DATA ANALYSIS ASSIGNMENT

 IMPACT OF COVID-19 ON TOURISM SECTOR

 IN INDIA

ABSTRACT:

The novel coronavirus [covid-19], which is one of its kind of humanitarian disasters, has affected people and businesses worldwide , triggering a global economic crisis.In this aspect, the tourism sector is not being left behind. The pandemic has not only affected the foreign exchange earnings[FEE] but also various regional developments, job opportunities, thereby disrupting the local communities as a whole. As there has been a substantial decline in the arrivals of overseas tourists in india in 2020,the paper aims to predict foreign tourists’ arrival in india and FEE using artificial neural networks. Furthermore, we analyse the impact of covid-19 based on four scenarios considering with and without lockdown in terms of loss and gain in FEE. Lastly, the results obtained will help policymakers make necessary strategic and operational decisions, along with maximizing the FEE.

INTRODUCTION:

The recent coronavirus [COVID-19] has triggered a concern worldwide in early January 2020, the outbreak has infected several people globally [WHO,2020]. The severity of the pandemic may be assessed based on the figures of the past epidemics such as SARS, Spanish, FLU, etc. Tourism and hospitality businesses are profoundly affected by COVID-19 that has been declared as pandemic on 12th March 2020[WHO,2020]. Due to the covid-19 pandemic, the travel and tourism industry’s employment loss is predicted to be 100.08 Million worldwide [statista,2020]. As the number of infected cases rising throughout the nation, and with the implementation of certain measures and campaigns like social distancing, community lockdowns, work from home, stay at home, self or mandatory quarantine, curbs on crowding ,etc, pressure is created for halting the tourism industry. This change in the current system has led to the beginning of the recession and depression, seeking a transformational change in society.

Is`hospitality. It is a major destination for many international tourists, creating several employment opportunities and generating enormous taxes[Ahmed&Krohn , 1992]. The indian tourism industry has created about 87.5 million jobs, with 12.75% of total employment, thereby contributing INR 194 billion to India’s GDP[WTTC, 2108]. Morover, the sector recorded a 3.2% growth from 2018, with 10.8 million foreign tourists arriving in india with a foreign exchange earning of USD 29.9 billion in 2019.

Also, there is a 66.4% decline in overseas tourists’ arrivals in india in March 2020 compared to last year[TAN,2020]. It has been estimated that there will be about 40 million direct and indirect job losses in india, with an annual loss in revenue of around USD 17 billion in india[FICCI,2020].

REVIEW OF LITERATURE:

IMPACT OF EPIDEMIC OUTBREAK ON TOURISM

Global tourism is affected by many disruptive events, such as terrorist attacks like 9/11, epidemic outbreaks like SARS, Swine flu,etc. in the past. However, the recent epidemic outbreak [COVID-19] originated from Wuhan, china has severly impacted almost every industry, including tourism worldwide [Yeh.2020]. The virus spread to all continents through air transport and still propagates infection exponentially. To contain the spread, many countries completely/partially close their boarder and cancelled all flights, and events including sports, entertainment, pilgrimages,etc. UNWTO[2020] estimated that international tourists would decline by 1%-3% compared to 2019 rather than the forecasted 3%-4% growth. As a result, global tourism has slowed down significantly.

The travel industry, which includes airlines, hotels and restaurants, would shrink by 50% in 2020, which would mean a significant loss of jobs and revenue. Hotels are being closed due to fewer tourists and many five-star hotels turning into quarantine facilities. Most restaurants see operating costs rising further because of social distancing, hygiene, and sanitation-related costs. Therefore, sustaining during this crisis is a challenging task for the tourism industry.

STATEMENT OF PROBLEM:

* On account of coronavirus, the indian tourism and hospitality industry is expecting a potential job loss of around 38 million.
* In the third week of march 2020 itself, the hotel sector saw a decline of more than 65% in occupancy levels as compared to the same period in 2019.
* With international and domestic travel on halt, demand for turbine fuel has substantially declined.
* Indian Association of Tour Operators[IATO] estimates the hotel, aviation and travel sector together may suffer a loss of about rupees 85 billion keeping in mind the travel restrictions imposed on foreign tourists.
* Impact of covid-19 would be felt on both white and blue collar jobs.
* India’s outbound and inbound travel will witness an all time low.
* The restaurant industry in india is expecting almost zero revenue in the immediate term, and a drop of 50% in the months to come.

At least 30% of hotel and hospitality industry revenue could be impacted if the situation doesn’t improve by the end of June 2020.

* There is a threat of job loss of nearly 15% in the hotel and restaurant industry once the lockdown is lifted, as they will not see an immediate surge in demand.
* Aviation industry in India could incur losses worth Rs.27,000 crore[$3.3-3.6 billion] in the first quarter of 2020-21.
* The passenger growth of airlines is likely to fall sharply to a negative 20-25% growth for the 2020-2021.

OBJECTIVES

Due to the penetration of the negative impact of coronavirus in all sub-sectors, and the diversion of the government’s attention from development activities to curbing the spread of the virus, there is a considerable level of deceleration in the nation’s GDP.

Under such a critical circumstance, apprising the impact of coronavirus on the tourism industry with statistical evidence, and putting forward scientific suggestions to restore the tourism industry, will give new life to the evergreen tourism industry. Although a few studies have researched the impact of COVID-19 on tourism, a systematic assessment on the above mentioned issue in the Indian context is missing in the literature. Therefore, in order to fill the gap and to offer suitable suggestions to policymakers, the present study is an attempt to document the impact of COVID-19 on India’s tourism industry; it is conceptual in nature. In order to execute the current study, both qualitative and quantitative data were collected from various sources, such as published articles, periodicals, government reports, and websites regarding the different facets on the impact of coronavirus. At the same time, special attention was given to the impact of COVID-19 on the tourism industry in general, and in the Indian context in particular. Using conceptual analysis, the present study attempts to articulate the impact of coronavirus not only on the aggregate level tourism industry, but also in each and every segment of the tourism sectors. These include the travel industry, hotel industry, resituate, markets and employment and the livelihood of the people that depend on the tourism industry. Therefore, the recommendations offered by this research article should have serve the purpose and fulfill the expectations of the policymakers. Further, the recommendations may be applicable to other developing countries that are similar to India.

HYPOTHESIS:

* Due to the COVID-19, there is a decrease in tourists from February to march 2020, approx..68% . Hence there is a continuous decrease in arrival of tourists in april is reduced by 68% to estimate the number of tourists in may 2020. Similarly, it has been done for rest of the months to predict the tourist arrival. Using this estimated number of tourists and forecasted exchange rates, the monthly FEE is predicted.

CONTENT:

METHODOLOGY AND DATA

This paper uses Artificial Neural Network [ANN] model to predict the impact of the epidemic outbreak COVID-19 on India’s foreign tourists’ arrival. Further, we predict the loss of Foreign Exchange Earnings[FEE] considering the exchange rate and tourists’ number. We use monthly data of foreign tourists’ arrival from different countries to India from 30th April 1989 to 31st March 2020[369 months]. The data are obtained from the centre for monitoring Indian economy [economicoutlook,2020]. Moreover, to analyse the impact of inbound tourism on the economy, the monthly foreign exchange earnings from tourism are collected from January 1993 to March 2020.

CONCLUSION:

The tourism sector has dramatically affected by the widespread of the COVID-19 and may remain for a longer time. The arrival of foreign tourists to India from different parts of the world has reduced by 68% in March 2020 compared to the previous month. It has a great impact on revenue generated from tourism in the form of FEE. A suitable forecasting model can help in strategic and operational decision-making. Hence, this study has predicted the number of foreign tourists using the ANN model with respect to COVID-19 outbreak. Also, the FEE has been predicted using the number of tourists and exchange rates. Further, to analyse the impact of COVID-19, four different scenarios are generated, and impact has been measured through predicting FEE.

Our findings suggest that if the tourism sector and policies are not restructured, then the FEE will fall below USD 1790.53 million and may be entirely lost. If it is managed at some level though reforming policies, then the FEE value will be at least USD 13351.07 million.

In this paper, we make three contributions as well as novelties. Firstly, a well understanding of the mutual interplay between the COVID-19 pandemic and the tourism sector is well explained through a novel approach. Secondly, an enriching contribution is made by predicting foreign tourist arrivals and FEE with the number of foreign tourists and exchange rates as an input to the ANN model. Finally, a decision has been proposed for the various stakeholders of the tourism industry to help recover the sector from the current scenario, which, is quite novel. Consequently. the findings presented in this paper will help the stakeholders and the policymakers facilitate strategic and operational planning based on the forecasted value. As per the study, FEE is reduced because of foreign tourists’ fewer arrivals in this pandemic can think about making the existing resource more efficient and effective.

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