Covid-19: Impact and Recovery of Hotel Industry in Malaysia

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Abstract: Covid-19 pandemic has caused a significant impact on the hotel industry. This study examines the impact of Covid-19 on the hotel industry and the recovery strategies the hoteliers to adopt to sustain their businesses. In this study, the external variable, Covid-19 severity, independent variables, decreased occupancy rate, decreased revenue, continued fixed cost, operational costs and job cuts, mediating variable intervention are discussed to examine their relationship with hotel sustainability. Data were collected from 197 hotel employees or owners. This research used simple linear regression and multiple linear regression to examine the relationship between the external variable, independent variables, mediating variable, and the dependent variable. The results show that sustainability in Malaysian hotel industry can be achieved through intervention. This study supports the Contingency theory and gives valuable information to Malaysian hoteliers to adopt effective recovery strategies in the hotel industry in Malaysia.

Keywords: Covid-19, Movement Control Order (MCO), hotel industry, recovery strategies, sustainability, Malaysia

INTRODUCTION

With the outbreak of Covid-19 in 2020, it spread to the world and affecting the entire world economy. As of 12 April 2021, over 133 million coronavirus cases and 2,904,005 deaths have been recorded worldwide because of the pandemic (Worldometers, 2021). This is a global public health incident following the SARS pneumonia in 2002. Malaysia government has chosen stricter measures, implement again and extend the Movement Control Order (MCO) to curb the trajectory of the pandemic since the number of daily

cases has reached an unexpected triple-digit (Salim *et al.*, 2020). Because of this pandemic, tourist destinations around the world have imposed restrictions on foreign tourists, causing the tourism industry to stagnate.

PROBLEM STATEMENT

Tourism is an industry that links with many other economy sectors, especially the hotel industry. As countries around the world continue to impose travel restrictions and close borders, hotel industry is facing declining demand and patronage. For example, until 16th of March 2020, 170,085 hotel room reservations worth RM68 million have been cancelled due to the outbreak of covid-19 (Matta, 2020).

Due to the pandemic becoming more serious in the beginning of year 2021, approximately 60% of hotel reservations in Langkawi have been cancelled when the government implemented the MCO 2.0 (Chin, 2021). This reflects that the pandemic has hampered the hotel industry and caused hotel industry operators unable to bear the cost and cease operations. To stay afloat, hotels that still operate will have to slash expenses anywhere they can, including the increase of employees' unpaid leave and the reduction of wages (Mahalingam, 2021). During this pandemic, hotel operators offer some discount packages and additional services such as cleaning services and food delivery to raise the revenue to sustain their business (The Star, 2020).

RESEARCH QUESTIONS

- What threat does the Covid-19 pandemic pose to the hotel industry in Malaysia?
- What are the strategies that the hotel operators adopt to minimise the impact of the Covid-19 pandemic?
- Does the recovery strategy affect the sustainable development of the Malaysia hotel industry?

RESEARCH OBJECTIVES

The main research objective of this study is to investigate the impact and challenges brought by the pandemic to Malaysia hotel industry, as well as the recovery strategies adopted by hotel managers for the sustainable development of the hotel industry.

LITERATURE REVIEW

Contingency Theory

Contingency theory is one of the developments of the organisational theory and used the theory model proposed by Woodward (1958) and Lawrence

and Lorsch (1967). According to Soares and Maduro-Abreu (2019), the concept of contingency theory is based on the presumption that no paradigm adapts to all organisations in all situations since the shifts happen due to the influence among some kinds of circumstances. Based on the contingency theory, the organisation must adapt to external circumstances because most of them are unpredictable (Thompson, 1976; Toppr, 2019). The framework of contingency theory is shown in Figure 1. Jin *et al.* (2007) applied contingency theory to explore how Singapore and China move along the spectrum during the severe acute respiratory syndrome (SARS) crisis. Contingency theory is applied in this study to explore the impact of Covid-19 on the hotel industry and its recovery strategy for sustainable development.
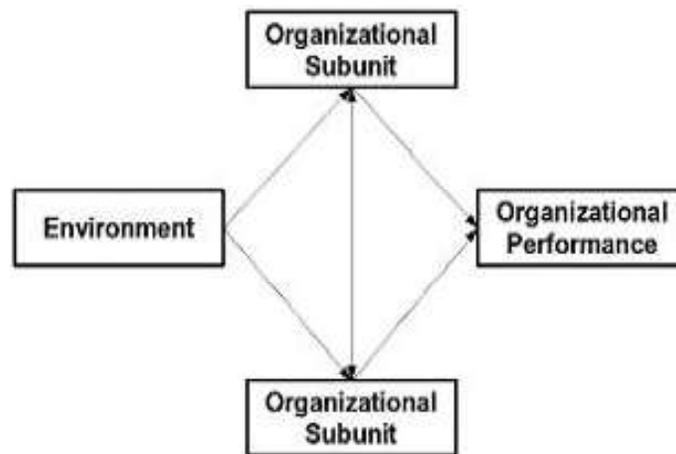

Figure 1: Contingency theory

Source: Weill & Olson (1989)

The relationship between Covid-19 Severity (CS) and decreased occupancy rate (OC) in the hotel industry

According to World Health Organization (WHO) (2020), a disease outbreak occurs when the number of disease cases exceeds usual expectations. As many countries implemented border closures, entry bans, and suspension of tourist visas, the supply of the hotel industry has been significantly diminished (Fu, 2020). On the demand side, most people avoid travel and cancel the booking due to health worries; the government also implemented the MCO and seriously affected the hotel industry (Chin, 2020). According to information provided by the Malaysian Association of Tour and Travel Agents (MATTA), 95,000 hotel reservations had been cancelled when the Covid-19 pandemic began (Zainudin, 2020). A study by Wu *et al.* (2010) proved that infectious

diseases outbreak would decrease hotel occupancy rates due to the drastic drop in inbound tourism. Therefore, a hypothesis is formulated below:

> *H1: There is a positive relationship between Covid-19 Severity and decreased occupancy rate in the hotel industry.*

The relationship between Covid-19 Severity and the decreased revenue (R) in the hotel industry

Since the hotel industry and tourism industry are interconnected, the implemented restraint policies have effectively placed the hotel industry on the verge of collapse (Gretzel *et al.*, 2020). According to Karim *et al.* (2020), the cancellation of 170,084 room reservations by tourists has caused a significant decline in revenue amounting to RM68,190,364 in the hotel industry. Besides, increased costs related to health hygiene and other operational costs related to the Standard Operating Procedure (SOPs) may intensify the drop in revenue (GrantThornton, 2020). According to the study by Crespí-Cladera *et al.* (2021), the hotel industry's revenue will decline, as it is one the of industries facing challenges to maintain social distancing (Pagano & Zechner, 2020). Thus, a hypothesis is developed below:

> *H2: There is a positive relationship between the Covid-19 Severity and decreased revenue in the hotel industry.*

The relationship between Covid-19 Severity and continued fixed costs (FC) in the hotel industry

According to Brignall (1991) and Kotas (2014), most hotels have a high percentage of fixed costs, with about three-quarters of hotel costs being fixed and uncontrollable. The fixed costs of the room department are mainly the department's wages and salaries, while the proportion of variable costs is much lower, mainly for laundry and household goods. On the other hand, hotel food and beverage departments require relatively high fixed costs, mainly restaurant wages, and also high variable cost for food and beverage costs (Pavlatos & Paggios, 2007). Hotels have high fixed costs that would remain constant regardless of the hotel's revenue level such as rental, utility expenses and insurance (Hoff, 2020; Darios, 2020). The following hypothesis is developed:

> *H3: There is a positive relationship between Covid-19 Severity and continuous fixed costs in the hotel industry.*

The relationship between Covid-19 Severity and operational costs (OC) in the hotel industry

As business trips and vacations are cancelled, hotel occupancy rates plummet. This put the hotel industry under significant financial strain

(Crespí-Cladera *et al.*, 2021). Any expenses involve with maintaining and operating the hotel are considered hotel operational costs (Darios, 2020). Hotel operational costs are divided into two categories which are fixed costs and variables costs. The limited number of guests due to Covid-19 has caused the hotel industry to experience increasing operating costs (Phelps, 2020). In the first implementation of the MCO, the hotel industry's business has almost dropped to zero, while the industry needs to bear operating costs at the same time (Ghazali & Ishak, 2021). A hypothesis is formulated as follows:

> *H4: There is a positive relationship between Covid-19 Severity and operational costs in the hotel industry.*

The relationship between Covid-19 Severity and job cuts (JC) in the hotel industry

As Covid-19 pandemic has economic impact that affects business bottom line, employers are beginning to cut salaries and lay off employees (FMM, 2020; Karim *et al.*, 2020). According to Datuk Abdul Halim Mansor, the president of the Malaysian Trades Union Congress, hotel employees have been hit the hardest by the Covid-19 pandemic, with some have to take unpaid leave, wage cuts, and even layoffs (Astro Awani, 2020). Since March 2020, the Malaysian Association of Hotels (MAH) received a record of more than 100 hotels have ceased operations, affecting more than 7,000 employees directly, while more employees are affected indirectly due to long-term pay cuts or unpaid leave work (Kaur, 2021). Thus, a hypothesis is developed below:

> *H5: There is a positive relationship between Covid-19 Severity and job cuts in the hotel industry.*

The relationship between the threats and intervention (IV) in the hotel industry

According to the study by Wu *et al.* (2010), unexpected outbreaks of infectious diseases would massively reduce hotel occupancy rates due to the sharp reduction in the number of tourists. The results in the study of Fu (2020) proved that the occupancy rate, revenue and employees has decreased in the hotel industry during the pandemic period (Karim *et al.*, 2020). This global pandemic may significantly affect the hotel industry which is more serious than SARS and the 2008 financial crisis. It is challenging for the hotel industry to meet the fixed cost and other operational costs (Kaushal & Srivastava, 2021). The hoteliers have implemented cost-cutting measures to minimize unnecessary expenses to maintain business (Lo *et al.*, 2006). Compliance with Covid-19 procedures and new safety measures in facilities can increase tourists' confidence to increase the occupancy rate (Rodríguez-Antón & Alonso-Almeida, 2020). The government has launched the PRIHATIN

economic stimulus package to help businesses rebound (Prime Minister's Office of Malaysia, 2020). The government has proposed deferring bank repayments and offering tax incentives to ease the cash flow of the hotel industry in Malaysia (Foo *et al.*, 2020). During the Covid-19 outbreak, most hotels provide domestic tourists with promotional activities such as discounts packages, vouchers for a limited stay period and group promotions (Gaya Travel, 2021; Malaysiakini, 2020). Besides, retailers, restaurants and hotels used platforms to expand their delivery services during the Covid-19 period (Reardon *et al.*, 2021). Therefore, the following hypothesis is formulated:

> H6:   *There is a positive relationship between decreased occupancy rate and intervention in the hotel industry.*
>
> H7:   *There is a positive relationship between the decreased revenue and intervention in the hotel industry.*
>
> H8:   *There is a positive relationship between continued fixed costs and intervention in the hotel industry.*
>
> H9:   *There is a positive relationship between operational costs and intervention in the hotel industry.*
>
> H10: *There is a positive relationship between job cuts and intervention in the hotel industry.*

The relationship between the intervention and hotel sustainability (HS) in the hotel industry

A series of activities have been studied for the hotel industry sustainability (Guix *et al.*, 2019), especially during the Covid-19 outbreak (Jones & Comfort, 2020). The Covid-19 pandemic is a global problem and has caused a slew of issues for the hotel industry. "Social distancing" is critical for the current community due to Covid-19 situation (Baum & Hai, 2020). Therefore, the hotel industry needs to change and adjust its operations to meet new health standards (Sigala, 2020). Various studies have supported that the hotel industry has implemented a series of recovery strategies and interventions to resume their business operations and survive in the uncertainty of the pandemic (Fu, 2020; Herédia-Colaço & Rodrigues, 2021; Rodríguez-Antón & Alonso-Almeida, 2020). Based on these past studies, a hypothesis is formulated below:

> H11: *There is a positive relationship between the intervention and sustainability in the hotel industry*

Proposed Research Framework

Figure 2 shows the research framework of this study. Covid-19 severity is the external variable in this study. The threat of Covid-19 to the hotel
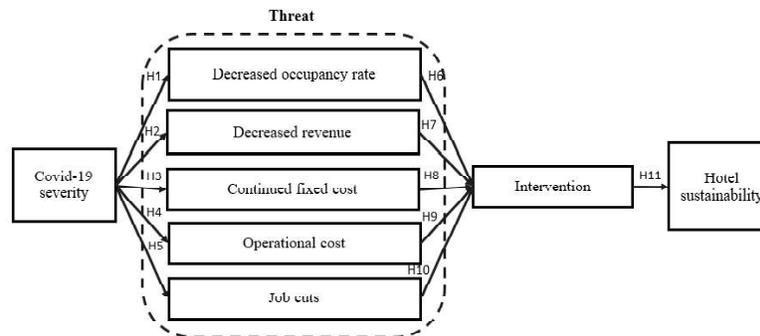
Figure 2: Proposed Research Framework

industry is captured in the five independent variables. The intervention is the mediating variable, and hotel sustainability is the dependent variable.

METHODOLOGY

Data Collection

In this study, an online survey questionnaire was used to collect primary data from respondents. The advantages of using an online survey questionnaire are it can be easily developed and spread with global scope especially during the pandemic period and it can be conducted using free tools like Type form, Google Forms, and Survey Monkey (Andrade, 2020).

Sampling Design

Population

This study was carried out in Malaysia. As of April 7, 2021, 528 rated hotels and 4608 registered tourist accommodation premises in Malaysia are listed on the official website of the MOTAC (Idris, 2021). The target population of this study is owner and hotel employee of the registered tourist accommodation who played a role in the operation or have a certain level of understanding of the hotel operation.

Sampling Frame

The sampling frame is the list of individuals through whom the sample will be taken (McCombes, 2021). Since the target population of this study is hoteliers in Malaysia, the researchers focused on hotels listed on the official website of the MOTAC. The questionnaires were distributed to the respondents using email and social media platforms such as Facebook, Instagram and WhatsApp.

Sampling Technique

Non-probability sampling is often used because the methods for selecting units to include in a sample are often simpler, faster, and less expensive (Lærd Dissertation, 2012). One of the non-probability sampling, quota sampling, was used to obtain data for this study. Quota sampling is used in this study to divide the population into thirteen States and three Federal Territories in Malaysia.

Sample Size

According to Hinkin (1998), the ideal sample size sufficient for subsequent analyses should consist of item-to-response ratio ranging from 4 to 10 times of the items in the questionnaire. The questionnaire contained 38 items. Hence, a sample size between 152 and 380 is required. Also, according to Loehlin (2004), a sample size between 100 and 200 is acceptable and sufficient. As such, 202 questionnaires were collected and 197 usable responses were analysed using SPSS Statistics software.

Research Instrument

In this study, an online questionnaire survey was conducted to collect the primary data of the respondents. The questionnaire for this study is divided into five sections: demographic information of respondents, the external variable, five independent variables, the mediating variable, and the dependent variable.

Pilot Test

As a generally accepted rule for reliability, the values of the Cronbach's alpha between 0.6-0.7 show a reasonable degree of reliability and the values

Table 1: Pilot Test (Reliability)

No.	Variables	Cronbach's Alpha	No. of Items
1	Covid-19 Severity	0.946	6
2	Decreased occupancy rate	0.967	3
3	Decreased revenue	0.986	3
4	Continued fixed cost	0.904	3
5	Operational cost	0.856	3
6	Job cuts	0.946	5
7	Intervention	0.870	10
8	Hotel sustainability	0.876	5

above 0.8 show a great level of reliability (Ursachi *et al.*, 2015). A pilot test with 25 respondents was conducted using the SPSS software to examine the questionnaire's validity and reliability. Table 1 shows that all eight variables in this study are reliable and valid since the alpha of all the variables are within the range of 0.85-0.98.

RESULTS

Descriptive Analysis

General Information of Respondents

202 sets of questionnaires were collected and 197 sets of questionnaires were usable. Out of the 197 respondents, 108 (54.8%) were female and 89 (45.2%) were male. Most of the respondents are from the age group of 25 to 35 years old (39.6%). The 197 respondents included 39 (19.8%) assistant managers, 50 (25.4%) general managers, 31 (15.7%) owners and 77 (39.1%) with other job titles. Most of the respondents have 5 to 10 years of working experience (31.5%), followed by respondents with more than ten years of experience (27.4%), 3 to 5 years' experience (22.3%) and 37 (18.8%) respondents were working less than three years in the hotel industry. The 197 respondents included 39 (19.8%) from chain hotels and 158 (80.2%) from independent hotels. The majority of the respondents were from mid-range service hotels (50.3%), followed by budget service hotels (42.1%) and 7.6% were from world-class service hotels. Among the 197 respondents, most hotels are from Pulau Pinang (10.7%), Selangor (10.7%), Johor (9.6%) and Kedah (9.6%). Most of the hotels have less than 100 employees (89.3%), followed by 100-200 employees (7.1%), 201-300 employees (2%) and more than 300 employees (1.5%).

Normality Test

All of the items are normally distributed as the kurtosis values are within the range of ±10 and the skewness values fall within the range of ±3 (Kline, 2005).

Reliability Test

Table 2 shows that the Cronbach's alphas of all of the variables are within the range of 0.68-0.94, indicating that all eight variables in this study are reliable.

Inferential Analysis

Pearson Correlation Coefficient Analysis

Table 2: Reliability test (Full data)

No.	Variables	Cronbach's Alpha	No. of Items
1	Covid-19 Severity	0.885	6
2	Decreased occupancy rate	0.894	3
3	Decreased revenue	0.943	3
4	Continued fixed cost	0.878	3
5	Operational cost	0.753	3
6	Job cuts	0.897	5
7	Intervention	0.737	10
8	Hotel sustainability	0.678	5

Table 3: Pearson Correlation Coefficient between variables

		CS	OR	R	FC	OC	JC	IV	HS
CS	Pearson Correlation	1	.578**	.580**	.593**	.473**	.256**	.439**	.314**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000	0.000	0.000
OR	Pearson Correlation	.578**	1	.872**	.789**	.619**	.384**	.388**	.374**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000	0.000	0.000	0.000
R	Pearson Correlation	.580**	.872**	1	.790**	.615**	.339**	.391**	.340**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000	0.000	0.000	0.000
FC	Pearson Correlation	.593**	.789**	.790**	1	.744**	.394**	.454**	.343**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000	0.000	0.000	0.000
OC	Pearson Correlation	.473**	.619**	.615**	.744**	1	.339**	.496**	.399**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		0.000	0.000	0.000
JC	Pearson Correlation	.256**	.384**	.339**	.394**	.339**	1	.436**	.209**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000		0.000	0.003
IV	Pearson Correlation	.439**	.388**	.391**	.454**	.496**	.436**	1	.511**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000		0.000
HS	Pearson Correlation	.314**	.374**	.340**	.343**	.399**	.209**	.511**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.003	0.000	
	N	197	197	197	197	197	197	197	197

**. Correlation is significant at the 0.01 level (2-tailed).

Table 3 shows that the results of Pearson correlation coefficient analysis between the variables were all below 0.9 signifying that there is no multicollinearity problem.

Simple and Multiple Linear Regression Analysis

Simple Linear Regression Analysis between the external variable and independent variables

Simple linear regression analysis was used to predict the relationship between the external variable (Covid-19 severity) with each dependent

variable (decreased occupancy rate, decreased revenue, continued fixed cost, operational cost, and job cuts) separately.

Relationship between Covid-19 severity and decreased occupancy rate

Table 4: Model Summary (CS and OR)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.578[a]	0.334	0.331	0.466

a. Predictors: (Constant), Covid-19 severity

Table 5: ANOVA (CS and OR)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.262	1.000	21.262	97.880	.000[b]
	Residual	42.359	195.000	0.217		
	Total	63.621	196.000			

a. Dependent Variable: Decreased occupancy rate

b. Predictors: (Constant), Covid-19 severity

Table 6: Coefficients (CS and OR)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.694	0.301		5.633	0.000
	Covid-19 severity	0.650	0.066	0.578	9.893	0.000

a. Dependent Variable: Decreased occupancy rate

Table 4 shows the value of R square as 0.334, which means that 33.4% of the decreased occupancy rate was explained by the Covid-19 severity. As per Table 5, F value is 97.880 with a p-value (0.000) below 0.05. Therefore, the model can significantly explain the decreased occupancy rate. Based on Table 6, the equation for the decreased occupancy rate (OR) is formulated as follows:

OR = 1.694 + 0.65 CS

Relationship between Covid-19 severity and the decreased revenue

Table 7: Model Summary (CS and R)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.580[a]	0.337	0.333	0.474

a. Predictors: (Constant), Covid-19 severity

Table 8: ANOVA (CS and R)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.216	1.000	22.216	98.976	.000[b]
	Residual	43.769	195.000	0.225		
	Total	65.984	196.000			

a. Dependent Variable: Decreased revenue

b. Predictors: (Constant), Covid-19 severity

Table 9: Coefficients (CS and R)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.669	0.306		5.460	0.000
	Covid-19 severity	0.665	0.067	0.580	9.949	0.000

a. Dependent Variable: Decreased Revenue

Table 7 above shows the R square value at 0.337 which means that 33.7% of the decreased revenue is significant by the Covid-19 severity. As per Table 8, F value is 98.976 with the p-value of 0.000 which is below 0.05. Therefore, it is an indication that decreased revenue is well explained by using the independent variable. According to Table 9, the equation for the decreased revenue (R) is written as follows:

$$R = 1.669 + 0.665 \, CS$$

Relationship between Covid-19 severity and the continued fixed cost

Table 10: Model Summary (CS and FC)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.593[a]	0.352	0.348	0.467

a. Predictors: (Constant), Covid-19 severity

Table 11: ANOVA (CS and FC)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.100	1.000	23.100	105.765	0.000
	Residual	42.590	195.000	0.218		
	Total	65.690	196.000			

a. Dependent Variable: Continued fixed cost

b. Predictors: (Constant), Covid-19 severity

According to Table 10, the R square value is 0.352, which means that 35.2% of the variance in the dependent variable is explained by the Covid-

Table 12: Coefficients (CS and FC)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.476	0.302		4.894	0.000
	Covid-19 severity	0.678	0.066	0.593	10.284	0.000

a. Dependent Variable: Continued fixed cost

19 severity. As per Table 11, F value is 105.765 with a p-value of 0.000 which is below 0.05. Therefore, the regression model for Covid-19 severity has significantly explained the variation in continued fixed cost. Based on the table 12, the SLR equation for continued fixed cost (FC) is:

$$FC = 1.476 + 0.678 \, CS$$

Relationships between Covid-19 severity and the operational cost

Table 13: Model Summary (CS and OC)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.473[a]	0.224	0.220	0.502

a. Predictors: (Constant), Covid-19 severity

Table 14: ANOVA (CS and OC)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.199	1.000	14.199	56.000	.000[b]
	Residual	49.209	195.000	0.252		
	Total	63.408	196.000			

a. Dependent Variable: Operational cost
b. Predictors: (Constant), Covid-19 severity

Table 15: Coefficients (CS and OC)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.981	0.324		6.111	0.000
	Covid-19 severity	0.531	0.071	0.473	7.501	0.000

a. Dependent Variable: Operational cost

According to Table 13, the R square value is 0.224, which means that 22.4% of the variance in the dependent variable is explained by the Covid-19 severity. Table 14 shows the F value as 56.000 with the p-value of 0.000

which is below 0.05. Therefore, it indicates that the dependent variable, the operational cost, is predictable by the independent variable which is Covid-19 severity. According to Table 15, the SLR equation for the operational cost (OC) is written as below:

OC = 1.981 + 0.531 CS

Relationship between Covid-19 severity and job cuts

Table 16: Model Summary (CS and JC)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.256[a]	0.066	0.061	1.027

a. Predictors: (Constant), Covid-19 severity

Table 17: ANOVA (CS and JC)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.441	1.000	14.441	14	.000[b]
	Residual	205.527	195.000	1.054		
	Total	219.968	196.000			

a. Dependent Variable: Job cuts
b. Predictors: (Constant), Covid-19 severity

Table 18: Coefficients (CS and JC)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.828	0.662		1.249	0.213
	Covid-19 severity	0.536	0.145	0.256	3.702	0.000

a. Dependent Variable: Job cuts

According to Table 16, the R square value is 0.066, which means that 6.6% of the variance in the dependent variable is explained by the Covid-19 severity. Based on Table 17, the F value is 14 with the p-value of 0.000 which is below 0.05. Therefore, the job cuts can be explained by the independent variable which is Covid-19 severity. The SLR equation for job cuts (JC) is written below based on Table 18:

JC = 0.828 + 0.536 CS

Multiple Linear Regression Analysis between independent variables and mediating variable

Table 19: Model Summary (IV and MV)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.577[a]	0.333	0.316	0.421

a. Predictors: (Constant), decreased occupancy rate, decreased revenue, continued fixed cost, operational cost, job cuts

Table 20: ANOVA (IV and MV)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.933	5.000	3.387	19.000	.000[b]
	Residual	33.874	191.000	0.177		
	Total	50.807	196.000			

a. Dependent Variable: Intervention
b. Predictors: (Constant), decreased occupancy rate, decreased revenue, continued fixed cost, operational cost, job cuts

Table 21: Coefficients (IV and MV)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.877	0.271		6.9	0
	Decreased occupancy rate	-0.053	0.116	-0.059	-0	0.650
	Decrease revenue	0.070	0.113	0.080	0.6	0.530
	Continued fixed cost	0.072	0.105	0.082	0.7	0.490
	Operational cost	0.290	0.080	0.324	3.6	0
	Job cuts	0.139	0.031	0.290	4.5	0

a. Dependent Variable: intervention

According to Table 19, the R square value is 0.333, representing that 33.3% of the dependent variable (intervention) is explained by the five independent variables. As per Table 20, F value is 19.000 with the p-value of 0.000 which is below 0.05. Therefore, the intervention can be explained by the five independent variables. The MLR equation for intervention (IV) is written as below based on table 21:

$$IV = 1.877 - 0.053\ OR + 0.07R + 0.072FC + 0.29OC + 0.139JC$$

Simple Linear Regression Analysis between mediating variable and dependent variable

Table 22: Model Summary (MV and DV)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.511[a]	0.261	0.257	0.408

a. Predictors: (Constant), intervention

Table 23: ANOVA (MV and DV)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.452	1.000	11.452	69.000	.000[b]
	Residual	32.411	195.000	0.166		
	Total	43.863	196.000			

a. Dependent Variable: Hotel sustainability

b. Predictors: (Constant), intervention

Table 24: Coefficients (MV and DV)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.117	0.232		9.126	0.000
	Intervention	0.475	0.057	0.511	8.301	0.000

a. Dependent Variable: Hotel sustainability

According to Table 22, the R square value is 0.261, representing that 26.1% of the dependent variable is explained by the mediating variable. Based on table 23, the F value is 69.000 with the p-value of 0.000 which is below 0.05. Therefore, the hotel sustainability can be explained by the independent variable which is intervention. The SLR equation for hotel sustainability (HS) is written as below based on Table 24:

HS = 2.117 + 0.475 IV

Summary of Hypothesis Testing

Table 25: Summary of hypothesis testing

	Hypothesis	Result	Significant Level
H1	There is a positive relationship between severity of Covid-19 and the decrease in occupancy rate in hotel industry	Supported	0.000
H2	There is a positive relationship between the severity of Covid-19 and the decrease in revenue in the hotel industry	Supported	0.000
H3	There is a positive relationship between the severity of Covid-19 and the continuous fixed costs in the hotel industry	Supported	0.000
H4	There is a positive relationship between the severity of Covid-19 and the operational costs in the hotel industry	Supported	0.000
H5	There is a positive relationship between the severity of Covid-19 and the job cuts in the hotel industry	Supported	0.000
H6	There is a positive relationship between decreases in occupancy rate and intervention in the hotel industry	Not supported	0.650
H7	There is a positive relationship between the decrease in revenue and intervention in the hotel industry	Not supported	0.530

contd. table 25

	Hypothesis	Result	Significant Level
H8	There is a positive relationship between continuous fixed costs and intervention in the hotel industry	Not supported	0.490
H9	There is a positive relationship between operational costs and intervention in the hotel industry	Supported	0.000
H10	There is a positive relationship between job cuts and intervention in the hotel industry	Supported	0.000
H11	There is a positive relationship between intervention and sustainability in hotel industry	Supported	0.000

DISCUSSION AND CONCLUSION

Discussion of Major Findings

The simple linear regression analysis showed that the p-value was $0.000 < 0.05$ indicating that there is a positive relationship between decreased occupancy rate and Covid-19 severity. According to the research conducted by Napierała *et al.* (2020), the results proved that there were significant impacts on occupancy rate in Polish cities due to the Covid-19 pandemic. The positive relationship was supported by a research result conducted by Smart *et al.* (2021), indicating that Covid-19 had significant negative impacts on the mid-scale hotels' daily occupancy rate in the United States. According to ET Hospitality World (2020), the overall decrease in occupancy rate in Malaysia was due to Covid-19.

The simple linear regression analysis showed that the p-value was $0.000 < 0.05$ suggesting that there is a positive relationship between decreased revenue and Covid-19 severity. The study supports the relationship between decreased revenue and Covid-19 in the hotel industry by Wang (2021), F. Wu *et al.* (2020) and Herédia-Colaço and Rodrigues (2021). Besides, the study by Denizci Guillet and Chu (2021) also proved the decrease in revenue in the hotel industry is due to Covid-19.

The simple linear regression analyses showed that p-values for both continued fixed costs and operational costs were $0.000 < 0.05$. Thus, the data support a positive relationship between continued fixed costs, operational costs and Covid-19 severity. A study by Okumus and Karamustafa (2005) proved that the hotel industry's negative impact, including the fixed and variable cost, increased due to a crisis. The study of Moore (2019) showed that the most significant effect of the electricity crisis in Accra is increased operational costs. K. Chan (2008) research shows that energy consumption is undoubtedly an essential cost in hotel operational costs. Tesse Fox (2020) and Lopez and Bianchi (2020) proved that the relationship between the costs and Covid-19 severity since the additional cost of hygiene increased the operational cost.

The simple linear regression analysis showed that the p-value was 0.000 < 0.05 between job cuts and Covid-19 severity. The survey results show that the hotel plans to lay off employees, but most of them are not really implemented. The study by Vo-Thanh *et al.* (2020) and Niesen *et al.* (2018) showed that reducing employee salaries or cutting down the number of employees will decrease employees' job quality and induce employees' job insecurity. Although the hotel is facing huge losses, they are trying to retain employees through various methods such as reduce employees' salaries, giving employees unpaid leave, and implement direct pay cuts. Meyer *et al.* (2021) confirmed that the firms have cut the wages due to the disruption of Covid-19.

The simple linear regression analysis showed a negative relationship since the p-value was 0.65 > 0.05 between decreased occupancy rate and intervention. The reasons might be that the decreased occupancy rate has a close relationship with travel restrictions (Jamaluddin, 2021). According to Carvalho (2021) and Trisha and Nordin (2021), the hotel occupancy rate has increased since the government allows tourism travel between Restricted Movement Control Order (RMCO) States. However, the latest announcement by the government has hit the hotel industry and cause many hotels to suspend temporarily since the travel permission between States has been temporarily suspended (Malek, 2021). The intervention will not increase the occupancy rate due to the current pandemic situation.

The simple linear regression analysis showed insignificant relationship since p-value was 0.53 > 0.05 between decreased revenue and intervention. The reasons may be the hoteliers believes that the best intervention is to do nothing since the hotel industry has a close relationship with the travel restrictions (Jamaluddin, 2021). For medium-sized and budget service hotels, suspending operations may be more efficient to slow down revenue loss than taking interventions such as food delivery. Chin (2021) stated that the hotel industry faced a huge revenue loss due to the Covid-19 pandemic. The hotel industry will not survive if travel restrictions are still implemented on domestic borders (Choong, 2021; Kaur, 2021).

The simple linear regression analysis showed negative relationship between the continued fixed cost and intervention since the result of p-value was 0.49 > 0.05. The reasons might be the fixed costs will not change and there is low profit in the hotel industry since the pandemic and travel restrictions still ongoing. According to the study by Bormans *et al.* (2021), although a company temporarily suspends its operation, the fixed costs is still ongoing. Many hoteliers are facing huge fixed costs (Verbeke, 2021). As stated by Qin *et al.* (2020), hoteliers must ensure that the companies have enough cash to meet their fixed costs. However, the hotel industry was

highly dependent on the Covid-19 situation and travel restriction. Since the travel restriction is still ongoing, it is hard for the hoteliers to generate revenue to cover the costs (Kathy, 2021).

There is a positive relationship between operational costs and intervention since the p-value was 0.000 < 0.05. Under the pandemic situation, hygiene and cleanliness are vital to the continued operation. According to the study by Wood (2020), Farmaki *et al.* (2020) and Dietz *et al.* (2020), properties are required to use specified cleaning products to prevent the spread of coronavirus during the cleaning process since the pandemic has highlighted the importance of cleanliness. Therefore, the prevention of Covid-19 has increased the operational costs since they need to implement new cleaning requirements to comply with the SOPs (Kostuch Media Ltd., 2020).

According to the result, there is a positive relationship between job cuts and intervention since p-value was 0.000 < 0.05. The reasons might be that some of the hotels adopt food to take away or delivery service during the pandemic period. According to the study by Norris *et al.* (2021), the shift in operations towards taking away and delivery expansion is the desire to keep employees working. Based on Heymann (2020), the hotel adopts an adaptive approach such as cross-use staff to perform multiple job responsibilities in a shift to save some labor costs. In addition, the hotel has adopted some survival methods, such as setting up hawker stalls to earn some profit and tried not to lay off employees (Yeap, 2021).

The simple linear regression analysis showed a significant positive relationship since the p-value was 0.000 < 0.05 between intervention and sustainability. According to Jain (2020), the need for future-oriented business development and resilience is also highlighted when discussing the hotel's sustainable recovery. Businesses need to adopt and establish some strategies for building long-term sustainability to survive (Pongsakornrungsilp *et al.*, 2021). Based on the result, the hoteliers agreed that by adopting some approaches during the pandemic period can increase the hotel's sustainability. However, most of them have no confidence that they can survive under the ongoing MCO and the pandemic period because the hotel's survival is highly dependent on the pandemic control, which will allow relaxation of travel restrictions (Malaysian Association of Hotels, 2021).

Implications of the Study

Theoretical Implication

This research contributes to future researchers who conduct similar research topics. The impact of Covid-19 on the hotel industry and the recovery

strategies to sustain the hotel industry are analysed in this study by using the contingency theory. Five variables of threats and intervention are added into the research model to provide an in-depth understanding in this study since the study aims to analyse the impact of Covid-19 and the recovery strategies to sustain the hotel industry. This study will support future research relating to disease or crisis in the hotel industry and contingency theory.

Practical Implication

As the pandemic continues to spread, various industries and companies implement intervention and prepare to restore their business in the future. This research can contribute and give valuable information to hoteliers. Besides, this research also helps hoteliers adopt effective recovery strategies in the hotel industry to take precautions in advance. The hoteliers should build strong crisis awareness and monitor the firm's management to ensure hotel sustainability.

Limitations of the study

The first limitation of the study is the contact method of the hotel industry. Some hotel industry does not provide or update their contact emails on the social media platform, resulting in some of the surveys unable to be sent to these hotels. Besides, some of the respondents who filled the questionnaires were with other job titles that do not play a role in the hotel's decision-making. Thus, this may affect the outcome of the result on the hotel sustainability as they just represent the hotel to fill up the survey. Another limitation of the study is the time constraints. Due to the unclear contact method of the hotels due to pandemic, it needs more time to find the hotel contact to send out the questionnaire. Besides, due to the MCO 3.0 implemented by the government to the whole country from 12 May to 7 June, most of the hotels have temporarily suspended their operation. Therefore, it is pretty hard to get responds from them in a short period of time. It is quite a rush for the researchers to complete the whole research in time in the Covid-19 pandemic situation.

Recommendation of the study

Future research can consider covering hotels in other ASEAN countries, not limited to Malaysia. This will allow a more accurate study on the impact of Covid-19 or other disease outbreaks on the hotel industry and understand the different strategies that other countries adopt to sustain their hotels.

CONCLUSION

The objective of this study was focused on the impact of the Covid-19 pandemic pose to the hotel industry, the strategies that hoteliers implemented to minimize the threats brought by the pandemic and whether these strategies affect hotel sustainability in Malaysia. Most of the results showed that there was a significant relationship between the variables except for three independent variables and showed that the hotel industry was highly reliant on the pandemic situation and the policy implemented by the government. The survey result was recorded until 7th June and the researcher has received notices from some of the hotels stated that they are temporarily suspended during MCO 3.0 period. Most of the hoteliers hope that the government can release more solutions to avoid more hotels facing the trend of bankruptcy. This study was not an ideal performance due to some limitations. Therefore, the researcher hoped the recommendations would help future researchers better understand this subject.

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