Assessment of the Effects of the COVID-19 Pandemic on Tourism and Hospitality Industry in the United Kingdom

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Abstract

This study investigated and provided an understanding of effects of the COVID-19 pandemic on the tourism and hospitality industry, in the United Kingdom. For this research, explanatory research design was adopted. The survey followed the standard measures comprising 250 structured questionnaires, divided into four (4) sections, namely demographic profile; COVID-19 behaviour; Tourists' attitude and effects of the COVID-19 pandemic. With tourism and hospitality operators of national importance selected through proportionate stratified sampling technique as the respondents, only 207 feedbacks were retrieved, while data from HM Revenue and Customs (HMRC) was equally be reviewed. Data were analysed through Man-Whitney (U), and Kruskal-Wallis (H) test, Kolmogorov-Smirnov and Factor analysis with Varimax rotation (reliability and convergent validity of construct). Finally, Ordinal regression (PLUM) and Multinomial Logistic Model

(MLR) were applied for assessing the influences of effects of the COVID-19 pandemic on tourism and hospitality industry, in the United Kingdom. Findings revealed a high level (0.84%) of Covid-19's effect on tourism and hospitality operators. More than 60% of respondents correctly answered majority of questions, but few cases namely time, value of money and less corporate tax, were major negative (-0.45) effects of the pandemic on their operations. Except share for the transport-markets, regulatory frameworks and corporate tax, level of effects of the pandemic were not varying statistically according to area of studies. It was also found that maximum selected indicators of effects of the pandemic were dependent on control variables except source of income, attended patronage and profit returns. Data further showed that transport and logistics were the worse-hit by the pandemic, wherein respondents recorded 100% losses; significant at $\alpha=0.859$ and $\beta=0.897$, respectively. It can be concluded that the COVID-19 pandemic had a significant effect on the tourism and hospitality industry in the United Kingdom. Increased level of education and awareness are really necessary to forestall any future outbreaks' effect of such magnitude on the said industry.

Introduction

The World Health Organisation formally said on March 11, 2020, that "COVID-19 can be characterised as a pandemic." Public health, the economy, politics, and society have all suffered greatly as a result of the COVID-19 pandemic (Gössling *et al*., 2020). There were 6,398,412 COVID-19 fatalities and 575,887,049 confirmed cases globally as of August 2, 2022 (WHO, 2022). Furthermore, most industries suffered both short-term and long-term losses as a result of COVID-19 (Yarovaya *et al*., 2021). It is evident that one of the economic sectors most severely damaged by the COVID-19 pandemic was the tourist and hospitality sector, which is crucial to a country's, or even the world's, economy and society (Lin & Falk, 2021). Many government policy measures, including the enforcement of social distancing, cancellation of public events, travel

controls, stay-at-home regulations, and gathering size constraints, can be used to explain the influence on the tourist and hospitality industry. These regulations have a significant impact on the travel and hospitality sector, but they are put in place to stop the spread of COVID-19 and level the death and infection curves (Chen *et al.*, 2020).

The worldwide tourist and hotel industry is facing challenging times because the COVID-19 pandemic (Clark *et al.*, 2021). According to the study of (Mazur *et al.*, 2021), by March 2020, the hotel and entertainment business has lost more than 70% of its market capitalisation in the United States alone, as reflected by the S&P1500 stock index. The tourist and hospitality business, which is highly vulnerable to environmental, political, and socioeconomic issues, has been extensively researched in the past as a result of different political crises, wars, natural catastrophes, and pandemics in some parts of the world. However, as several studies have shown, the economic crisis produced by COVID-19 differs significantly from prior crises in terms of extent, duration, and severity. As a result, it is vital to evaluate the effects of COVID-19 on the tourism and hospitality industries. There are several studies focussing on the influence of COVID-19 on the tourism and hospitality industry by using stock market data. These previous studies include the impact of COVID-19 on the changing distributions of travel and leisure industry returns using quantile regression models and daily stock data (Lee & Chen, 2022), the influence of government interventions on U.S. travel and leisure companies' returns (Chen *et al.*, 2020), using daily stock data. These studies primarily focus on COVID-19's impact on tourism and the hotel market, either from an American perspective, or United States' regional perspective. Few studies have examined investigations from a United Kingdom perspective. Furthermore, hardly little research has examined the effect between tourist and hospitality markets in various British related industries, given the pivotal the British Isles can play in the tourism and hospitality industry. In this study, the effects of the COVID-19 pandemic on tourism

and hospitality industry, in the United Kingdom from two perspectives, was investigated. First, by using a panel dataset consisting of tourism and hospitality patronage indices fromtourism and hospitality industry players. Secondly, statistically estimation of the effects among these players was carried out, whilst, interconnectedness between any paired players, if a spill-over effect exists was shown.

Methodology
Description of the Study Area

Located off the coast of the continental landmass in North-western Europe, the United Kingdom of Great Britain and Northern Ireland is also referred to as Britain or the UK (Bradley *et al*, 2007). England, Scotland, Wales, and Northern Ireland are included. The majority of the smaller islands in the British Isles are included in the United Kingdom, along with the island of Great Britain and the North-eastern portion of the island of Ireland (Curran and Stuart, 2010). The United Kingdom is encircled by the Atlantic Ocean, the North Sea, the English Channel, the Celtic Sea, and the Irish Sea in addition to the land border that separates Northern Ireland from the Republic of Ireland. The United Kingdom has a population of 67,596,281 in 2022 and a total area of 94,354 square miles (244,376 km^2) (Koch, 2006). The UK is located between longitudes 9° W and 2° E and latitudes 49° and 61° N. The Republic of Ireland and Northern Ireland are separated by a land border that is 224 miles (360 km) long (Davies *et al*, 2008). Great Britain's coastline spans 11,073 miles (17,820 km), although the coastal conundrum causes significant measurement variability (Markdel, 1991).The Channel Tunnel, the longest underwater tunnel in the world at 31 miles (50 km) (24 miles (38 km) underground, connects it to mainland Europe (Stuart, 2023).

Figure 1: Map of the United Kingdom, showing the major cities.
Source: Field survey, 2022.

Figure 2: Tourism map of the selected Tourism and Hospitality sites within the study area.
Source: Field survey, 2022.

Data Collection

Data were collected from thirty (30) tourism attraction sites across 11 cities in the United Kingdom (See Table 1).

Table 1: Distribution of the selected tourist and hospitality site used during the study.

S\N	Cities	Tourism sites	Significance index (β)
1	London	London Zoo (LNZ)	5.3
		British Museum (BTM)	6.5
		Tower Bridge (TWB)	8.7
2	Portsmouth	Mary Rose Exhibition (MRE)	1.8
3	Belfast	Titanic Belfast (TTB)	2.1
		Giants Causeway (GTC)	1.1
		Black Taxi Tours (BTT)	1.9
4	Edinburgh	Edinburgh Castle (EDC)	4.1
		Royal Yacht Britannia (RYB)	2.9
		Scottish National Portrait Gallery (SNP)	3.0
5	New Castle	Life Science Centre (LSC)	1.9
		The Baltic (TBT)	2.7
		The discovery Museum (TDM)	1.4
6	Brighton	Brighton Dome (BRD)	2.1
		Brighton Wheel (BRW)	3.6
		Brighton Sea Life (BSL)	2.9
7	Manchester	Old Trafford Stadium (OTS)	5.9
		Chester Zoo (CHS)	4.6
		Manchester Cathedral (MCC)	3.7
8	Liverpool	Mersey Ferry (MSF)	4.1
		Museum of Liverpool (MUL)	3.9
		The World Museum (TWM)	3.6
9	Leeds	First Direct Arena (FDA)	1.6
		West Yorkshire Playhouse (WYP)	2.9

10	Birmingham	Cadbury World (CDW)	4.1
		National Motorcycle Museum (NMM)	3.7
			2.8
		Think Tank (TKT)	
11	Cardiff	Dr Who Experience (DWE)	3.1
		St. Fagans National History Museum (SFM)	2.4
			2.6
		Cardiff Castle (CRC)	
	Total		

Source: Field survey, 2022.

250 structured questionnaires were developed and administered on the respondents. This was followed by measuring the standard which was comprised of four (4) sections, namely:

1. Demographic profile
2. COVID-19 behaviour
3. Tourists' attitude and
4. Effects of the COVID-19 pandemic

In addition to that, tourism and hospitality operators of national importance were selected through proportionate stratified sampling technique as the respondents.

Data Analysis

Data were analysed through Man-Whitney (*U*), and Kruskal-Wallis (*H*) test, Kolmogorov-Smirnov and Factor analysis with Varimax rotation (reliability and convergent validity of construct). Ordinal regression (*PLUM*) and Multinomial Logistic Model (*MLR*) were applied for assessing the influences of effects the variables measured with a p-value of 0.05.

Results

Table 2: Demographics of the respondents across the study area.

S/N	Cities	Tourism sites	Demographics		Mean±SD
			Male	Female	
1	London	(LNZ)	3	4	6.3±0.5
		(BTM)	4	6	4.5±1.6
		(TWB)	5	3	7.1±2.3
2	Portsmouth	(MRE)	5	3	3.8±1.8
3	Belfast	(TTB)	2	1	6.3±0.5
		(GTC)	6	6	4.5±1.6
		(BTT)	3	2	5.1±2.3
4	Edinburgh	(EDC)	7	6	6.3±0.5
		(RYB)	1	3	4.5±1.0
		(SNP)	4	2	9.1±2.3
5	New Castle	(LSC)	3	7	6.3±0.5
		(TBT)	5	1	4.5±1.6
		(TDM)	2	4	3.1±2.1
6	Brighton	(BRD)	3	7	6.3±0.5
		(BRW)	6	1	4.5±1.8
		(BSL)	4	4	51±2.3
7	Manchester	(OTS)	1	3	6.3±0.5
		(CHS)	6	4	4.5±1.2
		(MCC)	2	5	7.1±2.3
8	Liverpool	(MSF)	2	8	6.3±0.5
		(MUL)	4	1	4.5±1.6
		(TWM)	5	4	8.1±2.3
9	Leeds	(FDA)	7	3	6.3±0.5
		(WYP)	5	7	4.5±1.6
10	Birmingham	(CDW)	6	1	3.3±0.7
		(NMM)	2	6	4.5±1.6
		(TKT)	8	2	6.1±2.3

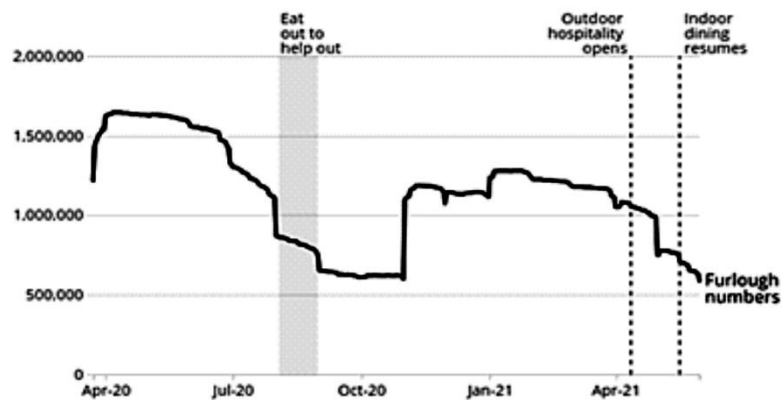| 11	Cardiff	(DWE)	6	6	3.8±1.9
		(SFM)	3	2	6.3±0.5
		(CRC)	2	8	4.5±1.6
	Total		95	112	78.3±9.2

Source: Field survey, 2022.

Figure 3: Attitudes of Tourist towards hospitality activities (Furlough)
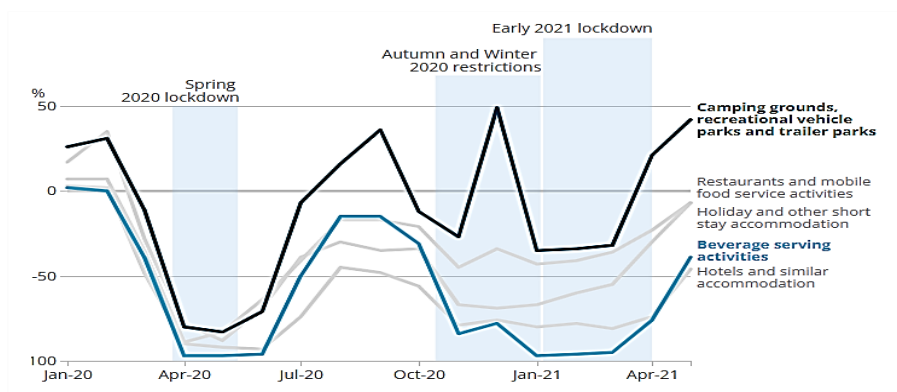**Source:** Data from HM Revenue and Customs (HMRC), 2022.

Figure 4: Effects of the pandemic on logistics of tourism and hospitality activities on recreational services.
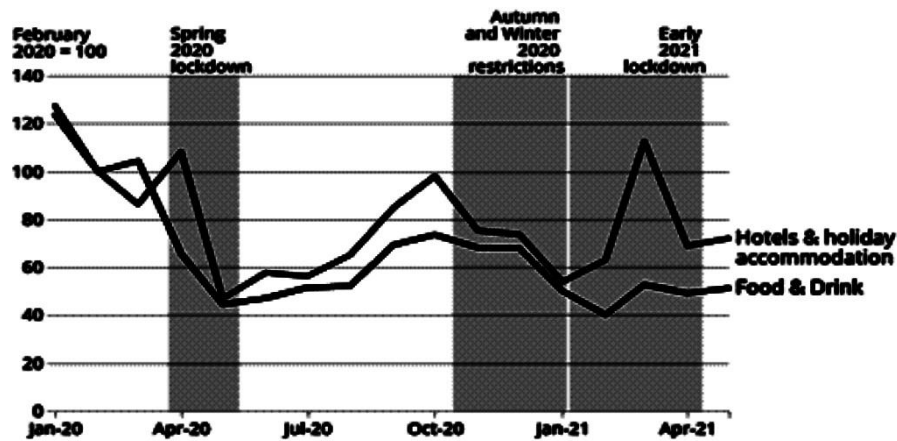**Source:** Data from HM Revenue and Customs (HMRC), 2022

Figure 5: Data on the effects of the pandemic on lodging and accommodation

Source: Data from HM Revenue and Customs (HMRC), 2022.

Table 5: COVID-19 behaviour on the essential aspects of the tourism and hospitality industry

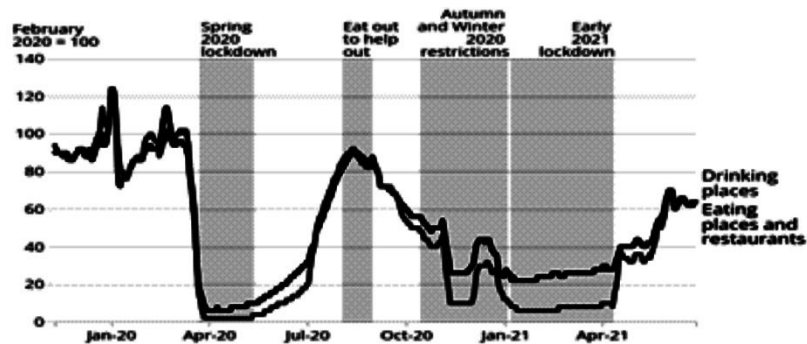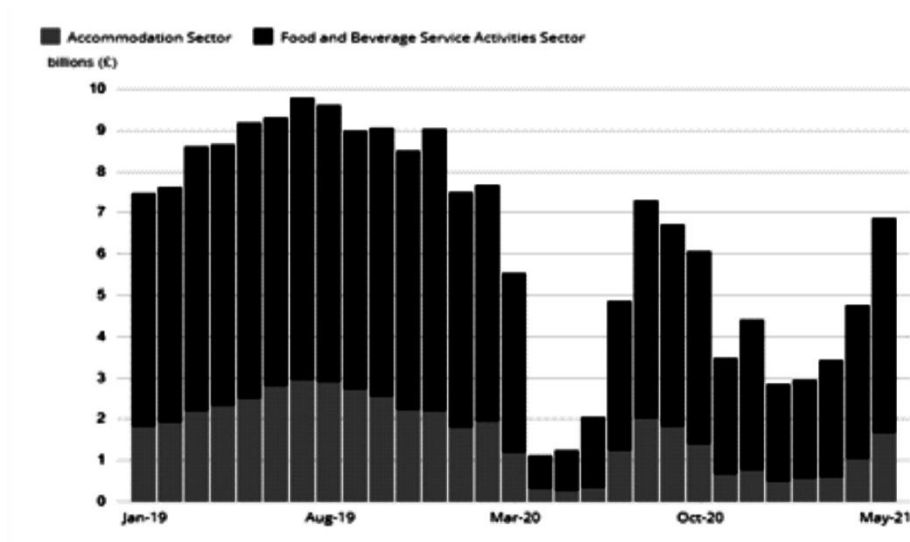| S/N	Sector	COVID-19 behaviour		β+α
		+ve	-ve	
1	Accommodation Sector	0.4584	0.45	2.85
2	Food Beverage and Service sector	0.5723	0.859	3.79
3	Transportation and logistics	0.3562	0.897	1.68

Source: Field survey, 2022.

Figure 6: Perception of respondent's on culinary services during the COVID-19 Pandemic
Source: Data from HM Revenue and Customs (HMRC), 2022.

Attitudes of respondents towards tourism activities of accommodation and feeding during the study period.
Source: Field survey, 2022.

Table 4: Sectoral distribution of respondents across the study area

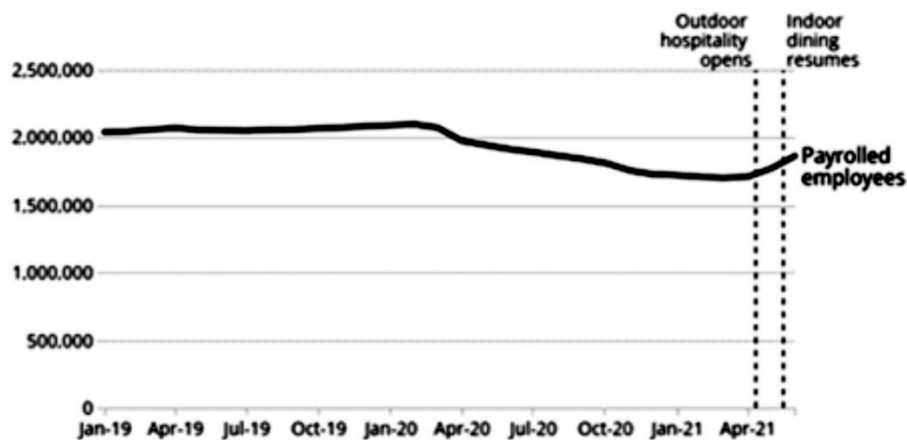| S/N	Sector	Tourists' attitude		$e^x = 1 + \dfrac{x}{1!} + < x$
		sign	**Not sign**	
1	Accommodation Sector	0.3	0.1	46.89
2	Food Beverage and Service sector	0.1	0.0	34.78
3	Transportation and logistics	0.0	0.3	50.45

Source: Field survey, 2022.

Figure 3: Paid employees of the tourism and hospitality sector's attitude to the pandemic.
Source: Data from HM Revenue and Customs (HMRC), 2022.

Table 5: Sectoral distribution of respondents across the study area

Statistics	Σ
U	0.3
H	0.1
PLUM	0.0
MLR	0.98

Source: Field survey, 2022

U = Man-Whitney, *H* = Kruskal-Wallis test, *PLUM* = Ordinal regression, and *MLR* = Multinomial Logistic Model

Discussion

Coronavirus Pandemic (COVID-19)

The findings indicated that the coronavirus pandemic (COVID-19) had a varying influence on the tourism and hospitality sectors in the United Kingdom. While bars and clubs were most severely affected, campsites fared better than the sector as a whole. While consumer expenditure on hospitality began to rise in May 2021, it is still less than 70% of pre-pandemic levels. Turnover also shows a similar trend, remaining a quarter below 2019 levels in May. This corroborates the assumptions of Aylward *et al*, (2016), wherein establishments in the hospitality industry were seen to have smaller gains in expenditure than consumers in May 2021, with payments to suppliers from food and drink establishments remaining roughly half of pre-pandemic levels. Confidence in business survival in the hospitality sector began to rise in May 2021, but it remained below the all-sector average. This was seen to share the same sentiments with Hidinger, (2018), when he postulated that job vacancies in the hotel sector might have increased significantly and are now higher than before the pandemic; yet, the number of employees in the sector remained 11% lower in June 2021 than in February, 2020. According to data from HM Revenue and Customs (HMRC), just under 1,650,000 employees in the industry were on furlough in April 2020 when

businesses suspended trading, with that figure reducing to just under 590,000 by the end of May, 2021. This accounts for 25% of all furloughed employees. As the pandemic progressed, the hospitality sector adjusted to the new limitations, with the number of firms temporarily shuttered dropping from 81% in the spring 2020 lockdown to 54% in the early 2021 lockdown. Business turnover (Figures 3 and 7) also showed this shift, with revenue higher in early 2021 than in spring 2020.

Monetary Effects of the Coronavirus Pandemic (COVID-19)

In May 2020, turnover was slightly more than £1.2 billion, compared to £3.4 billion in March 2021. This increased to £6.9 billion by May 2021, when limitations were largely lifted, the biggest sum since August 2020. However, this is still approximately 25% lower than its 2019 level (Adele, 2019). This revival was particularly strong in the restaurant and mobile food service activities sub-sector, where turnover in May 2021 was £3.3 billion, five and a half times higher than in May 2020; this is likely due to more restaurants being able to provide takeaway services and outdoor dining being permitted. The accommodation and food service activities sector is made up of the sub-sectors of food and beverage service activities. These trends are consistent with the overall consumer expenditure patterns observed in HM Revenue and Customs (HMRC) data. Following the relaxation of restrictions in spring 2021, consumer expenditure in the hospitality sector reached its highest level since summer 2020. Using HM Revenue and Customs' (HMRC) own sectoral breakdown, drinking establishments (including bars and pubs) saw a significant surge in consumer spending in spring 2021, coinciding with the relaxation of prohibitions on outdoor and indoor hospitality in England (Shwerbury, 2017). However, spending levels remained less than 70% of pre-pandemic levels by the end of June. Sectoral distribution of respondents across the study area.

Covid-19's Effect on Tourism and Hospitality Operators

Findings revealed a high level (0.84%) of Covid-19's effect on tourism and hospitality operators. More than 60% of respondents correctly answered majority of questions but few cases namely time, value of money and less corporate tax; were major negative (-0.45) effects of the pandemic on their operations. Except share for the transport-markets, regulatory frameworks and corporate tax, level of effects of the pandemic were not varying statistically according to area of studies. It was also found that maximum selected indicators of effects of the pandemic were dependent on control variables except source of income, attended patronage and profit returns (Lawrence, 2020). Data further showed that transport and logistics were the worse-hit by the pandemic, wherein respondents recorded 100% losses; significant at $\alpha=0.859$ and $\beta=0.897$, respectively.

Conclusion

The coronavirus (COVID-19) pandemic, has highlighted in the course of this study exacerbated disparities throughout society and the tourism and hospitality industry in the United Kingdom. The sector was observed to have been badly impacted. On the overall, turnover in the said sector was observed to have remained low, creating a downturn in the economy. It can be concluded that the COVID-19 pandemic had a significantly bad effect on the tourism and hospitality industry in the United Kingdom.

Recommendations

i.   A comprehensive strategy and wide socioeconomic development plan, including tourism and hospitality sector-specific strategies are required, going forward.

ii.   An environment that supports tourism and hospitality sector-entrepreneurship, are also required to allow those with strong

and sustainable business models to thrive, regardless of any future pandemic.

iii. Governments and financial institutions in the United Kingdom to regularly reassess and re-evaluate the situation to guarantee that the sector can be protected from such future influences.

iv. Increased level of education and awareness are really necessary to forestall any future outbreaks' effect of such magnitude on the said industry.

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