on the verge of tourism decline, as hypothesized by Butler (1980) in his tourism area life cycle (TALC) theory. Multiple but additive reasons are cited by the stakeholders in Kovalam. They are coastal erosion caused by climate change and Vizhinjam port construction, extreme policing, lack of effective governmental intervention for tourism development, apart from higher relative tourism prices.

Regarding hypothesis testing across the quantitative analyses employed in different chapters of the thesis, at least one variable from each of the three categories— origin-based variables, destination-based variables, and origin-cum-destination-based variables—remains significantly related to Kerala's international tourism demand. Null hypotheses suggesting no significant effect of the three categories of variables on

foreign tourist arrivals in Kerala had to be rejected in this context. However, origin-cum-destination-based variables dominate as significant determinants of Kerala's international tourism demand, with a greater number of variables significantly related in most models. Nominal exchange rates, the presence of Malayalee diaspora in the source countries, relative temperature, and relative prices are the dominant factors among them, making a stronger and significant impact on Kerala's international tourism demand. A significant and stronger effect of rainfall (a destination-based variable) and international tourism expenditure (an origin-based variable) were discovered in the quantitative analyses. Moreover, both economic and semi/non-economic determinants are significantly related to Kerala's international tourism demand. Relative prices, nominal exchange rates, and international tourism expenditure of the source countries are strongly related and significantly related economic variables. Environmental factors (relative temperature and rainfall), the presence of Malayalee diaspora abroad, migrant stock of the source countries, and the tourism season of the source countries are the semi/non-economic determinants that are strongly and significantly related to tourism demand.

Moreover, it was observed that special events in Kerala, such as boat races in the backwaters and festivals in temples, as well as the 'Biennale' in Fort Kochi (in Kerala), attract foreign visitors in large numbers, as revealed from the stakeholder analysis. On average, August receives greater arrivals of foreign tourists than the other offseason months, as most of the noted backwater boat races, including the 'Nehru Trophy Boatrace,' 'Kumarakom Boatrace,' 'Payippad Boatrace,' and 'Aranmula Uthrattathi Boatrace,' are organized in August every year.

7.7. Contribution of the Thesis

The current study on factors driving overseas tourist arrivals in Kerala could facilitate better regulation and management of international tourism in the state. It could help both tourism regulator (Government) and tourism managers (tourism entrepreneurs) in encouraging the factors under destination's control that are related positively to Kerala's international tourism in whatever way possible. Steps can also be taken to minimise the incidence of negatively affecting forces as much as possible that lie fully or partially under destination's control. The study gives an insight too on the need to protect or promote several social, economic, political and environmental factors so that

foreign tourist arrivals in the state could stay non-subsided. The study also gives an insight on trends and patterns of foreign tourist arrivals in Kerala. It could make tourism regulators and managers well informed about the focus areas.

It is found that seasonality nature of Kerala's international tourism is contributed apparently by relative temperature and destination's rainfall. It implies that fighting climate change is vital for sustained tourism receipts as climate change could directly harm Kerala's international tourism. We arrive at this conclusion as both relative temperature and rainfall were negatively and significantly related to tourist arrivals in the state from its top source markets. Moreover, it assumes greater significance as there have been constant reports of increasing global temperature and changing rainfall pattern.

While income was not significantly related as per ARDL approach, double log linear regression identified less income elasticity of tourism demand of Kerala from the top source markets of the West. It implies that tourist arrivals in developing countries/regions cannot be largely shaped by income and growth. In other words, economic slowdown or deceleration of the advanced economies (especially from the West) won't badly affect the tourist arrivals in Kerala and similar destinations. Even an economic boom of the Western advanced economies won't largely benefit Kerala's international tourism as well. Relative prices remained more relevant in affecting the tourist arrivals as well. Although income of the source markets remains out of control of destination's government, destinations should be kept competitive to foreign tourists to maximise the tourist arrivals. Presence of multiple destinations as complementary and dependence on low-cost transportation for city travel apart from the effect of exchange rates and relative prices clearly indicate that tourist arrivals in the state will rise if the destinations are competitive. The relevance of presence of Malayalee diaspora in the source countries and availability of direct flights between source countries and India clearly indicate that focus should be accorded to preserving and promoting the expatriates abroad and maintaining or judiciously raising the number of direct flights. It was found in the study that decisive and concerted efforts are required to fix the behavioural issues of poor waste management, noisy atmosphere and unnecessary questions and staring at the foreign tourists in the destinations. Being an important category, every effort could raise the share of repeat visitors among total tourists so that the foreign tourist arrivals in the state could be maximised. Moreover,

the study identified some signs of declining stage of Kovalam in terms of international tourism even before the outbreak of Covid 19 due to multiple reasons. Coastal erosion, strict regulations and higher prices compared to its substitute destinations are contributed for the same according to the stakeholders in Kovalam. Appropriate actions are necessary from the part of both tourism regulators (government) and tourism service providers in Kovalam beach.

The relevance of purely destination based factors was limited to a few variables while origin-cum-destination based factors remain highly relevant in explaining Kerala's international tourism (as per quantitative analyses). Hence, it is obvious that foreign tourist arrivals in Kerala still remain lower than par as destination's exclusive attributes are yet to make the most of it.

7.8. Recommendations/Policy Implications

The present thesis provides insights for both tourism service providers and the tourism authority (government). It could assist both the stakeholders in enhancing tourism management and regulation effectiveness.

First of all, maintaining destinations affordable to foreign tourists, regardless of the income status of the source countries, remains crucial. Relative prices were found to be influential in both quantitative and qualitative aspects of tourist arrivals. It is evident that managing income (a positive determinant of international tourism) is beyond the authority's control. However, the government must ensure that tourism prices in destinations remain competitive. Tax rates on tourism goods and services need to be optimized to keep destinations competitive compared to others within and outside the state.

Kerala's international tourism was significantly influenced by seasonality, as foreign tourists predominantly arrive during the November to March period. Efforts should be made to attract maximum tourists during the offseason to minimize disguised unemployment in the labour-intensive tourism industry. Europeans and North American tourists prefer winter visits to places like Kerala, while tourists from the Middle East visit during the rainy seasons of June to September. Therefore, special efforts to attract guests from the Middle East during the offseason would be meaningful, utilizing the presence of the Malayalee diaspora in the Gulf.

The presence of migration-related variables, including the diaspora in source countries, is significant in explaining the international tourism demand for Kerala. Steps should be taken to improve bilateral relations and arrange direct flights between India and potential source countries, as Kerala receives a significant number of tourists from countries with direct flights to and from India.

Efforts could maximize the arrivals of overseas tourists in the state, as several adjustable factors are prevalent in explaining Kerala's international tourism. These factors include the Malayalee diaspora, marketing, poor waste management in destinations, direct tourism resources of Kerala, availability of direct flights between major source countries and India, internet for tourism services, government expenditure for tourism development, safety in destinations, culinary tourism, presence of complementary destinations in the vicinity, and Ayurveda treatment.

Since the majority of foreign tourist arrivals are from countries with direct flight operations to India, the government can judiciously increase the number of direct flights to those countries. Behavioural problems in destinations, such as poor waste management, noisy atmospheres, and misbehaviour towards foreigners, must be addressed to maximize visitor arrivals in Kerala. Moreover, it is crucial to make and sustain Kerala's international tourism and its destinations more competitive. When tourism regulators and managers develop equally competent destinations in the least-visited districts of Kerala, international travel of foreign tourists to Kerala will become more competitive as the average cost per tourist location falls. This could further accelerate foreign tourist arrivals in Kerala.

7.9. Limitations of the Study

The complete tourist arrival statistics was available only for the period 2002 to 2019 leaving less scope for wider period analysis of trends and structural shifts in the sector. We found it difficult to have a host of control variables over this period arranged in monthly intervals. Field investigations were prohibitively problematic due to the onset of Covid 19 and the consequent lockdown which brought the whole tourism sector worldwide into a halt. Another possible issue is the problems of recalling and misreporting in the survey responses and also inadequate responses owing to personal inhibitions. Several of the intricacies related with tourism demand were explored using a thematic analysis which was however confined to stakeholders from the top four

foreign tourist destinations in the state. A state-wide stocktaking of thematic responses could not be produced as furthering the scope of the study was constrained by time and resources limits.

7.10. Areas of Further Research

Since Kerala's international tourism remains hugely seasonality driven, study on incidence of disguised unemployment in the offseason of Kerala's tourism would be meaningful. It could help identify the impact of seasonality on the people who find livelihood from the tourism industry in Kerala. It could help us understand the strategies for which the problem is being addressed or can be addressed. Destination-wise analysis of foreign tourist arrivals in Kerala could help understand the features engrained in the top destinations. It could provide a comparative view on various factors that are strongly related to the tourist arrivals in different locations. Studies are required on socio-economic perspectives of repeat visits of the foreign tourists in Kerala as repeat visitors constitute an important category of the foreign tourists in the state. The study on economics of sunbath for health rejuvenation would provide some valuable insights on one of the most sought after tourism products by the foreign tourists in Kerala's beach destinations. Furthermore, the study on impact of income on demand for Kerala's tourism industry is to be carried out as the present study could not find a conclusive evidence on the relevance of quantitative income in explaining the tourism demand.

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APPENDICES

Appendix 1: Month-wise foreign tourist arrivals in Kerala and India from Jan 2002 to Dec 2019 (total)

Year	Month	FTAsKL	FTAsIND	Year	Month	FTAsKL	FTAsIND	Year	Month	FTAsKL	FTAsIND	Year	Month	FTAsKL	FTAsIND
2002	Jan	29440	228150	2007	Jan	72814	535631	2012	Jan	106314	681002	2017	Jan	150808	964109
	Feb	29105	241133		Feb	66131	501692		Feb	103220	681193		Feb	135089	931025
	Mar	19246	216839		Mar	56151	472494		Mar	75544	606456		Mar	107141	885936
	Apr	18028	159789		Apr	34487	350550		Apr	61335	447581		Apr	82633	717899
	May	10794	144571		May	21098	277017		May	30470	374476		May	49073	622408
	Jun	6610	134566		Jun	18262	310364		Jun	28280	433390		Jun	44040	663470
	Jul	8581	178231		Jul	25199	399866		Jul	42977	485808		Jul	72552	779309
	Aug	14226	162594		Aug	35563	358446		Aug	59904	445632		Aug	73736	719129
	Sep	17808	163089		Sep	24708	301892		Sep	47440	411562		Sep	54700	719964
	Oct	20744	213267		Oct	33534	444564		Oct	63690	556488		Oct	79957	866976
	Nov	26190	245661		Nov	55647	532428		Nov	78833	701185		Nov	107028	997738
	Dec	31792	296474		Dec	72214	596560		Dec	95689	752972		Dec	135113	1167840
2003	Jan	41845	274215	2008	Jan	85028	511781	2013	Jan	113627	720321	2018	Jan	167980	1045035
	Feb	36163	262692		Feb	78155	611493		Feb	115403	688569		Feb	152003	1049255
	Mar	25261	218473		Mar	71026	479765		Mar	85953	639530		Mar	120711	1021530
	Apr	20106	160941		Apr	39538	361101		Apr	66371	450580		Apr	85493	745051
	May	12675	141508		May	26348	304361		May	32600	417453		May	45427	622408
	Jun	10820	176324		Jun	20578	341539		Jun	29758	451223		Jun	36746	663470
	Jul	14824	225359		Jul	31610	431933		Jul	45786	506427		Jul	68868	779309
	Aug	19240	204940		Aug	45711	383337		Aug	64518	486338		Aug	60121	719129
	Sep	20253	191339		Sep	28292	341693		Sep	51032	453561		Sep	44769	719964
	Oct	24702	260569		Oct	39748	450013		Oct	67702	598095		Oct	73263	866976
	Nov	32165	290583		Nov	59923	531683		Nov	83484	733923		Nov	99271	1012564
	Dec	36567	319271		Dec	72972	533904		Dec	101909	821581		Dec	141755	1191472
2004	Jan	45630	337345	2009	Jan	77839	481308	2014	Jan	119865	757786	2019	Jan	160588	11,11,040
	Feb	43418	331697		Feb	71136	489787		Feb	127153	755678		Feb	148024	10,90,516
	Mar	35006	293165		Mar	57250	442062		Mar	93175	690441		Mar	113857	9,78,236
	Apr	23546	223684		Apr	43473	347544		Apr	72441	535321		Apr	86693	7,74,651
	May	14870	185502		May	25386	305183		May	36302	465043		May	49952	6,15,136
	Jun	12734	223122		Jun	19493	352353		Jun	33898	502028		Jun	45675	7,26,446
	Jul	17228	272456		Jul	28914	432900		Jul	48577	568887		Jul	78034	8,18,125
	Aug	27341	253301		Aug	39079	369707		Aug	69909	575750		Aug	74210	8,00,837
	Sep	21103	226773		Sep	29283	330707		Sep	54245	509142		Sep	62942	7,51,513
	Oct	22160	307447		Oct	38870	458849		Oct	71598	668398		Oct	94205	9,45,017
	Nov	38118	385238		Nov	56880	541524		Nov	87720	765497		Nov	120848	10,92,440
	Dec	44392	417527		Dec	69649	615775		Dec	108483	885144		Dec	154743	12,26,398
2005	Jan	43345	385977	2010	Jan	87553	568719	2015	Jan	130463	790854				
	Feb	41314	369844		Feb	86747	552152		Feb	132873	761007				
	Mar	33479	352094		Mar	61334	512152		Mar	100156	729154				
	Apr	20191	248416		Apr	50922	371956		Apr	76734	541551				
	May	14919	225394		May	26783	332087		May	39583	509869				
	Jun	13239	246970		Jun	24685	384642		Jun	35457	512341				
	Jul	17593	307870		Jul	36188	466715		Jul	51722	628323				
	Aug	24398	273856		Aug	49518	422173		Aug	74710	599478				
	Sep	20064	257184		Sep	37859	369821		Sep	57573	542600				
	Oct	28068	347757		Oct	49514	507093		Oct	76119	683286				
	Nov	42324	423837		Nov	66526	608178		Nov	89883	815947				
	Dec	47565	479411		Dec	81654	680004		Dec	112206	912723				
2006	Jan	58858	459489	2011	Jan	94966	622713	2016	Jan	136539	844533				
	Feb	56530	439090		Feb	94185	627719		Feb	141143	848782				
	Mar	39584	391009		Mar	66854	535613		Mar	107037	809107				
	Apr	32377	309208		Apr	57215	446511		Apr	78099	592004				
	May	20470	255008		May	28938	383439		May	37994	527466				
	Jun	16209	278370		Jun	26738	405464		Jun	37368	546972				
	Jul	23578	337332		Jul	40931	475544		Jul	56666	733834				
	Aug	28821	304387		Aug	56230	428490		Aug	81070	652111				
	Sep	21888	297891		Sep	44673	417478		Sep	62599	608177				
	Oct	28681	391399		Oct	59414	559641		Oct	82551	741770				
	Nov	44421	442413		Nov	73843	669767		Nov	96155	878280				
	Dec	57117	541571		Dec	88998	736843		Dec	121198	1021375				

Source: Department of Tourism, Government of Kerala

FTAsKL: Foreign tourist arrivals in Kerala; FTAsIND: Foreign tourist arrivals in India

Appendix 2: Foreign tourist arrivals in Kerala in 2019 (total)

Country	Total	Country	Total	Country	Total
Afghanistan	924	Central African Republic	12	Guinea-Bissau	11
Albania	236	Chad	12	Guyana	72
Algeria	831	Chile	747	Haiti	37
Angola	69	China(Main)	11778	Honduras	41
Antigua and Barbuda	35	Colombia	901	Hong Kong	421
Argentina	1915	Comoros	339	Hungary	2148
Armenia	85	Congo	35	Iceland	887
Australia	42089	Congo (Dem. Rep)	0	Indonesia	2358
Austria	7180	Costa Rica	217	Iran	2557
Azerbaijan	259	Croatia	792	Iraq	481
Bahamas	42	Cyprus	318	Ireland	13482
Bahrain	8072	Czech Republic	2851	Israel	23592
Bangladesh	3580	Denmark	7645	Italy	28046
Barbados	27	Djibouti	0	Ivory Coast	46
Belarus	745	Dominica	71	Jamaica	184
Belgium	10512	Dominican Republic	27	Japan	13935
Belize	14	Ecuador	164	Jordan	1347
Benin	82	Egypt	5004	Kazakhstan	2377
Bermuda	20	El Salvador	138	Kenya	2074
Bhutan	147	Equatorial Guinea	4	Kiribati	0
Bolivia	138	Eritrea	52	Korea (South)	2763
Bosnia and Herzegovina	417	Estonia	763	Kosovo	31
Botswana	562	Ethiopia	330	Kuwait	9390
Brazil	3316	Fiji Islands	273	Kyrgyzstan	249
Brunei	51	Finland	1988	Laos	28
Bulgaria	1055	France	97894	Latvia	1111
Burkina Faso	16	Gabon	17	Lebanon	2501
Burundi	19	Gambia	7	Lesotho	114
Cambodia	65	Georgia	212	Liberia	40
Cameroon	261	Germany	67425	Libya	253
Canada	27228	Ghana	368	Lithuania	1218
Cape Verde	1	Greece	2371	Luxembourg	232
Cayman Islands	25	Grenada	26	Guatemala	62

Appendix 2: Foreign tourist arrivals in Kerala in 2019 (total)-Continued

Country	Total	Country	Total	Country	Total
Guinea	14	Paraguay	99	Tanzania	646
Macau	160	Peru	269	Thailand	4168
Madagascar	73	Philippines	9132	Togo	8
Malawi	232	Poland	7452	Tonga	3
Malaysia	40197	Portugal	3582	Trinidad and Tobago	259
Maldives	52236	Puerto Rico	153	Tunisia	2870
Malta	414	Qatar	5232	Turkey	2509
Marshall Islands	14	Romania	2706	Turkmenistan	80
Mauritania	170	Russia	35066	Turks and Caicos	2
Mauritius	2250	Rwanda	41	Tuvalu	0
Mexico	1940	Samoa	49	Uganda	135
Micronesia	2	San Marino	0	Ukraine	6563
Moldova	252	Sao Tome and Principe	0	United Arab Emirates	26844
Mongolia	52	Saudi Arabia	58422	United Kingdom	186085
Montenegro	56	Senegal	38	United States of America	109859
Morocco	2213	Serbia	1066	Uruguay	195
Mozambique	41	Seychelles	110	Uzbekistan	246
Myanmar	449	Sierra Leone	67	Vanuatu	0
Namibia	170	Singapore	11883	Venezuela	74
Nauru	3	Slovakia	1160	Vietnam	657
Nepal	3116	Slovenia	1102	Yemen Arab republic	1552
Netherlands	15467	Solomon Islands	4	Zambia	196
New Zealand	8567	Somalia	81	Zimbabwe	230
Nicaragua	85	South Africa	13135	Others	36302
Niger	40	Spain	18947		
Nigeria	373	Sri Lanka	6121		
Norway	3911	Sudan	731		
Oman	38619	Suriname	84		
Pakistan	31	Swaziland	672		
Palau	3	Sweden	12841		
Panama	26	Switzerland	15658		
Papua New Guinea	3	Tajikistan	44		

Source: Kerala Tourist Statistics 2019, Department of Tourism, Government of Kerala

Appendix 3: FTAs in Kerala from the top 15 source markets from 2003 to 2019 ('000)

	2003	2004	2005	2006	2007	2008	2009	2013	2014	2015	2017	2018	2019	Avg	Avg %
UK	50.363	61.684	70.423	91.033	120.489	141.147	128.229	147.435	151.497	166.792	180.975	201.258	186.085	130.57	18.40164
US	25.933	29.188	27.453	40.409	39.834	43.307	48.175	71.711	77.616	75.773	92.951	96.522	109.859	59.90238	8.442232
France	30.225	37.739	27.791	37.923	48.137	52.239	49.232	82.154	90.933	91.598	75.639	87.2	97.894	62.208	8.76717
Germany	21.347	25.304	22.861	24.649	35.848	43.468	44.778	75.377	75.698	76.791	62.642	66.194	67.425	49.414	6.964071
Saudi Arab	4.193	4.091	4.783	6.213	8.56	12.137	12.119	45.998	65.048	51.149	61.052	46.089	58.422	29.21954	4.118002
Oman	1.287	1.684	2.126	3.233	3.418	3.621	4.54	16.906	17.924	18.763	53.385	43.627	38.619	16.08715	2.267213
Maldives	16.333	25.863	32.967	29.687	22.642	35.435	14.787	12.801	11.784	9.929	38.769	42.237	42.237	25.80546	3.636845
Australia	7.017	10.271	9.962	12.46	14.622	16.968	21.656	35.802	34.513	35.244	38.97	38.617	42.089	24.47623	3.449512
Russia	2.035	1.987	4.331	5.077	6.632	9.766	9.163	32	35.01	32.725	27.541	32.366	35.066	17.97685	2.533534
Malaysia	2.938	2.45	2.939	4.563	4.762	3.571	8.015	24.237	25.611	28.047	37.614	29.825	40.197	16.52069	2.328313
Canada	5.57	6.781	7.527	8.78	10.492	13.541	16.033	22.809	25.976	26.216	28.676	26.342	27.228	17.38238	2.449754
UAE	2.967	3.451	3.734	5.656	8.174	13.334	14.253	16.981	18.264	20.507	32.546	25.583	26.844	14.79185	2.084662
Italy	10.291	12.688	10.02	14.197	18.052	17.385	14.878	22.311	24.479	21.433	23.137	24.502	28.046	18.57069	2.617226
Switzerlar	10.26	9.715	8.742	10.69	16.097	15.603	13.46	25.235	11.15	26.115	23.106	17.476	15.658	15.639	2.204054
Netherlan	9.379	9.665	7.554	10.488	12.738	12.511	14.304	15.047	15.74	22.275	16.59	14.456	15.467	13.55492	1.910338
														Total	72.14

Source: Department of Tourism, Government of Kerala & Author's calculation

Appendix 4: Destination-wise arrivals of foreign tourists in Kerala from 2009 to 2019 ('000)

Destinations	2009	2010	2013	2014	2015	2017	2018	2019	Average	Avg percentage
Kochi city	99.212	116.536	129.206	135.005	179.048	219.496	236.87	270.032	173.1756	18.83992499
Kovalam	93.214	108.639	169.406	173.761	181.703	177.94	142.914	132.313	147.4863	16.04515582
Fort Kochi	59.325	65.396	101.744	115.013	128.975	102.365	115.482	135.219	102.9399	11.19891742
Varkkala	24.054	45.545	58.105	61.311	51.599	133.658	103.602	86.878	70.594	7.679981897
Alappuzha	31.428	39.531	55.465	56.491	59.391	57.244	74.621	91.457	58.2035	6.332008759
Thiruvananthapuram city	51.647	43.032	52.774	56.499	63.285	68.798	64.014	61.164	57.65163	6.271969804
Maradu	28.737	37.881	21.598	36.224	37.358	41.539	46.034	49.032	37.30038	4.057939836
Kumarakom	21.657	26.599	34.387	34.961	43.363	25.934	35.975	49.837	34.08913	3.70858519
Munnar	12.169	19.69	43.733	45.393	42.303	24.003	24.293	38.967	31.31888	3.407207313
Thekkady	24.904	27.537	46.713	48.349	41.452	18.158	19.537	29.113	31.97038	3.478084557
Total	**557.258**	**659.265**	**858.143**	**923.366**	**977.479**	**1091.87**	**1096.407**	**1189.771**	**919.1949**	**81.019**

Source: Department of Tourism, Government of Kerala & Author's calculation

Appendix 5: District-wise foreign tourist arrivals in Kerala from 1999 to 2021 (total)

District	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Avg	Avg %
Thiruvananthapuram	96536	82803	63197	65240	94835	103558	119940	151578	193924	234797	176571	204049	224387	242739	268444	289612	310223	383608	420719	342761	310451	90550	8282	194729.7	33.6
Kollam	7430	8997	9970	8478	8620	8242	6813	7918	8854	8728	8010	8211	9317	9976	11403	12467	14100	8520	6227	9086	12961	5141	77	8675.913	1.5
Pathanamthitta	141	208	148	177	287	330	349	346	547	349	599	829	964	1253	1255	1379	1667	1620	2003	1953	2042	659	72	833.7826	0.13
Alappuzha	10478	12013	12871	17261	26157	38024	30274	36407	40463	49866	33493	41977	46019	50760	55364	60337	63838	78049	75037	95522	116228	46629	777	45123.65	7.22
Kottayam	11832	12876	17744	20488	21897	23517	20017	26543	27358	27230	24623	32561	37573	40926	40932	44366	49976	49513	32350	43287	58178	20072	366	29748.87	5
Idukki	10719	24842	25385	24692	31831	46031	39378	44583	46463	51025	38185	48295	55778	62387	68880	77905	83894	50366	42285	44833	75206	20163	591	44074.65	7.58
Ernakulam	55546	55819	69972	87357	99987	109031	108773	131767	165125	193013	239364	277675	308390	330390	352314	372997	383643	407653	453973	488175	522232	134982	46821	234563.9	38.73
Thrissur	1634	2057	1950	1979	2667	2658	2421	4142	4645	3398	3452	4326	5011	5946	6459	7391	7874	10133	10775	11333	15691	3416	463	5209.609	0.83
Palakkad	1512	1517	809	611	661	947	801	809	615	785	1170	1270	1331	1557	1874	2093	2232	2385	1711	1967	2147	742	41	1286.391	0.22
Malappuram	855	856	964	1048	1402	3129	5115	7109	9766	10166	13499	16915	18394	19417	20569	21613	23409	19769	18451	17610	25687	4100	553	11322	1.9
Kozhikode	449	5159	630	563	621	749	942	2611	4093	5638	5362	6575	7567	9541	10489	11313	12215	12649	13106	18388	22516	5282	2074	6891.783	1.06
Wayanad	2968	561	3232	3076	3529	4702	8420	11154	10020	9966	7513	9017	9892	10476	10844	11795	12377	7067	8995	11607	12302	4131	164	7556.87	1.3
Kannur	1271	1415	1197	1014	1438	2516	2090	2730	3067	3143	4186	5886	6038	6257	6972	7563	9022	5264	5123	5763	6862	2754	81	3984.435	0.68
Kasaragod	802	810	761	580	689	1799	1166	837	868	825	1231	1679	2040	2071	2344	2535	2973	1823	1115	4122	7289	2184	146	1768.217	0.25
Total	202173	209933	208830	232564	294621	345233	346499	428534	515808	598929	557258	659265	732701	793696	858143	923366	977443	1038419	1091870	1096407	1189771	340755	60487	42554.98	100

Source: Department of Tourism, Government of Kerala & Author's calculation

Appendix 6: Climatic data (rainfall and temperature)

Year	Month	Rainfall (t	KL Temp	Rel temp	Year	Month	Rainfall (t	KL Temp	Rel temp	Year	Month	Rainfall (t	KL Temp	Rel temp
2002	Jan	14.4	27.5	0.0083	2008	Jan	0	27.8	0.0993	2014	Jan	0	27.7	0.073
	Feb	0	27.6	0.0735		Feb	28	28.3	0.1131		Feb	5	28.3	0.1348
	Mar	10.8	28.5	0.1386		Mar	284.4	27.8	0.1364		Mar	21.8	29.3	0.2032
	Apr	88.2	29.1	0.2651		Apr	174.7	28.6	0.2768		Apr	54.9	29.7	0.3199
	May	518.3	28.5	0.4286		May	198.7	29	0.4385		May	316.8	29.1	0.4166
	Jun	530.5	27.5	0.6184		Jun	396.3	27.6	0.5747		Jun	412.8	28.4	0.5593
	Jul	319.6	27.2	0.6762		Jul	510.1	26.9	0.6914		Jul	515	27.6	0.6948
	Aug	611	26.9	0.6686		Aug	218.1	27.5	0.6327		Aug	783.5	27.1	0.6378
	Sep	153.5	27.9	0.4821		Sep	546.7	27.2	0.5113		Sep	247.6	27.7	0.5557
	Oct	458.9	27	0.3071		Oct	300	27.7	0.3452		Oct	437.4	27.8	0.4234
	Nov	114.5	27	0.1624		Nov	13.7	27.3	0.1919		Nov	123.7	27.4	0.2712
	Dec	0.2	27.3	0.0288		Dec	25.2	27.4	0.0775		Dec	24.5	27.5	0.1432
2003	Jan	0	27.4	-0.0751	2009	Jan	18.2	27.5	0.0084	2015	Jan	2.6	27.5	0.1055
	Feb	86.5	27.7	-0.0191		Feb	0	28.2	0.0374		Feb	3.2	28.5	0.078
	Mar	98.7	28.1	0.1538		Mar	59.4	29.4	0.1455		Mar	32	29.2	0.1826
	Apr	120.5	29.1	0.2641		Apr	193.3	29.8	0.3056		Apr	202.8	28.8	0.2724
	May	231.7	29.3	0.4278		May	449.6	29.6	0.4558		May	126.7	29.1	0.4105
	Jun	613.5	28	0.6258		Jun	616.3	27.7	0.5801		Jun	640.3	28	0.5525
	Jul	529.9	27.2	0.7216		Jul	733.9	27	0.6906		Jul	312.2	28.1	0.6296
	Aug	487.6	27.3	0.7138		Aug	179.9	27.6	0.6881		Aug	170.9	28.6	0.6455
	Sep	112.2	28.1	0.4975		Sep	392.8	27.5	0.5474		Sep	350.2	28.5	0.549
	Oct	492.7	27.2	0.2684		Oct	141.7	28.2	0.3273		Oct	335	27.9	0.3962
	Nov	58.2	27.1	0.1808		Nov	170.6	27.1	0.2555		Nov	345.1	27.7	0.2924
	Dec	97	27.1	0.0256		Dec	7.7	28.1	0.0422		Dec	47.2	27.8	0.2039
2004	Jan	9.6	27.2	-0.0488	2010	Jan	36.2	27.5	-0.0487	2016	Jan	2.5	28.4	0.0328
	Feb	29	27.9	0.0046		Feb	0	28.5	-0.0105		Feb	116	29.3	0.1069
	Mar	12.4	29.1	0.1097		Mar	45.8	29.8	0.1342		Mar	8.8	30.4	0.1599
	Apr	87.7	29	0.2739		Apr	151.9	29.7	0.2896		Apr	76.6	31.2	0.2525
	May	884.6	27	0.4323		May	328.9	29.3	0.3922		May	285.8	29.4	0.433
	Jun	555	27	0.5952		Jun	852	27.9	0.5757		Jun	475.8	27.4	0.5904
	Jul	421.5	26.7	0.6744		Jul	648.5	27	0.7399		Jul	536.9	27.6	0.687
	Aug	276.7	27.3	0.6625		Aug	242.1	26.9	0.6611		Aug	178.4	28.1	0.6614
	Sep	202	27.1	0.5311		Sep	464.3	27.6	0.512		Sep	40.9	28	0.5788
	Oct	623.2	27.5	0.3335		Oct	686.4	27.3	0.3483		Oct	225	28.3	0.3833
	Nov	45.6	27.6	0.1268		Nov	386.7	27.2	0.1592		Nov	153.1	28.1	0.2026
	Dec	12.1	27.8	0.0206		Dec	46.9	28.1	-0.0266		Dec	9.1	28.3	0.1131
2005	Jan	6.4	27.9	0.0154	2011	Jan	7.7	27.5	0.0336	2017	Jan	6.2	28.4	0.0517
	Feb	0	28.9	-0.0306		Feb	241.9	28	0.0324		Feb	0	28.3	0.1215
	Mar	1.8	29.7	0.096		Mar	73.9	29.1	0.148		Mar	50.9	29.8	0.2001
	Apr	184.5	28.8	0.276		Apr	161.7	29.1	0.3489		Apr	53	30.3	0.2645
	May	117.9	29.3	0.412		May	285.1	29.1	0.4563		May	430.1	29.4	0.4338
	Jun	815.4	27.5	0.6169		Jun	756.4	27.9	0.5988		Jun	641.3	28	0.5978
	Jul	814.8	27	0.6804		Jul	470.1	27.3	0.6568		Jul	469	28.2	0.5745
	Aug	403.8	27.8	0.5427		Aug	435.1	27.6	0.6438		Aug	333.6	27.9	0.6515
	Sep	498	27.4	0.5326		Sep	455.7	27.5	0.5622		Sep	391.8	27.8	0.516
	Oct	247.8	27.9	0.3728		Oct	92.7	28.4	0.3697		Oct	407.9	28	0.4286
	Nov	205.3	27.1	0.1321		Nov	108.6	27.3	0.2595		Nov	86.4	27.7	0.2094
	Dec	2.3	27.1	0.0079		Dec	6.2	27.4	0.1395		Dec	11.8	27.7	0.1075
2006	Jan	13.7	27.3	-0.0411	2012	Jan	15.7	26.9	0.0623	2018	Jan	3.2	27.8	0.1024
	Feb	0	28.5	-0.013		Feb	33	28.2	-0.0038		Feb	8.5	28.5	0.0575
	Mar	24.9	29.4	0.0293		Mar	19.1	29.2	0.2171		Mar	41.6	29.8	0.1038
	Apr	9.9	29.7	0.238		Apr	468.1	29.5	0.2576		Apr	132.5	30	0.3097
	May	580.5	28.9	0.3958		May	175.6	29	0.4369		May	271.2	29	0.4589
	Jun	646.6	28.1	0.5927		Jun	381.8	28	0.5538		Jun	709.1	27.6	0.5694
	Jul	557.1	26.9	0.7481		Jul	298.8	27.8	0.6431		Jul	956.5	27.3	0.7064
	Aug	415.6	27.3	0.6292		Aug	432	27.5	0.6512		Aug	487.3	27.1	0.7164
	Sep	531.6	27.3	0.5647		Sep	193.6	28	0.5151		Sep	38.2	28.5	0.5366
	Oct	430.8	26.9	0.3858		Oct	214.7	28.2	0.35		Oct	306.4	27.9	0.3816
	Nov	400.5	26.9	0.1784		Nov	268.5	27.8	0.2056		Nov	227.9	27.9	0.2377
	Dec	0.6	27.5	0.1085		Dec	11.8	27.9	0.0499		Dec	20.3	28.2	0.1473
2007	Jan	0	27.4	0.0452	2013	Jan	25.2	27.7	0.025	2019	Jan	18.3	27.3	0.0589
	Feb	2.4	27.8	-0.0094		Feb	45.8	28.1	0.0309		Feb	22.4	28.4	0.1231
	Mar	0.9	29.1	0.1253		Mar	32.4	29.1	0.0669		Mar	31.2	30.8	0.1967
	Apr	156.7	29.6	0.3194		Apr	43.8	30.4	0.2675		Apr	100.8	30.1	0.3123
	May	216.5	29.2	0.4215		May	160.4	29.2	0.4149		May	286.9	29.3	0.4154
	Jun	719.5	27.6	0.585		Jun	1162.1	26.3	0.5853		Jun	718.6	27.9	0.5727
	Jul	894.9	26.9	0.6491		Jul	718.7	26.5	0.6929		Jul	600.1	27.2	0.7025
	Aug	363.3	27.3	0.6543		Aug	319	27.3	0.6731		Aug	403.3	27.5	0.6378
	Sep	733.6	27.2	0.5116		Sep	222.9	27.3	0.5362		Sep	292	28.2	0.5401
	Oct	423.3	27.3	0.3841		Oct	331.1	28.1	0.398		Oct	324.3	28	0.4158
	Nov	114.8	27.5	0.1748		Nov	197.3	27.8	0.2075		Nov	184.5	28.1	0.2644
	Dec	11.8	27.5	0.0996		Dec	82	27.7	0.1227		Dec	36.3	27.9	0.1353

Source: Indian Meteorological Department (IMD), Thiruvananthapuram; National Oceanic and Atmospheric Administration (NOAA), USA, 2020; KL: Kerala's average monthly temperature (ºC)

Appendix 7: Tourist arrivals in Kerala from the top source countries (the UK, the US and France)-total from Jan 2015 to Dec 2019

Month	UK	USA	France	UK	USA	France	UK	USA	France	UK	USA	France	UK	USA	France
		2015			2016			2017			2018			2019	
JAN	41312	10391	15413	24617	12045	11969	26835	14391	12107	35872	15541	14418	28752	16778	16183
FEB	35690	8979	17631	23831	10408	12339	31786	11893	12582	38031	13375	15589	34654	13163	18828
MAR	19542	6461	13745	18233	7489	9968	20394	8181	9005	26302	9149	12502	22829	9384	13393
APR	13558	5574	7582	11575	6461	8160	16712	5905	6056	17923	6052	5728	14173	6075	6779
MAY	4699	2979	4137	5073	3453	2248	6411	4417	2949	6165	4406	3481	6507	4178	3240
JUN	2949	3129	1557	4553	3627	2694	4805	5326	1507	3210	4240	1203	3198	3980	1343
JUL	3468	4902	2616	5204	5682	2952	5695	6356	3250	4645	6941	3033	5556	7061	3856
AUG	5696	5450	6115	7305	6318	5238	6435	4671	5812	5584	4394	4072	6252	6319	4328
SEP	5007	4270	3195	6647	4950	1343	6756	3832	2601	4764	3473	2000	6574	5436	3303
OCT	10118	5591	5690	11244	6481	6340	12131	5981	4406	13074	5684	5211	15170	8607	6687
NOV	11002	6461	7904	16994	7490	6859	20732	8323	7655	19962	8466	8492	20555	11342	9773
DEC	13751	11586	6013	20272	13430	9712	22283	13675	7709	25726	14801	11471	21865	17536	10181
Total	**166792**	**75773**	**91598**	**155548**	**87834**	**79822**	**180975**	**92951**	**75639**	**201258**	**96522**	**87200**	**186085**	**109859**	**97894**

Source: Department of Tourism, Government of Kerala & Author's calculation

Appendix 8: Distribution of sample stakeholders across the destinations

Category	Fort Kochi	Kovalam & Poovar	Varkala	Alappuzha	Other	Total
Auto/Taxi		2		1		3
Accommodation units	2		1	2		5
Natives & native shop owners	2	3	1	1		7
Restaurants & Tea shops		2		1		3
Other destination jobs (boats, guide, guard)		1	2	2		5
Foreign tourists			4			4
Government					1	1
Total	4	8	8	7	1	28

Source: Primary data

Appendix 9: Themes, responses and effect (in high to low order)

Organising theme	Responses (Max: 28)	Global theme	Nature of effect on FTAs
Direct tourism resources	27	Tourism resources	Positive
Guests mostly from advanced economies in Europe, North America, Middle East and Oceania	25	Economic factors	Positive
Multiple destinations as complimentary	23	Tourism resources	Positive
Budget transportation: Auto, bus, bike, bicycle	19	Economic factors	Positive
Poor waste management	18	Social, cultural and psychological factors	Negative
Arrivals for leisure	18	Social, cultural and	Positive

		psychological factors	
Repeat visits	17	Social, cultural and psychological factors	Positive
Sufficient government effort	16	Induced arrivals	Positive
Seasonal arrivals	16	Climatic factors	Positive
Culinary tourism: fresh fish, sea food, local food & globalization of food	16	Social, cultural and psychological factors	Positive
Investment by private entrepreneurs: resorts and guest houses, restaurants and tea shops, souvenir shops, and grocery stores	15	Infrastructural factors	Positive
Insufficient government effort	15	Induced arrivals	Negative
Tour packages	14	Induced arrivals	Positive
Sunbath for health rejuvenation	14	Health factors	Positive
Safe and friendly atmosphere	14	Social, cultural and psychological factors	Positive
Guests are mostly not rich	14	Economic factors	Positive
Disturbed by noise and overcrowding and need calmness	14	Social, cultural and psychological factors	Negative
Preference to walk	13	Health factors	Positive
Lower relative prices	13	Economic factors	Positive
Ayurveda	13	Health factors	Positive
Travel plan and budget of the guests	12	Social, cultural and psychological factors	Positive
Extreme cold in origin and comfortable climate in destination	12	Climatic factors	Positive
Travel mania of Europeans	11	Social, cultural and psychological factors	Positive
Shopping	11	Economic factors	Positive
Language: barriers for non-English speaking guests	11	Social, cultural and psychological factors	Positive/Negative
Internet for tourism information, online booking and marketing	11	Technological factors	Positive
Greater currency value	11	Economic factors	Positive
Special events: festivals, biennale, boat race	10	Social, cultural and psychological factors	Positive
Lack of basic facilities	10	Infrastructural factors	Negative
Effective policing	10	Social, cultural and psychological factors	Positive
Yoga and meditation	9	Health factors	Positive
Trust building	9	Social, cultural and psychological factors	Positive
Multiple destinations as substitute	9	Tourism resources	Negative

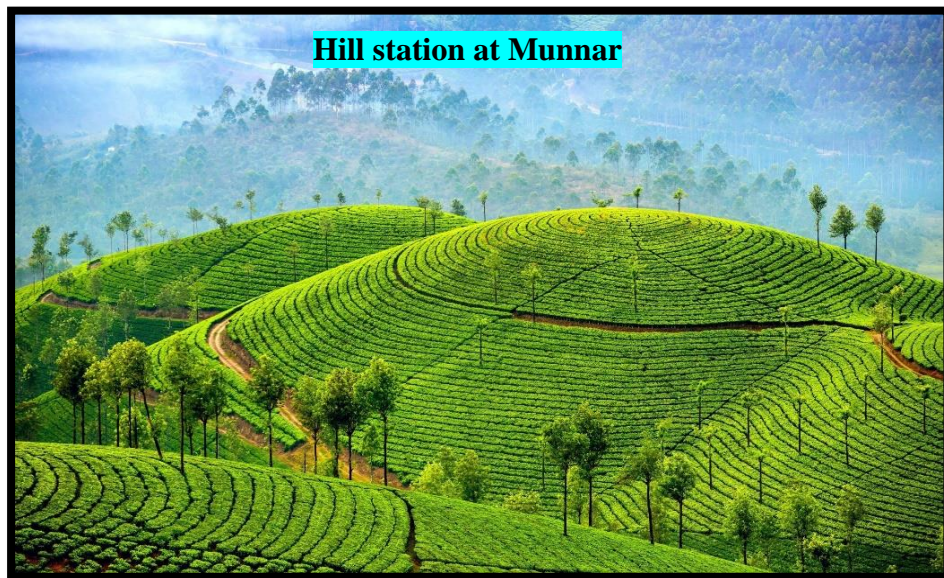|			
Experiencing destination's culture and village life	9	Tourism resources	Positive
Beach-side stay: more and longer	9	Social, cultural and psychological factors	Positive
Vacation	8	Climatic factors	Positive
Ship guests: rich guests, luxury stays, short stays, aged persons	7	Economic factors	Positive
Reviews and mouth publicity	7	Social, cultural and psychological factors	Positive
Residential tourism (long staying guests stay in rented houses)	7	Social, cultural and psychological factors	Positive
Misbehaviour towards foreign tourists: staring and unnecessary questions	7	Social, cultural and psychological factors	Negative
Cheating	7	Social, cultural and psychological factors	Negative
Visa policy	6	Induced arrivals	Positive
Unnecessary regulations	6	Induced arrivals	Negative
Regular pension to the aged	6	Economic factors	Positive
Marketing by government and tourism entrepreneurs	6	Induced arrivals	Positive
Lower arrivals during rainfall	6	Climatic factors	Positive
Higher prices in Kovalam compared to other destinations in Kerala	6	Economic factors	Positive
Bargaining and cautious spending	6	Economic factors	Positive
Reputed destination	5	Tourism resources	Positive
Pilgrim tourism	5	Tourism resources	Positive
Phone booking	5	Technological factors	Positive
Overcrowding in some destinations	5	Social, cultural and psychological factors	Negative
Monsoon tourism	5	Climatic factors	Positive
Kochi airport	5	Infrastructural factors	Positive
Enjoying art forms	5	Social, cultural and psychological factors	Positive
Emotional bond	5	Social, cultural and psychological factors	Positive
Traffic congestion	4	Infrastructural factors	Negative
Longer stays during Ayurveda treatment	4	Health factors	Positive
Economic spending by long staying guests and large scale spending by short staying guests	4	Economic factors	Positive
A few instances of guests' involvement in Illegal activities	4	Social, cultural and psychological factors	Negative
Unsafe and unfriendly	3	Social, cultural and	Negative

atmosphere		psychological factors	
Travel schemes (for students and employees)	3	Induced arrivals	Positive
Social media contacts	3	Technological factors	Positive
Sea erosion due to tsunami, Vizhinjam project and climate change	3	Geographical factors	Negative
Part-time work	3	Economic factors	Positive
Marital relation	3	Social, cultural and psychological factors	Positive
Lack of promotion for international tourism in North Kerala	3	Induced arrivals	Negative
Flooding	3	Geographical factors	Negative
Allopathic treatment for Arabs	3	Health factors	Positive
Age: No age difference except package tour guests who are mostly aged	3	Social, cultural and psychological factors	Positive
Sufficient transportation (road)	2	Infrastructural factors	Positive
Shorter stays by rich guests and longer stays by normal guests	2	Economic factors	Positive
Rate discrimination	2	Economic factors	Negative
Property ownership	2	Economic factors	Positive
No night life	2	Tourism resources	Negative
No gender disparity in arrivals	2	Social, cultural and psychological factors	Positive
Higher flight fare	2	Economic factors	Negative
high spending by aged	2	Economic factors	Positive
Guests are mostly rich	2	Economic factors	Positive
Flight guests are common people	2	Social, cultural and psychological factors	Positive
Deepness of the sea	2	Geographical factors	Negative
beach-side restaurant	2	Social, cultural and psychological factors	Positive
Aged guests are rich	2	Economic factors	Positive
Access to beach	2	Geographical factors	Positive
uncomfortable with street dogs	1	Social, cultural and psychological factors	Negative
Selective impact of close proximity	1	Geographical factors	Positive
Insufficient tourism supply	1	Infrastructural factors	Negative
Fresh water in the cliff	1	Geographical factors	Positive
Fresh air	1	Health factors	Positive
Economic crisis	1	Economic factors	Negative
Complicated procedure and unwanted fees	1	Induced arrivals	Negative

Source: Transcripts of stakeholder interviews

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Appendix 10: Iconic images of Kerala's top foreign tourist destinations

Chinese fishing nets at Fort Kochi

Jewish Synagogue at Mattancheri-Fort Kochi

Light house at Kovalam beach

Cliff beach at Varkala

Sea bridge at Alappuzha beach

Houseboat cruise at Alappuzha backwaters

Houseboat cruise at Kumarakom backwaters

Hill station at Munnar

Wildlife at Thekkady

Appendix 11: Correspondence table of thematic analysis on Kerala's international tourism

Themes	Stakeholder categories							
	auto/taxi	accommodation units	natives and native shop owners	restaurants	foreign tourists	other destination job/services	Govt	Active Margin
Resources	8	8	19	9	9	13	3	69
Income and price	11	31	33	25	14	24	6	144
Purposeful arrivals	20	39	28	23	18	43	9	180
Repeat visits and reviews	4	11	6	4	6	10	0	41
Well fashioned arrivals	3	11	10	6	0	13	3	46
Europe's travel culture	0	4	1	1	1	3	1	11
Behavioural problems	3	8	8	8	5	9	2	43
Safety	2	1	10	1	3	7	0	24
Other positives	3	17	8	7	2	13	3	53
Other negatives	7	12	16	11	6	17	4	73
Active Margin	61	142	139	95	64	152	31	684

Source: Author's estimates

Appendices