



Economic impact of covid-19 on the tourism sector in Batticaloa district of Sri Lanka

Navirathan V^{1*}, Vijayakumar S², Dr. Jeyarajah S³

¹ Department of Establishment, Eastern University, Sri Lanka

² Professor, Department of Economics, University of Jaffna, Sri Lanka

³ Department of Economics, Eastern University, Sri Lanka

Abstract

Sri Lankan Tourism is not doing very well. Since the Easter bomb attack Sri Lankan tourism has gone down. It has been declining. This article's primary objective is to look into the economic impact of Covid-19 on the Batticaloa District's Sri Lankan tourism industry. Many businesses have been forced to close as a result of the containment measures implemented to stem the spread of this pandemic. According to Ozili and Arun, containment tactics including curfews, travel restrictions, and lockdowns caused tourist attractions like hotels and entertainment centers to close (2020). One of the most important companies in the region is Sri Lanka's tourist industry, which provides the country with foreign currency. Luxury hotels in Sri Lanka have historically suffered when the country's tourism economy suffers during the Easter season. The study's objective was to determine the impact of a new coronavirus pandemic on the Batticaloa District's tourism business in Sri Lanka. In light of the current COVID-19 outbreak, the researcher was able to appropriately meet the research objectives with the data collected on people's perceptions of the tourism sector's performance. Questionnaires were used to acquire the data. To analyze the collected data, researchers employed quantitative methods like descriptive and inferential analysis. New COVID-19 results showed a detrimental influence on the tourism industry's economic performance, the study found. There was a high correlation found between family income and residents' comprehension of the current coronavirus pandemic's economic impact on the tourism industry, according to the findings of the study.

Keywords: tourism sector, economic impacts, Covid-19

Introduction

1. Background of the Study

The global pandemic of coronavirus has challenged the global operation of all economic activities. Following the containment measures set aside to control the spread of this pandemic has resulted in the closure of many business enterprises. According to Ozili and Arun (2020) [30] containment measures restricted people's movement from one place to another; curfew and lockdown, measures led to the closure of tourism facilities like hotels and entertainment facilities. In Batticaloa District of Sri Lanka, tourism is the main tool of the economy and during this period of economic recovery, it is expected to play a critical role in regaining economic stability. Seetanah (2011) [33] suggests that tourism is the main contributor to Sri Lanka's economy through foreign exchange and one of the biggest industries in the region. Historically, the tourism industry in Sri Lanka was seriously affected by Easter bomb blasts, which hit different luxury hotels in the main tourism areas. The industry has been adversely affected following the fact that the first person to test positive for the coronavirus in the country was a tourism stakeholder who was working as a tour guide in the Italian tourist group. The tourism industry continued to receive threats where more tourists and individuals working in the industry continue testing positive. The arrival visa for tourists in the region was suspended from March 2020. Although the government was quick in responding to the spread of the disease, travelling was still considered as the key contributor to the virus spread. Restriction of movement locally and internationally resulted in tremendous pressure on both the international travelling sector and the operation of the tourism industry.

Various tourism facilities such as airports, hotels, and entertainment facilities were closed and they are facing immense challenges to date. Most of the researchers have examined the impacts of coronavirus pandemic on different countries, very few have examined the impacts of coronavirus pandemic in the tourism industry. Besides, the researcher found that limited studies have examined the effects of coronavirus pandemic in Batticaloa District of Sri Lanka. Therefore, the present study found it is necessary to investigate the impacts of coronavirus on the tourism industry in the Batticaloa District of Sri Lanka.

2. Objectives of the Study

The main objective of the study is to evaluate the economic impacts of the coronavirus pandemic on the tourism industry in the Batticaloa District of Sri Lanka. Like any other research paper, this study was guided by three objectives. First, to investigate the association between the impacts of coronavirus pandemic on the tourism industry in Batticaloa District of Sri Lanka and family income. Second, to assess the association between the impacts of coronavirus pandemic on the tourism industry in Batticaloa District of Sri Lanka and employment. Third, to assess the association between the impacts of coronavirus pandemic on the tourism sector in Batticaloa District of Sri Lanka and the saving for investment. And lastly, to investigate the association between the influence of coronavirus pandemic on the tourism industry in Batticaloa District of Sri Lanka and the living standards of people.

3. Research questions

The research aims at answering the following research questions

- Whether economic impacts of coronavirus has significantly affected the tourism sector in Batticaloa District of Sri Lanka.
- Whether the association between the influence of coronavirus pandemic on the tourism industry in Batticaloa District of Sri Lanka and family income is significant.
- Whether the association between the influence of novel coronavirus on the tourism industry in Batticaloa District of Sri Lanka and employment is significant.
- Whether there is a significant association between the influence of novel coronavirus on the tourism sector in Batticaloa District of Sri Lanka and saving for investment.
- Whether there is a significant association between the influence of novel coronavirus on the tourism sector in Batticaloa District of Sri Lanka and living standards.

4.1 Significance of the study

This study is of benefit to the government and tourism sectors especially during the economic recovery after the novel coronavirus epidemic. The study will help to understand the economic impacts of novel COVID-19 on the performance of the tourism sectors in the Batticaloa District of Sri Lanka.

The study is also of essence to tourism stakeholder's community developers in implementing strategies that will assist the industry to quickly recover from the novel coronavirus epidemic. The study is also of significance to policymakers in implementing the coronavirus epidemic measures and also control economic failure on the basis that the tourism industry is the core contributor to the economy in Sri Lanka.

5. Literature Review

This section covers the recent and past studies by other scholars and researchers regarding the economic impact of novel covid-19 on the tourism sector. The chapter helps in determining the gap to be filled in the current study. It also helps in determining the framework of the study. The previous studies are significant in developing the research questions' clear understanding and what are expected results of the study.

5.1 Employment

According to Nepal (2008) tourism sector is a source of employment for thousands of people. According to their study conducted using panel data from Alberta Canada, they found that many people are employed in tourism facilities like hotels, airlines, and entertainment facilities. The coronavirus epidemic has significantly affected the tourism sector. Most of these facilities were closed in an attempt to contain the spread of the coronavirus, thus leading to the loss of jobs (Gosslip *et al.*, 2020). More so, Isaac (2021) [20] conducted a study on the influence of the novel coronavirus epidemic on the tourism sector in Bethlehem. According to the finding of their study, the novel coronavirus epidemic has contributed to the loss of jobs to millions of people thus reducing their budget on tourism. The containment measure of coronavirus pandemic led to the closure of many businesses and organizations which were the source of

employment to many tourism thus limiting their travelling behaviours.

Additionally, Riadii (2020) investigated the influence of the coronavirus epidemic on the tourism sector in Indonesia. The finding of his study indicated that tourism facilities have been closed as a method to control the spread of the virus. People employed in tourism facilities were led to jobless. Besides, the development of tourism was also greatly affected which could provide thousands of jobs to people. Norouzin *et al.* (2020) [29] investigated the economic influence of the novel coronavirus epidemic on the tourism sector in China. The study gathered information from a sample size of 346 residents and used a conceptual regression test to examine the association between variables. The findings of the study revealed that the employment factor was one of the major factors that affected the tourism sector in the country during the coronavirus epidemic era. Besides, Nicola *et al.* (2020) [28] found that loss of employment to thousands of people has significantly contributed to the decrease in the financial performance of tourism sectors. Other studies that revealed similar findings included Binnus and Nel (2020), and Vasquez (2020) [39]. This contributes to the first research hypothesis;

Ha0: Economic influence of novel coronavirus epidemic on the tourism industry has an insignificant association with employment.

Ha1: Economic influence of novel coronavirus epidemic on the tourism industry has a significant association with employment

5.2 Family income

Family income is the gross income of all members of a family. According to Sturm and Gresenz (2002) [37], family income is used to measure the economic health of the family and their living conditions. Getz and Petersen (2005) [14] revealed that family income has a significant contribution to the tourism industry. According to the finding of their study, most of the tourists come from economically healthy country. Uusal and Crompton (1984) investigate the association between family income and demand for international tourism flows to Turkey. According to the result of their study, family income has a significant association with the demand for international tourism flows. Besides, most international tourists have a high gross income. With the outbreak of the coronavirus which significantly spread all over nations, most of the families were led jobless and their income significantly dropped. The demand for international tourism flows decreased across the world thus decreasing the performance of the tourism industry.

Shen *et al.* (2020) [35] investigated the impacts of COVID-19 on the performance of firms. the study found that tourism firms are highly affected by the policy measures to control the spread of coronavirus. Most of the tourism firms were closed where employees were forced to go back home. Unlike other firms where the employees worked from home, tourism firms' employees lost their job completely. This decreased their income and consequently family income. More so, most tourism lost their incomes during the pandemic period could not travel due to low income (Ugur and Akbiyik, 2020). The second hypothesis can be derived as;

Hb0: Economic impacts of novel COVID-19 on tourism industry has an insignificant association with family income

Hb1: Economic impacts of novel COVID-19 on tourism industry has a significant association with family income

5. 3 Saving for investment

Assaf and Josiassen (2013) in their study to investigate the association between saving for investment and tourism performance. According to the findings of the study, tourism performance has a positive significant association with saving for investment. The study indicated that when the performance of the tourism sector is high, many investors are willing to invest a large amount in the industry. On the other hand, when the performance of the tourism sector is low, a small number of people are ready to invest in the sector. Brau *et al.* (2005) [9] found consistent results that tourism has a significant association with saving for investment. According to the finding of their study, most of the tourists' attendance in the tourist facilities end up starting their facilities like a hotel through savings. Other studies found similar findings includes; Assefa *et al.* (2013) [4], Asadi *et al.* (2020) [2], investigated the association between saving for investment and the tourism performance in island countries. According to the study, during this period of coronavirus pandemic, a large number of tourism facilities were closed thus decreasing investor's spending on the tourism sectors. Besides, most people in the tourism industry to save for investment were highly affected by the closure of tourism facilities. However, Fu *et al.* (2020) [35] found that there is an insignificant association between saving for investment and the performance of the tourism sector in the area of study. The above literature led to the third hypothesis stating that;

HC0: Economic influence of novel coronavirus epidemic on tourism has an insignificant association with saving for investment

HC1: Economic influence of novel coronavirus epidemic on tourism has a significant association with saving for investment

5. 4 Living standards

Various studies have investigated the association between tourism development and the living standard of the people around in that region (Akis *et al.*, 1996; Hoang *et al.*, 2020;

Mc Cool *et al.*, 1994; Rivera *et al.*, 2016). [1, 19, 26, 32] The findings of these studies were different depending on the place and the time of the study. For example; Akis *et al.* (1996) [1] found that there is a significant association between tourism development and the living standards of the residents. According to them, tourism development creates more employment opportunities for the people thus increasing their living standards. Besides,

Development of infrastructure, creation of employment, and other benefits attributed to tourism in society improve the living standards of the residents. Reeder (2005) posits that tourism enhances employment opportunities not only in the urban regions but also in rural areas, which has a major contribution to the living standards of the residents. Besides, through employment, communities are capable of expanding their social-economic conditions and earning, thus improving their living standards. Rivera *et al.* (2016) [32] posit that tourism has led to the development of other infrastructures like roads, airports.

Contrary, Hoang *et al.* (2020) [19] found that living standards have no significant association with tourism sector performance, especially during this coronavirus epidemic era. According to this study, most of the tourists although have better living standards never travelled during the coronavirus epidemic period for the fear of the disease. Besides, most of the tourism facilities were closed to avoid the spread of the coronavirus. According to Sharpley (2020) [34], this period of coronavirus tourism showed no significant association with the living standards of the people. According to the finding of his study, people living styles were controlled by the coronavirus epidemic's policies. The above literature led to the fourth hypothesis which states that;

Hd0: Economic influence of novel coronavirus epidemic on the tourism industry has an insignificant association with living standards

Hd1: Economic influence of novel coronavirus epidemic on the tourism industry has a significant association with living standards

Conceptual framework

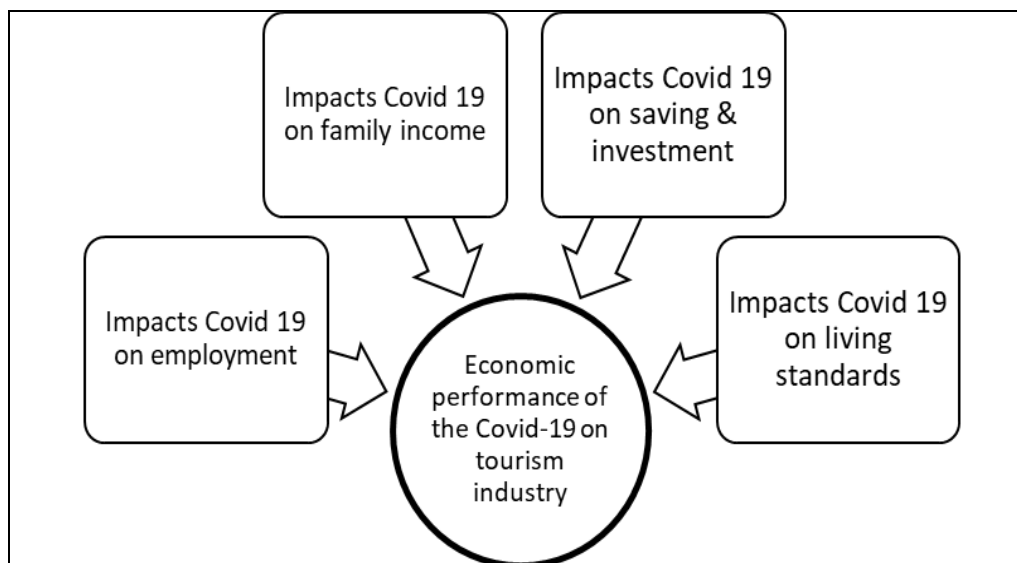


Fig 1: Conceptual framework

7. Research Methodology

This section gives the method used to collect data and how the research answered the research questions.

7.1 Research design

The study is descriptive research involving the compilation of structured statistical data and statistical confirmation. The study also used descriptive design to determine the causal association between the economic influence of the novel coronavirus epidemic and the performance of the tourism sector in Batticaloa District of Sri Lanka.

7.2 Population and sample

The study’s population is the residents of Batticaloa District of Sri Lanka. Since this study is a survey, the researcher collected data from 100 to both beneficiaries and non-beneficiaries residents of the tourism sector in the study area.

7.3 Research material

Online questionnaires were used where the interested respondent logged in using the provided link. After the respondents have completely answered the questions in the questionnaire, the data was automatically saved and the site locked.

7.4 Data

The data expected to be collected is based on people’s precisions and knowledge based on the economic influence of the novel coronavirus epidemic on the tourism industry in the Batticaloa District of Sri Lanka. Most of the data will be levelled data on basis of a 5-point Likert scale. The dependent variable will be the overall precision of people about the economic influence of the novel coronavirus epidemic on the tourism sector. The independent variables will be precisions of residents about the effect of novel COVID-19 on the employment sector, family income, saving for investment, and the living standards of people.

7.5 Analysis of Data

The collected data was analyzed using quantitative methods; descriptive and inferential analysis. Descriptive statistics

will give the general description of the respondents and the data collected, using mean, minimum, maximum, standard deviation, and mode. The inferential statistics involved correlation and regression analysis, carried at a 95 per cent confidence interval to causally examine the association between the response and independent variables.

7.6 Analytic Model

The model used to show the association between the predictor variables and dependent variables as below;

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + ei$$

Where:

Y: The overall precision of people about the economic effects of novel coronavirus on the tourism sector.

X1: precisions of residents about the effects of novel coronavirus epidemic on the employment sector

X2: precisions of residents about the effects of novel coronavirus epidemic on the family income

X3: precisions of residents about the effects of novel coronavirus epidemic on the saving for investment

X4: Precisions of residents about the effects of novel coronavirus epidemic on the living standards of people.

ei stands for the error terms

8. Findings of the Study

This part entails the analysis of the data collected for the study from 100 residents of Batticaloa District of Sri Lanka. The section will provide the results of the analysis and interpretation. The results are presented on tables for easy interpretation. The analysis consists of respondents' profiles, a test of reliability, descriptive statistics, and inferential statistics; correlation and regression analyses.

8.1 Test of reliability

Cochran's test was used to assess the reliability of the data in this study. Cochran's Test hypothesis states that the data used is not reliable. Therefore, Cochran's Q with a sig. a value less than 0.05 shows that the data is reliable and vice versa is true.

Table 1: Cochran's Test

		Sum of Squares	df	Mean Square	Cochran's Q	Sig
Between People		139.728	99	1.411		
Within People	Between Items	17.608	4	4.402	21.421	.000
	Residual	311.192	396	.786		
	Total	328.800	400	.822		
Total		468.528	499	.939		
Grand Mean = 3.7120						

From the table above, Cochran's Test gave a Cochran's Q value of 21.421 and a significance value of 0.000. Since the significance value for Cochran's Test is less than 0.05, the data is reliable and can be used for analysis to give reliable results.

8.2 Descriptive analysis

Descriptive statistics include the minimum, maximum, mean, mode, and standard deviation skewness and Kurtosis. The descriptive statistics give a general description of the data. It also helps the researcher to determine the variable with missing variable or the presence of the outlier, which contributes to invalid analysis results.

Table 2: Statistics

		Overall precision	Family income	Saving for investment	Employment	Living standards
N	Valid	100	100	100	100	100
	Missing	0	0	0	0	0
Mean		3.4400	3.5700	3.6900	3.7300	3.5800
Mode		3.00	3.00	4.00	4.00	3.00
Std. Deviation		.83267	.90179	.92872	.90849	.94474
Skewness		-.127	-.298	-.265	-.342	-.382
Std. Error of Skewness		.241	.241	.241	.241	.241
Kurtosis		-.033	.117	-.391	-.227	.206
Std. Error of Kurtosis		.478	.478	.478	.478	.478
Minimum		1.00	1.00	1.00	1.00	1.00
Maximum		5.00	5.00	5.00	5.00	5.00

Table 2 presents the descriptive statistics of the variables. The total sample was 100 with no missing term. The mean of the overall precision about the economic impact of COVID-19 on the tourism sector was 3.44 which was greater than 2.5 a median value of 5-points Likert scale. We, therefore, assume that the residents of Batticaloa District agreed that novel COVID-19 has economically affected the performance of the tourism sector. The mean of the other variables is also greater than 2.5, which also can be concluded that residents of Batticaloa District agreed that novel COVID-19 has affected family income, saving for investment, employment, and their living standards, where all these variables has a direct connection with the performance of the tourism sector. However, most of the residents who had similar precisions about the economic influence of the novel coronavirus epidemic to the tourism sector, family income, and the living standards were neutral, but for saving for investment, and employment the most of the residents who share common precision agreed that they have been affected by novel COVID-19. All the variables are negatively skewed which indicates that most of the resident’s precision was below 3, the median class. The minimum value for all variables was 1 and a maximum value of 5.

8.3 Inferential statistics

The study used correlation and regression analysis to investigate the association between variables. That is independent variables, family income, employment, saving for investment, and the living standards for residents, and the dependent variables, overall residents’ precision about the economic impacts of novel COVID-19 on the tourism sector. The study also used a multicollinearity test (Variance Inflation Factor) to test the presence of multicollinearity among the independent variables. All the inferential statistics were carried at a significance level of 0.05, thus any test; F-test and t-test of regression giving a significance value greater than 0.05 shows an insignificant association, while any test which records a significance value less than 0.05, then the association between variables is significance.

Correlation test for the association between variables

The study used a correlation test to test whether independent and dependent variables are associated. Since the data was levelled data, the study used Spearman’s rho to explain the level of association between the variables. If the Spearman’s rho value is positive, then the variables head in the same direction, but if it is negative, then they head in a different direction. Spearman’s rho value greater than 0.5 shows a stronger correlation while less than 0.5 shows a weak correlation.

Table 3: Correlations

		Overall precision	Family income	Saving for investment	Employment	Living standards	
Spearman's rho	Overall precision	Correlation Coefficient	1.000	.753**	.132	.633**	.458**
		Sig. (2-tailed)	.	.000	.191	.000	.000
		N	100	100	100	100	100
	Family income	Correlation Coefficient	.753	1.000	.179	.446	.495
		Sig. (2-tailed)	.000	.	.075	.000	.000
		N	100	100	100	100	100
	Saving for investment	Correlation Coefficient	.132	.179	1.000	.479	-.166
		Sig. (2-tailed)	.191	.075	.	.000	.099
		N	100	100	100	100	100
	Employment	Correlation Coefficient	.633	.446	.479	1.000	.196
		Sig. (2-tailed)	.000	.000	.000	.	.050
		N	100	100	100	100	100
	Living standards	Correlation Coefficient	.458	.495	-.166	.196	1.000
		Sig. (2-tailed)	.000	.000	.099	.050	.
		N	100	100	100	100	100

The correlation table 3 shows the association between the variables of the study. The table gave 0.753 as a Spearman’s rho value between the family income and overall residents’ precisions. This shows that there is a strong favourable

correlation between family income and overall residents’ precisions. The Spearman’s rho value between the family income and overall residents’ precisions was 0.132, and a Spearman’s rho value of 0.458 between living standards and

overall residents' precisions about the economic influence of novel coronavirus pandemic on the tourism sector, which are less than 0.5. Therefore, there is a weak direct correlation between the saving for investment and overall residents' precisions, and the living standards and overall residents' precisions on the economic influence of novel coronavirus pandemic on the tourism sector. More so, the table gave a Spearman's rho of 0.633 between the employment and overall residents' precisions. This shows that there is a strong direct correlation between the family income and overall residents' precisions about the economic influence of novel coronavirus pandemic on the tourism sector.

Test for multicollinearity

The study used a multicollinearity test using the variance inflation factor as a test statistic. Variance inflation factor showed the presence of collinearity between an independent variable that might have a significant influence on the regression analysis. The critical VIF was set at point 3, and any association between independent variables with VIF greater than 3, shows the presence of collinearity and should be eliminated in the regression analysis. The collinearity test results were as in the table below.

Table 4: Collinearity Statistics

Tolerance	VIF
.715	1.398
.704	1.420
.656	1.524
.770	1.299

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. the error of the Estimate
1	.835 ^a	.698	.685	.46721

a. Predictors: (Constant), living standards, saving for investment, Family income, Employment

The regression analysis gave an R-Square value of 0.698, which indicated that the causality association overall residents' precisions about the economic effects of novel coronavirus pandemic on the tourism sector and residents' precisions about the effects of novel coronavirus pandemic on employment, saving for investment, family income, and

All independent variables snowed a variance inflation factor of less than 3. Therefore, there exist no cases of collinearity between independent variables. The regression analysis will, therefore, use all variables as independent variables, to test their causality association with overall residents' precisions about the economic impacts of novel coronavirus pandemic on the tourism sector.

Regression analysis

The regression test was used the shows evaluate the causality association between variables. The researcher used that overall residents' precisions about the economic impacts of novel COVID-19 on the tourism sector as the dependent variable and residents' precisions about the economic effects of novel coronavirus pandemic, such as impacts on employment, saving for investment, family income, and living standards of residents as independent variables. The study used regression analysis to test whether the association between the impacts of novel COVID-19 on family income among the residents of Batticaloa District of Sri Lanka and the performance of the tourism industry performance is significant. Whether there is a significant association between the impacts of novel COVID-19 on employment among the residents of Batticaloa District of Sri Lanka and the performance of the tourism industry. Whether there is a significant association between the impacts of novel COVID-19 on saving for investment among the residents of Batticaloa District of Sri Lanka and the performance of the tourism industry. Whether there is a significant association between the impacts of novel COVID-19 on living standards among the residents of Batticaloa District of Sri Lanka and the performance of the tourism industry. The results were as below:

living standards of residents was 69.8 per cent. Other variables that influence the residents' precisions about the economic effects of novel coronavirus pandemic on the tourism sector apart from the above factors attribute to 30.2 per cent. The adjusted R-Square value was 0.685.

Table 6: ANOVA for Regression

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	47.903	4	11.976	54.864	.000
	Residual	20.737	95	.218		
	Total	68.640	99			

The F-test was used to show if their regression models were a significant model to show the association between the dependent and independent variables. The regression analysis, gave an F-statistic value of 54.864, with a

significance value of 0.000. Thus, the regression model is a significant model to show the association between the dependent and independent variables.

Table 7: coefficients of regression test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	.380	.294		1.292	.200
	Family income	.447	.062	.484	7.255	.000
	Saving for investment	.180	.060	.201	2.986	.004
	Employment	.486	.064	.530	7.617	.000
	Living standards	.088	.057	.100	1.561	.122

The regression coefficient table gave a positive value for all independent variables. This shows that there is a positive association between family income, saving for investment, employment, and living standards, and the overall precision about the effects of novel coronavirus pandemic on the tourism sector. The precision of residents on the effects of novel coronavirus pandemic on the family income, employment, and saving for investment gave a significance t-value less than 0.05 when regressed against the overall precisions about the economic effects of novel coronavirus pandemic on the tourism sector/industry. In other words, the effects of the novel coronavirus pandemic on family income, employment, and saving for investment significantly affected the performance of the tourism industry. The association between the effects of novel coronavirus pandemic on the living standards and the precision about the economic effects of novel coronavirus pandemic on tourism gave a significance t-value greater than 0.05, thus insignificant. The model can be fitted as;

$$Y = 0.38 + 0.486X_1 + 0.447X_2 + 0.180X_3 + 0.88X_4$$

Discussion of the findings

The study aimed to investigate the economic effects of a novel coronavirus pandemic on the tourism sector in Batticaloa District of Sri Lanka. Using the data collected on people's precision about the performance of the tourism sector based on the current COVID-19 pandemic, the researcher was able to sufficiently address the research objectives.

First, the study found there is a significant positive association between employment and the overall residents' precision about the economic effects of novel coronavirus pandemic on the tourism sector. This shows that the novel COVID-19 affected people's employment which contributed significantly to the performance of the tourism sector. Mao *et al.* (2020)^[24] supported this study's findings by finding that the novel COVID-19 not only resulted in the closure of tourism facilities which contributed to the loss of jobs for thousands of people but also led to the closure of so many businesses which employed most potential tourists. Unemployment contributes to a decrease in spending level among people thus significantly affect the spending on the tourism sector. Likewise, Chen *et al.* (2020)^[10] indicated that most of the enterprises were closed to contain the spread of the COVID-19 pandemic across the world. Millions of people were forced to work from home and others lost their jobs which significantly affected their income level. With a decrease in income among people also decrease their spending habit, which has significantly affected the tourism industry. Other studies which found similar results include; Hao *et al.* (2020)^[17]; Nichola *et al.* (2020); and Riadil (2020)^[31].

Second, the study found there is a significant positive association between family income and the overall residents' precision about the economic effects of novel coronavirus pandemic on the tourism sector. Family income affects the spending habit of people (Mayer and Leone, 1997)^[25]. With the outbreak of the coronavirus in 2019 December in China, the WHO announced the virus as a global pandemic which created tension among people and the government. Most people avoided their daily hustle to avoid the contraction of coronavirus (Khan and Shah, 2020)

^[21]. This highly affected their level of income which also affected their spending habit in the tourism industry. According to Bae and Po-Ju (2020), the novel COVID-19 affected family income which also decreased their spending on tourism. Besides, Khan *et al.* (2020)^[21] found that most of the tourism sectors' performances were highly affected by a decrease in the family income and the restriction of movement as a result of the COVID-19 pandemic.

Third, the study revealed there is a significant positive association between saving for investment and the overall residents' precision about the economic effects of novel coronavirus pandemic on the tourism sector. The finding of this study was similar to the study conducted by Liew (2020)^[23]. According to him, coronavirus affected people's investment in tourism sectors due to the high decrease in tourists visiting the region. Most of the investors in the tourism sector were forced to use some of their savings to maintain their families and cater to daily expenses (Bisong *et al.*, 2020)^[8]. Besides, the restriction of the international and national movement negatively affected the performance of the tourism industry. Most of the investors in the tourism sector considered investing in this sector as risky activity thus decrease the financial performance in the tourism sector (Cro and Martins, 2020)^[12]. According to Williams *et al.* (2020), in fact, during the pandemic, most people were not able to save for investment.

Lastly, the study observed there is an insignificant positive association between living standards and the overall residents' precision about the economic impacts of novel COVID-19 on the tourism sector. Tourism is part of living standards (Bernini *et al.*, 2017)^[6]. The living standards are influenced by the family income which was significantly and negatively influenced by the novel COVID-19. The loss of employment, and enforcement of coronavirus containment measures, altered the living standards of almost every person across the globe. Tourists were forced not to travel outside countries and even to some places within their regions (Cohen and Cohen, 2020; Wells *et al.*, 2020^[40]; and Wen *et al.*, 2020)^[41]. Besides, Sheresheva (2020) posits that most tourism facilities like recreation facilities, hotels, and entertainment centres were closed.

Conclusion, limitation, and recommendations

Conclusions

The finding of the study showed a novel COVID-19 has economically affected the performance of the tourism sector. The finding of the study also showed that family income and overall residents' precisions about the economic effects of novel coronavirus pandemic on the tourism sector has a positive strong correlation. This is because, the Spearman correlation value was 0.753, which was greater than 0.5. The regression analysis confirms that there is a positive significant association between the economic effects of the novel coronavirus pandemic on the tourism sector and family income. The study's finding also indicated that there that employment has a positive strong correlation with the economic effects of novel coronavirus pandemic on the tourism sector. This is because the Spearman correlation value was 0.633. The causality analysis indicated that employment has a positive association with the economic impacts of novel COVID-19 on the tourism sector.

The finding of the study also showed that saving for investment and living standards of the residents have a weak

positive correlation with the economic effects of novel coronavirus pandemic on the tourism sector. However, the association between the economic effects of novel coronavirus pandemic on the tourism sector and the saving for investment was significant but the economic effects of novel coronavirus pandemic on the tourism sector and living standards of the residents were positively insignificant.

The regression model shows that the economic effects of the novel coronavirus pandemic can only be 69.8% explained by the effect of novel COVID-19 employment, family income, saving for investment, and the living standards of people. This indicates that the economic effects of novel coronavirus pandemic on the tourism sector can be 30.2% explained by other exterior factors other than the independent variables in the study. However, although the model was significant in showing the association between the dependent and independent variables in the study, it cannot be used to predict the effects of a novel coronavirus pandemic on the performance of the tourism industry. This is because the variables represented the dependent variable by 69.8%, which is less than 75%.

Limitation

The study like any other research paper was faced with different limitations. The researcher was only based on the data collected from the people of Batticaloa District of Sri Lanka and therefore can only be used to explain the economic effects of novel coronavirus pandemic on the tourism sector in Batticaloa District of Sri Lanka.

The study was also limited to people's precisions but not real data, thus the researcher cannot able to measure to what extent novel COVID-19 has economically affected the tourism sector of Batticaloa District of Sri Lanka.

The sample size used was very small and thus using the larger sample size could result in different results. Besides, a small sample size could give invalid results and conclusions. The study used only quantitative data only which could give insufficient results to make conclusions about the topic of the study.

Recommendations for Sri Lankan's tourism development

Since tourism is the main factor of the economic growth in Sri Lanka, the government and concerned organizations should focus on tourism development for economic recovery after COVID-19 like the followings.

- Sri Lanka is planning on introducing electric vehicle for use in the tourism sector.
- Electronic vehicle to boost tourism
- Debt moratorium granted to the tourism industry to support people engaged in the industry
- Sri Lanka aims to attract 1.5 million tourist arrivals in 2023 and 3 million by 2024 as the country is making progress towards restoring normalcy amidst negative publicity.
- Accordingly, Sri Lanka is to promote its tourism industry on a much bigger scale under 150 themes in 2023, which include sports tourism, Religious tourism, Adventure tourism, Maritime and wellness tourism and many others.
- Many programmes can be implemented through the Ministry of Wildlife to attract tourists. There are

tourists Bungalows which are situated in the vicinity of lakes which can be developed for this purpose.

- Dollar payment could be allowed for tourists to national parks. The Wildlife and forest conservation Ministry plan to introduce a system enabling foreigners entering national parks to make dollar payments for their entrance tickets. In addition, action taken to increase the quantity and the quality of the facilities provided to foreign tourists who visit the Yala National Park.
 - Reviving tourism in Sri Lanka does not take a herculean effort; it does not require a faith that moves mountains, nor does it require a crystal ball to gaze into the future. What is required is an attitude of love towards the motherland and attitude of boldness.
 - Need to establish proper rules and regulations to go ahead in the tourism sector.
 - Facilitate affected tourism industry due to covid and give them some relief.
 - Provide proper training for the youth who want to join the hospitality industry. When create these opportunities there will be more job opportunities opening up.
 - Need investors to come Sri Lanka.
- The study recommended for future study covering a large area of the island and large sample size to provide sufficient evidence to support the objective of the study.

References

1. Akis S, Peristianis N, Warner J. Residents' attitudes to tourism development: the case of Cyprus. *Tourism management*,1996 :17(7):481-494.
2. Asadi S, Pourhashemi SO, Nilashi M, Abdullah R, Samad S, Yadegaridehkordi E *et al.* Investigating influence of green innovation on sustainability performance: A case on Malaysian hotel industry. *Journal of cleaner production*,2020:258:20860.
3. Assaf AG, Josiassen A. Identifying and ranking the determinants of tourism performance: A global investigation. *Journal of Travel Research*, 2012:51(4):388-399.
4. Assefa E, Hermes N, Meesters A. Competition and the performance of microfinance institutions. *Applied Financial Economics*,2013:23(9):767-782.
5. Bae SY, Chang PJ. The effect of coronavirus disease-19 (COVID-19) risk perception on behavioural intention towards 'untact'tourism in South Korea during the first wave of the pandemic (March 2020). *Current Issues in Tourism*, 2020, 1-19.
6. Bernini C, Cracolici MF, Viroli C. Does tourism consumption behaviour mirror differences in living standards? *Social Indicators Research*,2017:134(3):1157-1171.
7. Binns T, Nel E. Tourism as a local development strategy in South Africa. *Geographical Journal*,2002:168(3):235-247.
8. Bisong A, Ahairwem PE, Njoroge E. The impact of COVID-19 on remittances for development in Africa. *Maastricht: European Centre for Development Policy Management*, 2020.
9. Brau R, Lanza A, Pigliaru F. An investigation on the growth performance of small tourism countries. *The Economics of Tourism and Sustainable Development*, 2005, 8-29.

10. Chen H, Huang X, Li Z. A content analysis of Chinese news coverage on COVID-19 and tourism. *Current Issues in Tourism*, 2020, 1-8.
11. Cohen E, Cohen SA. A mobilities approach to tourism from emerging world regions. *Current Issues in Tourism*, 2015;18(1):11-43.
12. Cró S, Martins AM. Foreign direct investment in the tourism sector: The case of France. *Tourism Management Perspectives*, 2020;33:100614.
13. Fu X, Ridderstaat J, Jia HC. Are all tourism markets equal? Linkages between market-based tourism demand, quality of life, and economic development in Hong Kong. *Tourism Management*, 2020;77:104015.
14. Getz D, Petersen T. Growth and profit-oriented entrepreneurship among family business owners in the tourism and hospitality industry. *International journal of hospitality management*, 2005;24(2):219-242.
15. Godovykh M, Ridderstaat J. Health outcomes of tourism development: A longitudinal study of the impact of tourism arrivals on residents' health. *Journal of Destination Marketing & Management*, 2020;17:100462.
16. Gössling S, Scott D, Hall CM. Pandemics, tourism and global change: a rapid assessment of COVID-19. *Journal of Sustainable Tourism*, 2020;29(1):1-20.
17. Hao F, Xiao Q, Chon K. COVID-19 and China's hotel industry: Impacts, a disaster management framework, and post-pandemic agenda. *International journal of hospitality management*, 2020;90:102636.
18. Hateftabar F, Chapuis JM. How resident perception of economic crisis influences their perception of tourism. *Journal of Hospitality and Tourism Management*, 2020;43:157-168.
19. Hoang TTH, Van Rompaey A, Meyfroidt P, Govers G, Vu KC, Nguyen AT *et al.* Impact of tourism development on the local livelihoods and land cover change in the Northern Vietnamese highlands. *Environment, Development and Sustainability*, 2020;22(2):1371-1395.
20. Isaac RK. Can you imagine Bethlehem without tourism: the impacts of Covid-19 on Bethlehem, Palestine. *Current Issues in Tourism*, 2021, 1-17.
21. Khan N, Faisal S. Epidemiology of corona virus in the world and its effects on the China economy, 2020. Available at SSRN 3548292.
22. Khan N, Fahad S, Faisal S, Akbar A, Naushad M. Critical Review of COVID-2019 in America and Impacts on Its Economy, 2020. Available at SSRN 3635062.
23. Liew VKS. The effect of novel coronavirus pandemic on tourism share prices. *Journal of Tourism Futures*, 2020.
24. Mao Y, He J, Morrison AM, Andres Coca-Stefaniak J. Effects of tourism CSR on employee psychological capital in the COVID-19 crisis: from the perspective of conservation of resources theory. *Current Issues in Tourism*, 2020, 1-19.
25. Mayer SE, Leone MP. *What money can't buy: Family income and children's life chances*. Harvard University Press. 1997.
26. Mc Coolm SF, Martin SR. Community attachment and attitudes toward tourism development. *Journal of Travel research*, 1994;32(3):29-34.
27. Neto F. August. A new approach to sustainable tourism development: Moving beyond environmental protection. In *Natural resources forum* Oxford, UK: Blackwell Publishing Ltd, 2003;27(3):212-222.
28. Nicola M, Alsaifi Z, Sohrabi C, Kerwanm A, Al-Jabir A, Iosifidis C *et al.* The socio-economic implications of the coronavirus and COVID-19 pandemic: a review. *International journal of surgery*, 2020.
29. Norouzin N, de Rubens GZ, Choubanpishehzafar S, Enevoldsen P. When pandemics impact economies and climate change: exploring the impacts of COVID-19 on oil and electricity demand in China. *Energy Research & Social Science*, 2020;68:101654.
30. Ozili PK, Arunm T. Spillover of COVID-19: Impact on the Global Economy. Available at SSRN 3562570, 2020.
31. Riadilm IG. Tourism industry crisis and its impacts: investigating the Indonesian tourism employees perspectives' in the pandemic of COVID-19. *Jurnal Kepariwisata: Destinasi, Hospitalitas Dan Perjalanan*, 2020;4(2):98-108.
32. Rivera M, Croes R, Lee SH. Tourism development and happiness: A residents' perspective. *Journal of Destination Marketing & Management*, 2016;5(1):5-15.
33. Seetanah B. Assessing the dynamic economic impact of tourism for island economies. *Annals of tourism research*, 2011;38(1):291-308.
34. Sharpley R. Tourism, sustainable development and the theoretical divide: 20 years on. *Journal of sustainable tourism*, 2020;28(11):1932-1946.
35. Shen H, Fu M, Pan H, Yu Z, Chen Y. The impact of the COVID-19 pandemic on firm performance. *Emerging Markets Finance and Trade*, 2020;56(10):2213-2230.
36. Sheresheva MY. Coronavirus and tourism. *Population and Economics*, 2020, 4(72).
37. Sturm R, Gresenz CR. Relations of income inequality and family income to chronic medical conditions and mental health disorders: national survey. *Bmj*, 2002;20:324(7328).
38. Uğur NG, Akbıyık A. Impacts of COVID-19 on global tourism industry: A cross-regional comparison. *Tourism Management Perspectives*, 2020;36:100744.
39. Vasquez D. Employee retention for economic stabilization: A qualitative phenomenological study in the hospitality sector. *International Journal of Management, Economics and Social Sciences (IJMESS)*, 2014;3(1):1-17.
40. Wells CR, Sah P, Moghadas SM, Pandey A, Shoukat A, Wang Y *et al.* Impact of international travel and border control measures on the global spread of the novel 2019 coronavirus outbreak. *Proceedings of the National Academy of Sciences*, 2020;117(13):7504-7509.
41. Wen J, Kozak M, Yang S, Liu F. COVID-19: potential effects on Chinese citizens' lifestyle and travel. *Tourism Review*, 2020.
42. Williams SN, Armitage CJ, Tampe T, Dienes K. Public perceptions and experiences of social distancing and social isolation during the COVID-19 pandemic: A UK-based focus group study. *BMJ open*, 2020;10(7):p.e039334.