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ANALYZING THE ECONOMIC CONSEQUENCES OF COVID-19 ON TOURISM IN KERALA

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Abstract

This research concentrates on formulating the mechanism to analyse the seriousnessof COVID-19 and its impact on tourism in Kerala. The pandemic condition due to COVID-19 has its impact on economic, social, political situationsglobally and posed a tremendous influence over global industries like tourism which is considered as one of the primary sources of income in the service industries. The tourism department encounters a hard hit and shows massive set back to the international sectors. The tourism department faces a decline of 2.85 trillion dollars, contributing to 50% revenue losses. The initial phase of the research explores the COVID-19 pandemic consequences and how the proposed mechanism pretends to normalize the existing consequences that hit the tourism department in Kerala. This work triggers the researchers to examine the baseline principles, significant assumptions, and organization development and formulates a framework to rebuild the tourism sectors. In the second phase, the work emphasizes impacts of COVID-19on tourism,its practices, and attitudes in attaining the recovery phase. In the final step, the work senses specific characteristics and consequences due to COVID-19 in tourism research. The predictions offer some broader insight towards the refinement of tourism industries and offer some recommendations to tourism sectors, officials, and researchers to re-invest to haul out the pandemic condition to normal condition.

Keywords: tourism, Kerala, pandemic, consequences, COVID-19.

1. INTRODUCTION

COVID-19, a deadly sickness caused considerable monetary loss and global and monetary concerns. Periodic invasion of infections, epidemics, and catastrophes have a substantial consequence on tourism industry, which is a significant donor to the service-based economy. Pandemics show harmful influence on the mental health of patients. As anoutcome, they stop planned excursion asthe individuals are afraid of illness which is unbearable to eliminate while travelling. Tourists also upsurges the sickness risk for other passengers during the absence of vaccines. Viruses, epidemic, breakdowns, and pandemics are transferred across local communities by travellers. The entire world is now in danger. The harmful impact oftravel and recreation industries resulted in the establishment of viral infections. Itis highly aggressive, faster, and increases mortality rate. As an outcome, viruses emerge faster causing pandemics. Contagious agents regularly transfer from animals to humans, endangering lives of people and professional nurses. As a result of the pandemic, patients with chronic illnesses have suffered. Infected people spread virus to others in their vicinity by droplets, coughing, smearing and environmental pollution. According to a recent study, travel restrictions are effective and useful to prevent the pandemic from spreading and managing transmission rates in communities.

A fatal illness caused by thecontagious infection COVID-19 kicked off the coronavirus 2019 pandemic (SARS-CoV-2). Health workers found the virus in December 2019 in Wuhan, China. WHO declared COVID-19 epidemic as a global public health emergency predicting a global pandemic (March 2020).The pandemic had affected over 120 million people where 2.69 million people died from the deadly contagious disease. This lethal virus is now one of the world's most dangerous outbreaks. Coronavirus illnesses cause symptoms that range from non-fatal to exceedingly severe and life-threatening. When one infected person encounters another, the virus is usually passed on through the air. It enters another individualviahis nose, mouth or eyes while inhaling, spitting, sneezing, or conversing. Also, it spreadsvia contaminated surfaces. Individuals might be affected for up to two weeks and transmit the virus despite having no symptoms.

2. Global contributor

Tourism industry make significant contributions to the world's top industry for job generation, economic growth, and social heritage. In various regions, towns and countries, tourism is a vital economic aspect. The tourism and recreation industry are critical for economic growth and consumer enjoyment, but it is also the most inclined to be exposed to risk. This sector has always been hit hardest by various ailments, epidemics, periodic influenza, and global pandemics.Significant "black swan" catastrophes like the global economic crisis in 2007, diverse social civil strife, and earthquakes have all wreaked havoc on the tourism industry. The emergence of this most harmful virus has impacted variouseconomic sectors, and also the happiness of visitors and consumers. Economic activities and commercial services require specialist estimates based on old methods. Managing global crisis situations may be outdated and ineffective. In accordance with COVID-19, accurate prediction solutions for corporate and academic operations are necessary. The ongoing pandemic has aroused extraordinary global health concerns, social emergencies, and serious economic impact since the outbreak of the pandemic. The current COVID-19 outbreak has caused worldwideissues, such as sustainable power, carbon pollution, economic and health crises, and spillover impacts on global industries, such as travel and tourism, which are important contributors to the overall service economy. It shows huge long-term success impact in corporate organizations, and CEO's role is grown in making decisions to restore economic advantages. Social media outlets provide information to various stakeholders throughout the COVID-19 pandemic crisis.The leisure and tourism industry are hurtleddue to COVID-19.Tourism industry is one of the world's most affected industries as there has been a devastating fall in the leisure, travel and inflowing tourist movement which saw the greatest fall, with damages of 2.86 trillion USD, or 50% or more in revenue. The first stage in our investigation is to determine the circumstances of COVID-19 outbreak. Thisinvestigation examines how innovations assist the tourist industry in adjusting to new normal.

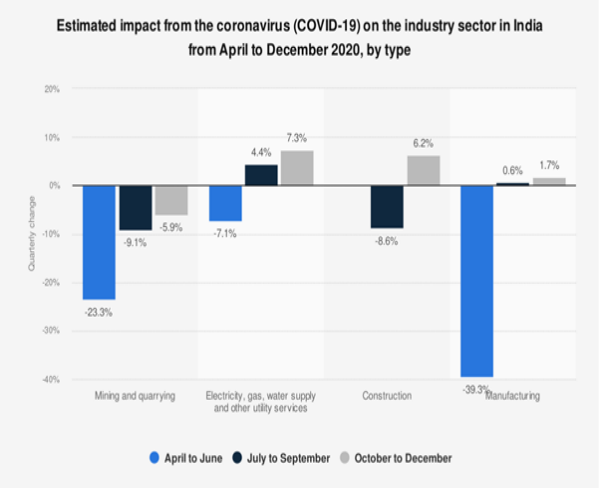

Fig 1 *GDP during COVID-19*

3. International contribution

Travel and tourism play akey role in operational processes and, therefore in the global economy. The travel and tourism industriesare a major contributor to the GDP of the target country. The anticipated impact of

COVID-19 on the industry is depicted in Fig 1.The travel industry grew rapidly from 2010s, due to proactive mobility and participation of various countries. In addition to the intra-European tourism, US and China are two protuberant marketing participants who contributed significantly to the rise of tourism. The increase in the number of touristscreates certain problemsand the locationsareexpected topredict long-term measures to handle the number of people. Nonetheless, tourism and hospitality showpositive impact on the economy as it contributes considerably. Earlier in 2018, it provided ahuge number of jobs and contributed 785 billion to EU economy. Europe was among the most popular tourism destinations for the visitors. According to the United Nations World Tourism Organization, European region seems to have half of the international visitors and was the most visited zone. The tourist industry has grown into a key factor of social and cultural progression employing hugenumber of people.

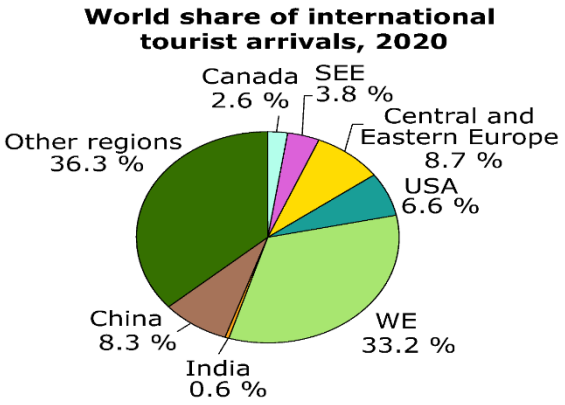

Fig 2 *International tourist arrivals*

Tourism is heavily reliant on electricity use as a significant industry for local and national socioeconomic progress. To face the transition, an increase in tourist arrivals implies an increase in energy usage. Outbreaks due to COVID-19 pandemic, has interrupted economic operations around the world and has hit the tourism industry hard. Due to lockdowns, beginningwith internal air travel, coordinated initiatives are required to increase tourist arrivals, expand green power use, and ensure a sustainable environment. Energy usage habits, and also globalization and tourism, have all changed as a result of the epidemic. The outbreak caused an impact on stock markets which resulted in inflation. The pandemic has also damaged governmental financial aid for agriculture and family welfare programmes. European tourism industry was the second-most affected, with 58 percent lesser tourists, following by Middle East countries, which saw a decline of 51% in visits. On the other hand, both US and Africa plummeted by 47% during that time period.The majority of travel research concentrates on the impact of socio-economic and cultural factors that are important to visitors to a region. Inbound tourism has a huge effect on the community as their positive effects on foreign visitor arrivals obstruct residents' cultural, socialand economic progress and prosperity. Virus's outbreak harmed the tourist activities from March 2020, which ended up in travel collapse. From January until May, international tourist arrivals dropped 56%, with 97% 98% drop in April and May 2020 (See Fig 2).

4. Global health crisis

The disease breakouts triggereconomic and health disasters. Pandemics worsen health condition and influencesindividuals' mental health. Tourist'srecklessnessand scheduled vacation plans owing to the hazards made it complex to eliminate virus infection while travelling. In the absence of proper vaccinations, it is a fatal disease. Air travellers and tourists plays critical role in the pandemic virus spreadamong the populations. WHO labelled COVID-19 outbreak a public health emergency, expecting a global epidemic (March 2020).About 1.19 million people have died (March 15, 2021) as a result of the overwhelming infectious disease. This is one of the world's deadliest pandemics. Infections like COVID-19 creates anxieties among the vast majority of tourist populations and harms inbound tourism activity. With COVID-19 outbreaks, the globe is thrown into a health and economic catastrophe affecting more than 200 nations.

5. Social stigma

There is a negative correlation among people who shares certain characteristics and certain illnesses. It discusses how communities are discriminated, identified and treated asit is considered as infectious illness. Family members, people, friends, relatives, and patients' caregivers are influencedby bad social behaviours. Individuals have other characteristics and faces social stigma in their own communities. The pandemic COVID-19 has caused societal shame in certain civilizations throughout the world. People from varied socioeconomic origins, religious affiliations, and racial identities have exacerbated bigotry against Chinese people. This conduct has influenced the perceptions of Chinese visitors. Domestic violence has been recorded in various studies throughout the world as a result of the epidemic. People's religious beliefs have contributed to marriage contentment. Coronavirus infection is harmful to diabetic individuals who are old. Due to the origin of thisworst disease, women struggle with mental health andlead a life of stress.

The current epidemic has produced severe health problems, putting a strain on healthcare systems throughout the world. The current worldwide health crisis has impacted global populations' livelihoods, and tourism destinations are suffering as a result. The deadly viral epidemic has inflicted international communities. Researchers are rethinking the revival tactics to introduce the following typical economic activities. As a result, COVID-19 tourism effects and associated research will raise awareness by educating the community, nurturing, reforming, and managing such an economic crisis by introducing innovation and change to resuscitate the sector. Global economy suffershuge losses. Investigations based on e-tourism are needed to respond to the growing research interest in COVID-19 tourism effects studies. By offering quantifiable and multifunctional value structures, boundaries, and conceptual tendencies, e-tourism has the capability to influence the travel future and tourist business.

COVID-19 pandemic shows psychological, social, economic, and cultural consequences on a large number of tourists, and they are affected for a long period. The epidemic creates "abundant" framework for researchers to undertake further investigations. Moreover, prior approaches for implementing tourism aredropped in COVID-19. Furthermore, scientists perform feasibility studies based on demand predictions and the bestpractices to better understand COVID-19 implications for diverse regional organizations. They theoretically give space for enhancing crisis management knowledge and improving pandemic's potential to reopen investigation, expanding the function and tourist bound. The goal is to enable academics to understand and adoptCOVID-19 as a transformational tool to remodel the research methodologies towards tourism innovation using creative thinking. As anoutcome, it intends to reconstruct the objectives and analyze the function, purpose and tourist impact studies performed by tourism organizations. Also, the crises encourage creation and innovative technology utilization. These should not consider unchallengeable, inescapableor complex re-form to fit certain demands and existing criteria. Investigatorsneed to satisfy COVID-19 tourist research toguarantee long-term returns.

6. A case study in Kerala

The study's population included travel agencies, tour operators, amusement parks, and hotel chains, all of whom work in the travel and tourism business. The region chosen for research was Kerala's Ernakulam district. The study's sample size was set at 50 people. The data was obtained online using a well-structured questionnaire. For research and inferring results, the study used statistical methods like Wilcoxon Test, Likert scale analysis and Chi-Square Test.

6.1. Hypothesis

The primary objective of the research is to examine the consequences of COVID 19 based on business perspectives of tourism industries

in Kerala. Some of the hypotheses are provided below:

H_1: Difference (median) among turnover before and after lockdown is equals zero.

H_2: Difference (median) among occupancy rate (OR) before and after lockdown is equals zero.

H_3: No proper relationship among the organization type and turnover before lockdown.

H_4: No proper relationship among the organization type and turnover after lockdown.

i) Analysis

The outcomes of the survey data processing are detailed in this section. The study looked into the tourist industry's business before and during the Covid-19 outbreak. The findings of a five-point Likert scale analysis are given below.

ii) Likert scale analysis

According to the poll, 76% respondents strongly agree that they should contact their consumers online during this pandemic crisis, while 225 are undecided. Only 2% of people disagree with this viewpoint. In terms of respondents' experiences with staff scarcity during the Covid Pandemic, 86% agree or strongly agree, 6% are indifferent, and 8% do not encounter any kind of staff shortage during these periods. In terms of respondents' views on government help, 94% agree that government aid is necessary whilethe disaster time, i.e., merely 2% reduction assistance. With respect to respondent's expectations towards travel and tourism reopening with full precautions, 82% strongly agree, while 4% are pessimistic. 70% of respondents strongly agreed or agreed that arranging a meeting with their clients online has had an impact on their business, and 88% agree that consumers in the tourism sector are concerned about the services provided during the COVID epidemic. According to the findings, just 44% of respondents satisfied their employees' travel demands during the COVID epidemic, while 32% declined and 24% remained neutral. During the COVID epidemic, 65% respondents agreed that their workers work from home, 26% disapproved. Table 1 depicts the Likert scale responses.

Table 1 *Likert scale responses*

Business dimensionality	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Communicate clients online	--	1	11	24	14
Staff scarcity during COVID-19	--	4	3	30	13
Government aid during tourism and travel	--	1	2	18	29
Safety and precautions measure	--	2	7	29	12
Online meetings influence the business	--	6	9	25	10
Rescheduling customer's visit during post lockdown	--	6	9	23	12
Hesitation or fear during service provisioning	--	6	12	24	8
Fulfilling employee needs during COVID-19	--	1	4	27	17
Work from home	--	16	12	19	3

iii) Wilcoxon test (WT)

Because the two linked variables are in ordinal form, WTis used to evaluate the hypothesis. Here, 1 specifies a turnover (less 1 lakh), 2 specify turnover (= 1 to 5 lakh), and 3 specifies turnover above 5 lakhs. SPSS tests were run on the replies, yielding the following findings.

Negative Hypothesis:Turnover (before lockout) - rotation (during lockdown) = zero.

Table 2 *Descriptive statistics*

	Sample Size	Mean	Std. deviation
Turn over (before lockdown) average quarterly	50	2.4	0.64
Turn over (after lockdown) average quarterly	50	1.3	0.50

Before the COVID pandemic shutdown, the mean of 2.44 specifiesthe average turnover of 5 lakhs, however the mean value of 1.3 specifiesthe average turnover nearing 1 lakh (during lockdown). Before lockdown, dispersion is superior during lockdown. There are 38 situations when the Turnover (during lockdown) is lesser than Turnover (Before lockdown). There are no instances for Turnover (during lockdown) exceeds the Turnover (Before lockdown). The turnover (during lockdown) equals the turnover in 12 instances (Before lockdown). WTis used when there is a significant variation in turnover before and after the lockdown (See Table 2 to Table 4). With a considerable impact size of -0.55, the test outcomes showed a statistically significant negative decrease in average quarterly turnover, Z= -5.542, p =0.0 (See Fig 3 to Fig 5).

Table 3 *Ranking analysis*

Negative ranking	Positive ranking	Complexities
38	0	12

Table 4 *p-value analysis*

Z score	P-value	Effect size analysis
-5.5	0.0	-0.5

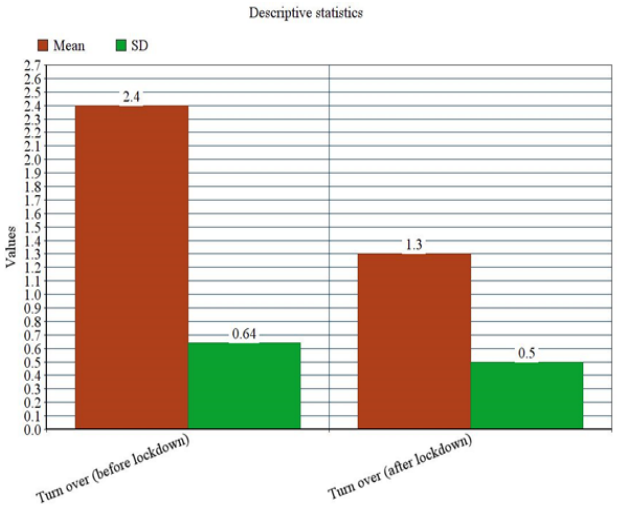

Fig 3 *Descriptive statistics*

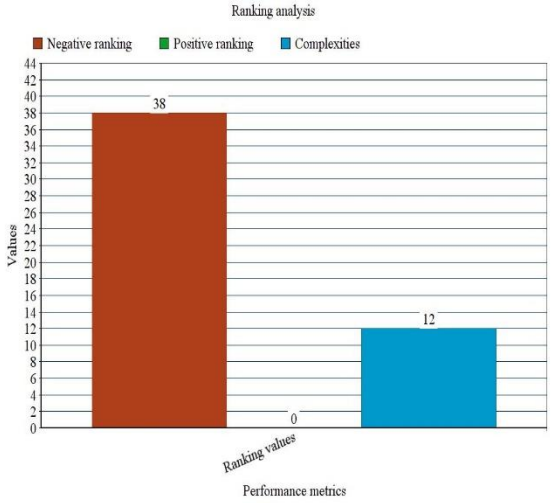

Fig 4 *Ranking analysis*

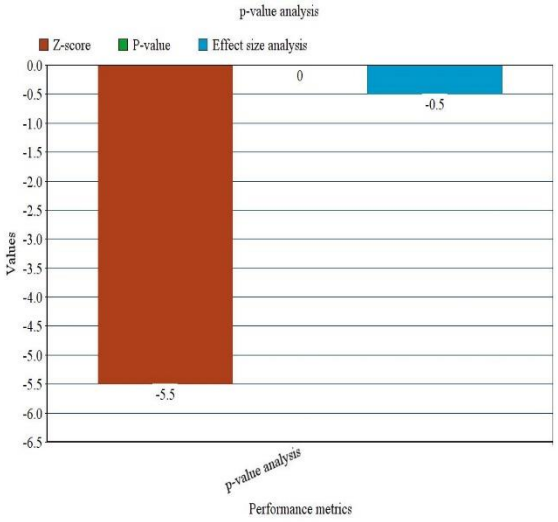

Fig 5 *p-value analysis*

iv) Average occupancy rate (AOR)

Because the two related variables were in ordinal form, a WTis used to verify the successive hypothesis. Here, 1 specifies an AORamong 0-20%, 2 specifies an AORamong 20%-40%, 3 specify an AORamong 40%-60%, and 4 specify an AORamong 60%. The statistical tests yield the below findings. The null hypothesis states that the median difference among the AOR before and after the lockdown is zero. The mean value of 2.96 before lockdown stated that the mean OR was high (See Table 5 to Table 7), approaching 40-60%, however, the mean value of 1.9 during lockdown period specifies a low average OR, around 20-40%. During lockdown, distribution is higher than before the lockdown state (See Fig 6 to Fig 8).

Table 5 *Descriptive statistics (avg. quarterly)*

	Sample Size	**Mean**	**Std. deviation**
Turn over (before lockdown)	50	2.9	0.7
Turn over (after lockdown)	50	1.9	0.8

Table 6 *Ranking analysis*

Negative ranking	**Positive ranking**	**Complexities**
37	6	7

Table 7 *p-value analysis*

Z score	**P-value**	**Effect size analysis**
-4.6	0.0	-0.5

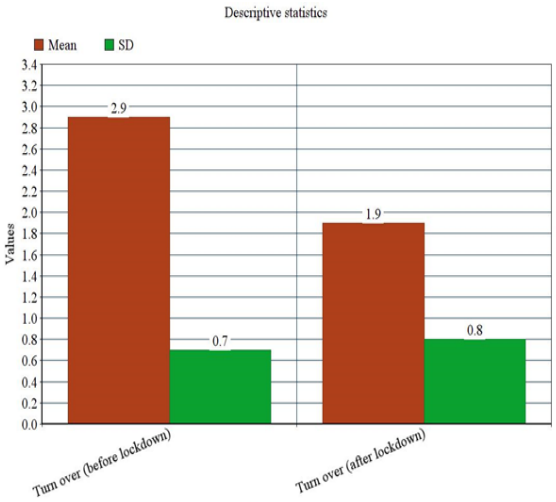

Fig 6 *Descriptive statistics*

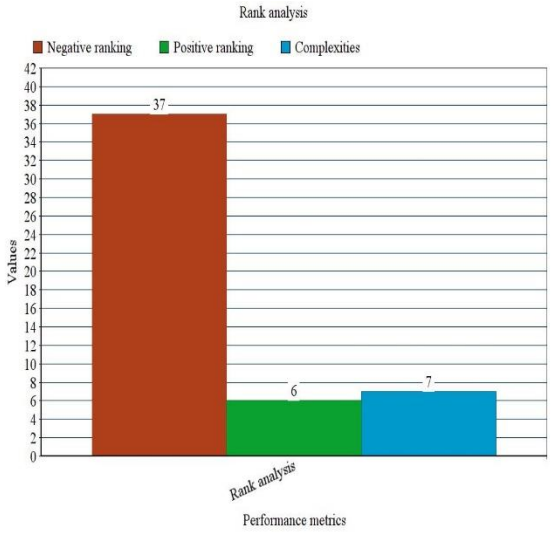

Fig 7 *Rank analysis*

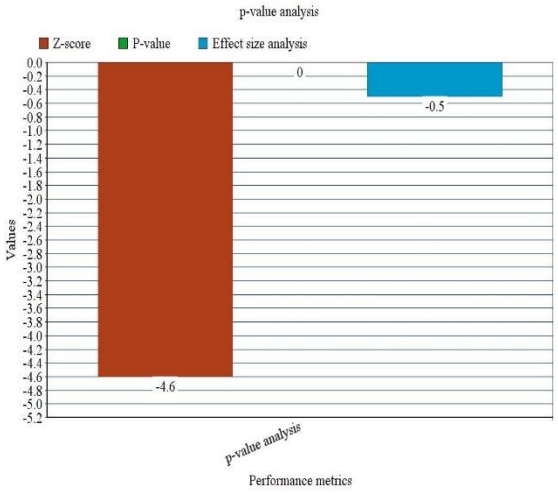

Fig 8 *p-value analysis*

v) Chi-square analysis (CS)

Before the lockdown, a CS test is used to determine the relationship among the kind of organization and average quarterly turnover (See Table 8). The study looked at three different kinds of businesses: private companies, sole proprietorships, and partnerships.

Table 8 *Test statistical analysis*

	Value	Freedom degree	P-value
Likelihood ratio	0.7	4	0.9

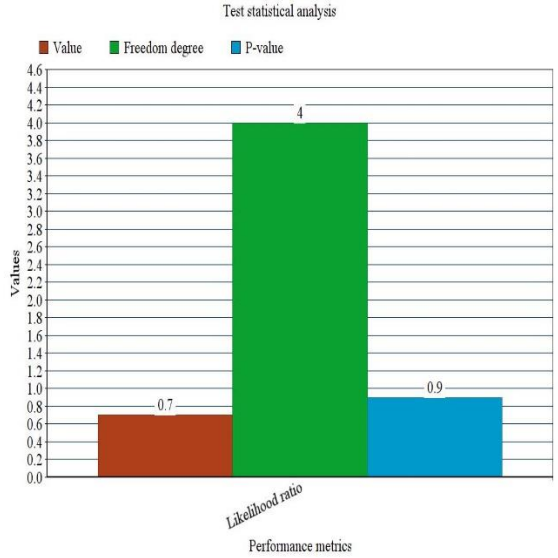

Fig 9 *Likelihood ratio*

The Chi-Square test was performed on the replies using SPSS, and the results are shown below. The null hypothesis states that there is no link among the organization type and turnover (before lockdown). The work failed to avoid the null hypothesis as the p-value is higher than 0.05, and there was no connectivity among thevarious organizations and the turnover before lockdown. p =0.9, likelihood ratio (4,N=50) =0.7 The Chi-Square test assumptions were broken when three cells (33%) had an anticipated count of less than five (See Fig 9). As a result, rather than using Pearson Chi-Square, the probability ratio was employed.

7. Discussion

The present narrative research on the COVID-19-based tourism impacts pursues to consider all the participants of tourism. However, it is not consistent. The condition shows prominent influence over the tourist organizations like transportation managers, intermediaries, and hotel/providers are dependent on factors like tourism industry's size, administration, venue, and governance types.

Likewise, various travel demands towards corporate travels and leisure, along with individual and local visitors show that COVID-19 with its enormous repercussions are essential for debate under specific market sectors. It specifies various pandemic factors that are distinguishable. Due to the context change, they contain enhanced predictive skills to predict any specific suggestions on predicting the weaknesses and disparities that occur in stakeholder groups (tourists). The analysis eliminatesspecific tourist stakeholders like tourism employees, businesses, residents, education agencies, university students, and academics. Some instances and complexitiesaround COVID-19 showworsened stakeholders' working conditions and complicateits predicament. Research towards COVID-19 and tourist stakeholders'actions are crucial.

8. Conclusion

COVID-19 implications towards tourism have raised the requirement for cultural tourism in the gods' country (Kerala). It showssomeconsequences on global employment prospects. Research towards tourist industry needs to deal with training, recruiting, disruptions and insecure chances as anoutcome of virtual learning and teaching. The challenges faced by tourism business initiatives and programmes and scientific universities are decrease in the number of students' enrolment, funding, marketing, and governmental support. To compute the organizational distance, tourism academics investigatesnewerapproaches and research probabilities, considering the mental health

about the COVID-19 stakeholders' privacy. However, teaching problemsneed to be investigated, like student's development with transferable and mechanical aptitude in business sectors and sustainable, and adaptable tourist teaching techniques implementation. Other COVID-19-related factors are also exploring. Tourism increases social entrepreneurship, during 2008 economic crisis. COVID19 sponsors tourist initiatives to enhance social impact, resolves COVID-19-based social issues and helps people in need. The fasteradvancements of appropriate social tourism businesses afforddiverse possibilities to analyze reality and completely comprehend its stakeholders,bio-diversity and situations.

The analysis should be "better with pleasant travel, individualized service with lower costs," indeed of "increased tourist numbers." Tourism business considers improving hotel facilities, improving quality of employees, streaming tour and tourist registration and transformation towards electronic technologies. Family recreation and amusement get exclusive consideration. For example, establishing suitable amusement programmes, providing appropriate snacks and meals, and providing proper place and facilities. To be equipped fully to defend future pandemics, tourism industry should make sure of utmost cleanliness and hygiene and supply with top quality materials. For example, every hotel management should make sure that each and every employee and visitor wears gloves and face mask. Also, to reduce overcrowding, restaurant should work in shifts. Beaches and parks should be partitioned to maintain social distance. Tourist business stake holders, administrators and other participants in the industry should hold discussions and implement appropriate plans to enhance tourism. Once the pandemic threat is overcome and the tourism industry returns to its formal glory, there needs to be regular evaluation of the safety measures to ensure the safety of everyone especially the tourists. The researchers recommended that the government extends wholehearted support to enhance comprehensive development and growth of tourism sector especially in the post covid era.

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