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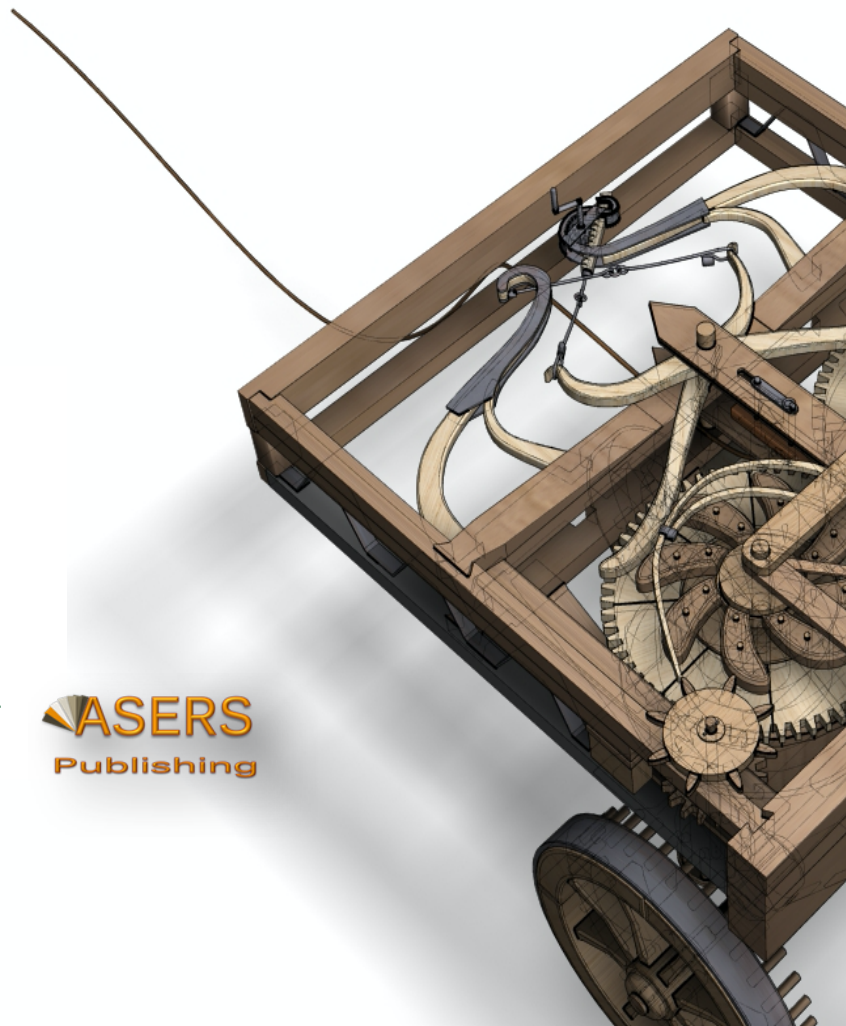
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Impact of COVID-19 Pandemic on Redang and Perhentian Island Communities Behavioral Strategy

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Abstract:

Pandemic COVID-19 did not only affect the tourism activities and income of islands in Negeri Terengganu but their behaviours after pandemic also changed especially B40 communities in Redang and Perhentian Islands. This study is to determine the impact of COVID-19 pandemic shock on Redang and Perhentian Island communities' behavioral strategy. The regression analysis was performed into 4 models. Model 1i and 1ii were conducted to determine the impact of COVID-19 pandemic shock on communities' behavioral strategy in Redang and Perhentian Island, respectively. Meanwhile, model 2i and 2ii were to determine the impact of pandemic shock's components on communities' behavioral strategy. The findings showed that 25.2% and 39.3% behavioral strategy are explained by pandemic shock in Redang and Perhentian Island, respectively. Besides, 34.3% and 47.8% of behavioral strategy respondents in Redang and Perhentian Island are explained by economy shock, health shock, politic shock and risk management, respectively. Furthermore, the economic shock is dominant factor affecting the behavioural strategy among respondents in Redang Island to overcome problem regarding expenditure and spiritual practice, followed by risk management and health shock. Whereas economic shock is also dominant factor affecting the behavioural strategy among respondents in Perhentian Island, followed by health shock, risk management and environmental shock.

Keywords: COVID-19; pandemic shock; behavioral strategy; island communities.

JEL Classification: D91; Z19; G32; C19.

Introduction

COVID-19 or 2019 novel coronavirus infection has been a worldwide big issues since it recorded over than 100,000 deaths until October 2020. Malaysia also affected by COVID-19 pandemic and recorded 249 deaths until 31 October 2020. Since there is no specific treatment for COVID-19, numerous clinical trials are being conducted to find vaccines for COVID-19 worldwide (Elengoe 2020). According to the Department of Statistic Malaysia (2020) the unemployment rate increases drastically from Mac to September 2020 with the highest increase of 5.3% due to movement control order (MCO). Besides, the tourism activities in Malaysia were also impacted due to the cancellation of Visit Malaysia Year 2020 Campaign and closing of numerous hotels (Abdul Razak 2020). The cancellation around 170,084 hotel room bookings within 2 months of MCO led to a loss of revenue approximately to RM68,190,364 (Malaysian Association of Hotels, 2020). As result in, it brought to the decrease of the number of tourists due to cross border travel restrictions and inter-state travel ban (Foo, e al, 2020; Chan & King, 2020). Prior to COVID-19, the international tourism expenditure contributes more than 50.0 per cent compared to national tourism sector (Department of Statistics Malaysia, 2020).

Furthermore, it also affected the losing of jobs or unpaid leave among staff since the minimization of size of employees cut the budget and there were also the companies or hotels/resorts/chalets had to be entirely closed during MCO. In consequence, it affected their income of them since majority of them depended on the tourism activities including the community in islands in Terengganu especially group of low income or B40. According to Mahdzan, *et al.* (2020), overall, it implied the negative impact towards financial well-being among communities especially households in Malaysia. Simultaneously, it also affected their expenditures. Besides, due to minimizing exposure to the covid-19 virus, many had to work from home (WFH). Even though it assisted the male, older, high-educated, and high-paid employees but it tended to exacerbate pre-existing inequalities in the labour market if it will not be adequately regulated (Bonacini & Scicchitano 2020).

According to Rashid *et al.* (2018), the different expenditure patterns reflect how people are surviving in the current economic climate. As a result, a big change had to be made in their lives in adapting to the new norms especially their strategies, practices and behaviours transformation. Besides, Khan and Hashim (2020) claimed that the emphasis in tourism and hospitality industry specially to study, teach and engage with current tourism-related concepts and theories to rebuild and transform the tourism and hospitality industry especially adapting the new normal. Since the human behaviour changes due to the COVID-19 pandemic is important elements (Robert BĘBEN *et al.* 2021), thus, it is important to know to what extent the COVID-19 pandemic affected behavioral strategy. Therefore, this study to identify the impact of COVID-19 pandemic on Redang and Perhentian Island communities' behavioral strategy.

1. Literature Review

Consumers could have behaved differently in emergencies (Wang *et al.* 2020). However, it was subjected to the individual aim whether to avoid illness, avoid anxiety or to live by important life values. Moreover, the changes led to positive or negative impact depending on themselves how to control the problems (Yau *et al.* 2020). The exposure to a negative economic shock led to the high risk of stress, anxiety, and depression (Codagnone *et al.* 2020). An unusual consumer behaviour during pandemic, was reported globally (Wolf *et al.* 2020). According to Ozili (2020), social anxiety was the most important consequence among communities. Szymkowiak (2020) claimed that the only way to reduce the negative effects of pandemic is by taking precautions. Based on Liu *et. al* (2020) findings, most respondents in China had positively changed by complying standard operating procedure (SOP). Furthermore, SOP more complied the respondents without depression compared to other respondents with depression. Besides, Papageorge *et al.* (2020) stated that self-protection is significantly affected by income, work arrangements and beliefs of effectiveness of social distancing. Therefore, Sheth (2020) stated that a new norm with advanced technology, demographics change and innovative alternatives is important to cope with blurring the work, leisure, and education boundaries. As specified by Sheth (2020), people tend to use new technology during long term of staying home to facilitate work, study and consumption in a more convenient manner.

Additionally, temporal social policies during pandemic also affecting the social and economic well-being of African (Ozili 2020). The Government policy on consumption was very important to shape future consumption and avoid the old habits. It is important to community to transform to their new normal life or otherwise they inclined to death. New habits such as online purchasing, teaching and working or modified habit such as wearing mask and hygiene concerned were among behavioural changes during COVID-19 (Sheth 2020). However, the behaviour changes were subject to their knowledge. As stated in Jose *et al.* (2020) study they found a significant association between knowledge and behavioural change. However, consistent messaging from health authorities

and the government was important to improve levels of knowledge, attitudes and practices among communities (Azlan *et al.* 2020). Governments should also insist communities to be their monitors (eyes and ears) keeping informal surveillance on those not complying with the SOP. It is important to ensure that the risk of COVID-19 infection can be reduced (Ling and Ho 2020). Those with low health literacy tend to be less worried about COVID-19 because they were more confident in the federal government response (Wolf *et al.* 2020).

Laato *et al.* (2020) study found a strong relationship between intention to self-isolate and make unusual purchases. It proved that consumer behavior is associated with anticipated time spent in self-isolation. Therefore, unusual behaviour such as panic buying would be handled by the high self-efficacy. Besides, according to Hashem (2020) and Sharma & Jhamb (2020), online purchasing and e-payment were alternatives instead of traditional purchasing during the pandemic.

Murakami, Shimizutani and Yamada (2020) claimed that the household spending per capita will decrease by 1–2% in one year due to the pandemic in Philippines. Food expenditure showed the highest drop of 2–3%. However, lifestyle behaviors and changes were related to subjective well-being (Hu *et al.* 2020). Therefore, it was important to spend wisely complying the shari'ah Islam. Islam encouraged to spend moderately and control or restrain our excessive lusts and expenses. Furthermore, spending based on Shari'ah would give us the additional convenience in order to anticipate the unexpected things or to support future generations (Rashid *et al.* 2018).

1. Methodology

This study has been conducted on 297 respondents in Redang Island and 325 respondents in Perhentian Island using the simple random sampling. However, due to weather constraint and transmission of covid-19 outbreak only 140 and 157 respondents managed to be collected in Redang and Perhentian Island, respectively. Data collection encompass interview by face to face or respondents answered the questionnaires by themselves while being monitored by the enumerators. Next, data was analyzed using SPSS software. Prior to inferential analysis, data screening namely normality test was employed to test whether the data are normally distributed and parametric or otherwise. Next, after data normality achieved, the inferential analysis which are simple and multiple linear regression were performed to determine the impact of COVID-19 pandemic shock on behavioral strategy among community in Redang and Perhentian Island. There are 4 models were conducted which are 1i, 1ii, 2i and 2ii. Model 1i and 1ii are the Redang and Perhentian Island respondents' behavioural strategy (BS) regressed by pandemic shock (S), respectively. These models are expressed as follows:

$$BS_i = \beta_0 + \beta_1 S_i \text{ (Model 1i)} \quad 1.1$$

$$BS_{ii} = \beta_0 + \beta_1 S_{ii} \text{ (Model 1ii)} \quad 1.2$$

Meanwhile, in model 2i and 2ii, behavioural strategy among respondents Redang and Perhentian Island were regressed by economic shock (ES), health shock (HS), environmental shock (EN), political shock (PS) and risk management (RM).

$$BS_i = \beta_0 + \beta_2 ES_i + \beta_3 HS_i + \beta_4 EN_i + \beta_5 PS_i + \beta_6 RM_i \text{ (Model 2i)} \quad 1.3$$

$$BS_{ii} = \beta_0 + \beta_2 ES_{ii} + \beta_3 HS_{ii} + \beta_4 EN_{ii} + \beta_5 PS_{ii} + \beta_6 RM_{ii} \text{ (Model 2ii)} \quad 1.4$$

Denotes β_0 = intercept, β_1 , β_2 , β_3 , β_4 , β_5 and β_6 were coefficient of economic shock, health shock, environmental shock, political shock and risk management, respectively.

2. Findings

Unstandardized residual regression normality has been conducted on these four models. According to Table 1, all these models achieved the normal distribution with the result of statistic of Kolmogorov-Sminov and Shapiro-Wilk are not significant ($p > 0.05$) after deleting the outliers. Besides, it is line with the statistics test of Skewness and Kurtosis implying in the range of -1 and +1. Therefore, after the normality attained, the data are reduced to 124 and 154 respondents in Redang and Perhentian Island, respectively.

Table 2 shows the demographic profile among respondents of Redang and Perhentian Island, respectively. Majority of respondents of Redang and Perhentian Island are males which is 73.4% and 68.4%. Average of respondents in Redang Island show the age 21 to 61 years and above which are 15.3% to 22.6%. Meanwhile, most of respondents (22.4% to 27.0%) of Perhentian Island aged from 21 to 50 years old. Besides, 93.5% respondents in Redang Island are from Terengganu and the remaining are others states such as Kelantan and Selangor. Furthermore, over 82.9% of respondents in Perhentian island are from Terengganu and remaining are others states such as Johor, Kedah, Kelantan, Perak and Selangor. The majority of respondents in Redang

and Perhentian Island are married with percentages of 73.4% and 68.4%, respectively. Besides, more than 73% respondents have the level of SPM and below as their highest education for both Islands.

Table 1. Normality test

Model	Unstandardized Residual	Kolmogorov-Smirnov ^a	Shapiro-Wilk	Skewness	Kurtosis
1 ⁱ	Statistic p-value	0.042 0.200*	0.985 0.180*	-0.320	-0.325
1 ⁱⁱ	Statistic p-value	0.061 0.200*	0.980 0.057*	-0.136	-0.551
2 ⁱ	Statistic p-value	0.071 0.061*	0.061 0.053*	-0.130	-0.791
2 ⁱⁱ	Statistic p-value	0.062 0.200*	0.989 0.300*	0.040	-0.662

Notes: The normality of unstandardized residual regression involved dependent variable (Pandemic Shock) and independent variables (Economy shock, health shock, environmental shock, political shock and risk management).

* This is a lower bound of the true significance

^a Lilliefors Significance Correction

ⁱ and ⁱⁱ is for Redang Island and Perhentian Island, respectively.

The majority of respondents of Redang Island have an income of RM501 to RM1000 (45.2%) while the average of respondents in Perhentian Island which are 75.4% of them have the income between RM501 and RM2000. Additionally, most of respondents have 1 to 3 for the number of total dependents (including children, spouse, parents, siblings/relatives and others) which are 50.8% in Redang Island and 73.0% in Perhentian Island.

Table 2. Demographic profile

Island	Redang		Perhentian	
Demographic profile	Frequency (N=124)	Percentage	Frequency (N=152)	Percentage
<i>Gender</i>				
Male	91	73.4	104	68.4
Female	33	26.6	48	31.6
<i>Age</i>				
≤20	5	4.0	12	7.9
21-30	19	15.3	36	23.7
31-40	20	16.1	41	27.0
41-50	28	22.6	34	22.4
51-60	22	17.7	14	9.2
60+	28	22.6	10	6.6
Not specified	2	1.6	5	3.3
<i>Place of Birth</i>				
Terengganu	116	93.5	126	82.9
Others	8	6.5	26	17.1
<i>Status of marriage</i>				
Single	27	21.8	36	23.7
Married	91	73.4	104	68.4
Divorced/widowed	6	4.8	12	7.9
<i>Educational level</i>				
None	14	11.3	11	7.2
PMR/SRP and below	55	44.4	44	28.9
SPM	41	33.1	68	44.7
STPM/Sijil	8	6.5	19	12.5
kemahiran/Diploma				
Degree and above	6	4.8	10	6.6
<i>Level of income</i>				
≤RM500	20	16.1	11	7.2
RM501-- RM1000	56	45.2	56	36.8

Island	Redang		Perhentian	
Demographic profile	Frequency (N=124)	Percentage	Frequency (N=152)	Percentage
RM1001-RM2000	29	23.4	59	38.8
RM2001-RM3000	6	4.8	13	8.6
RM3001-RM4000	2	1.6	2	1.3
RM4001-RM5000	0	0.0	5	3.3
RM5000+	0	0.0	2	1.3
None	11	8.9	4	2.6
<i>Total of dependents</i>				
1- 3	63	50.8	111	73.0
4- 6	29	23.4	21	13.8
7- 9	8	6.5	6	3.9
10+	2	1.6	1	0.7
None	22	17.7	13	8.6

Note: N represents the total number of respondents

The status and sector of occupation are described in Table 3. Majority of respondents (38.7%) in Redang Islands worked before MCO and job loss after MCO while 25.0% and 21.8% of them working before and during MCO (still working and have full income) as well as state in other conditions, respectively. Besides, in Perhentian Islands, 50.0% respondents worked before MCO and job loss after MCO while 32.9% and 11.8% respondents worked before and during MCO (still working and have full income) as well as in other conditions, respectively. Additionally, majority of respondents are under self-employed (44.4%) and private sectors (30.6%) for Redang Island. Meanwhile, 40.8% and 43.4% respondents in Perhentian Island worked under self-employed and private sectors, respectively.

Table 3. Occupation

Island	Redang		Perhentian	
Occupation	Frequency (N=124)	Percentage	Frequency (N=152)	Percentage
<i>Status of occupation</i>				
Working before and during MCO (Still working and have full income)	31	25.0	76	50.0
Working before MCO and jobless after MCO	48	38.7	50	32.9
Jobless during and after MCO	5	4.0	3	2.0
Others	27	21.8	18	11.8
Unemployed	13	10.5	5	3.3
<i>Sector</i>				
Government agency	11	8.9	11	7.2
Private	38	30.6	62	40.8
Self-employed	55	44.4	66	43.4
Others	9	7.2	8	5.3
None	11	8.9	5	3.3

Note: N represents the total number of respondents

It could be seen the change of mean of monthly expenditure based on types of expenditure in Table 4. The food and online purchase expenditure increase among respondents Redang Island while decrease among respondents Redang Island before and during MCO. Furthermore, the food and online purchase expenditure decrease in Redang Island but increase in Perhentian Island during and after MCO. However, the food expenditure and online purchase decline for both Islands before and during MCO, respectively. Besides, the medicine and charity/almsgiving expenditure decrease among respondents Redang Island while increase among respondents Redang Island before and during MCO. Moreover, the medicine and charity/almsgiving expenditure increase in Redang Island but decrease in Perhentian Island during and after MCO. Nevertheless, the medicine and charity/almsgiving expenditure decline for both Islands before and during MCO, respectively. Despite that, expenditure pay debt and liability, saving, investment, entertainment, public transport, eating outside and contribution to parents show the same situation for both island in which it declined before and during MCO as well

as before and after MCO, respectively. Nonetheless, all these expenditures increase during and after MCO in both islands.

There was an increase of electricity bill before and during MCO, during and after as well as MCO before and after MCO in Redang Island. Whereas electricity bill of respondents in Perhentian Island increase before and during MCO, as well as before and after MCO while it decreases during and after MCO. Telecommunication bill and Petrol/ Diesel spending for both islands decrease before and during MCO while increase during and after MCO. However, the spending for Telecommunication bill increase before and after MCO in Redang Island and decrease before and after MCO in Perhentian Island. Furthermore, Petrol/ Diesel decreases before and after MCO in Redang Island and increase before and after MCO in Perhentian Island.

Table 4. Change of mean of monthly expenditure

Types of expenditure	Redang			Perhentian		
	Mean (RM)	SD	Change	Mean (RM)	SD	Change
Food						
Before MCO	414.29	269.199		753.57	629.095	
During MCO	465.36	749.222	↑ ↓	612.45	652.202	↓ ↓
After MCO	384.87	276.397	↓ ↓	723.53	617.135	↑ ↓
Medicine						
Before MCO	373.00	644.305		180.17	281.108	
During MCO	170.00	305.059	↓ ↓	182.83	411.397	↑ ↓
After MCO	271.00	382.425	↑ ↓	154.17	284.956	↓ ↓
Pay debt and liability						
Before MCO	673.13	1428.272		786.52	1149.220	
During MCO	103.12	165.800	↓ ↓	471.67	998.837	↓ ↓
After MCO	251.25	205.985	↑ ↓	979.55	1375.063	↑ ↓
Saving						
Before MCO	266.54	308.142		796.67	1313.001	
During MCO	117.31	291.528	↓ ↓	126.67	414.102	↓ ↓
After MCO	180.77	293.284	↑ ↓	583.33	1224.491	↑ ↓
Investment						
Before MCO	391.50	751.436		445.00	580.522	
During MCO	270.00	786.059	↓ ↓	267.00	618.601	↓ ↓
After MCO	354.00	767.741	↑ ↓	347.00	610.356	↑ ↓
Entertainment (hobby and sport)						
Before MCO	195.63	332.001		145.38	128.881	
During MCO	25.00	46.291	↓ ↓	12.31	31.132	↓ ↓
After MCO	56.25	77.632	↑ ↓	70.77	68.976	↑ ↓
Electricity bill						
Before MCO	101.17	87.879		146.20	150.390	
During MCO	105.33	139.610	↑ ↑	183.75	273.544	↑ ↑
After MCO	177.88	198.725	↑ ↑	149.33	162.381	↓ ↑
Water bill						
Before MCO	38.14	30.699		52.44	32.352	
During MCO	38.29	61.022	↑ ↑	53.17	70.467	↑ ↑
After MCO	59.22	69.087	↑ ↑	57.53	66.590	↑ ↑
Telecommunication bill (telephone and internet)						
Before MCO	53.49	56.845		65.52	37.669	
During MCO	49.44	58.205	↓ ↑	62.87	37.976	↑ ↓
After MCO	55.91	66.277	↑ ↑	64.30	37.400	↑ ↓
Petrol/ Diesel						
Before MCO	97.52	135.644		732.30	842.886	
During MCO	49.31	57.146	↓ ↓	336.09	793.966	↓ ↑
After MCO	85.94	99.184	↑ ↓	773.69	1051.682	↑ ↑
Public transport						
Before MCO	34.17	34.412		224.62	468.395	
During MCO	26.67	40.825	↓ ↓	84.36	118.850	↑ ↓

Types of expenditure	Redang			Perhentian		
	Mean (RM)	SD	Change	Mean (RM)	SD	Change
<i>After MCO</i>	31.67	36.560		211.79	473.275	
Online purchase						
<i>Before MCO</i>	87.08	108.647		222.00	234.310	
<i>During MCO</i>	196.67	161.801	↑ ↓	12.50	34.157	↑ ↓
<i>After MCO</i>	70.42	97.109	↓	128.13	224.328	↑
Eating outside (including online order)						
<i>Before MCO</i>	192.81	275.427		251.03	312.351	
<i>During MCO</i>	71.56	174.812	↓ ↓	157.65	402.267	↓ ↓
<i>After MCO</i>	91.87	175.584	↑	219.41	323.203	↑
Charity/almmsgiving						
<i>Before MCO</i>	36.73	25.727		64.13	77.264	
<i>During MCO</i>	20.19	21.283	↓ ↓	76.74	155.531	↑ ↓
<i>After MCO</i>	33.85	26.956	↑	43.70	67.187	↓
Contribution to parents						
<i>Before MCO</i>	211.59	230.631		297.12	223.916	
<i>During MCO</i>	98.78	98.417	↓ ↓	181.73	212.139	↓ ↓
<i>After MCO</i>	161.59	131.351	↑	251.92	222.940	↑

Notes: ↑ and ↓ denotes mean expenditure increase and decrease, respectively.

Model 1i and 1ii show the R square of 0.252 and 0.393, respectively. It shows that 25.2 percent of behavioral strategy among respondents in Redang Island can be explained by pandemic shock while 74.8 percent of shock due the pandemic might be explained by other variables. Whereas it also indicates that 39.3 percent of behavioral strategy among respondents in Perhentian Island can be explained pandemic shock while the 61.7 percent of shock due the pandemic might be explained by other variables. From the model 1i, it is obtained that the variable of pandemic shock is significant and positively affecting the behavioral strategy with $\beta=0.350$. It shows that the 1 unit increase in pandemic shock will increase 0.350 unit of the behavioral strategy among respondents in Redang Island. Besides, the pandemic shock is significant and positively affecting the behavioral strategy with $\beta=0.936$ (Model 1ii). It clarifies that the increase in 1 unit of pandemic shock will increase 0.936 units of behavioral strategy among respondents in Perhentian Island.

Table 5. Effect of pandemic shock towards behavioral strategy

Variables	Model				
		1i(Redang)		2i(Perhentian)	
		β	SE ₁	β	SE ₂
^{1,2} Constant	β_0	2.266 (16.024)**	0.141	1.024 (3.873)**	0.264
¹ Pandemic shock	β_1	0.350 (6.419)**	0.055	0.936 (9.860)**	0.095
<i>R Square</i>		0.252		0.393	
<i>ANOVA Model</i>	<i>F-value</i>	41.203**		97.226**	
<i>DW</i>		1.943		1.694	
<i>VIF</i>		< 5		< 5	

Notes: Dependent variable is Behavioural strategy; DW represents Durbin Watson and VIF represents variance inflation factor. The value in parentheses represent t-value.

* and ** Significant at 0.05 and 0.01 level, respectively

¹ and ² are constant for model 1ⁱ and 2ⁱ, respectively

Table 5 describes the result of regression analysis of economic, health, environmental, politic shock and risk management towards behavioral strategy. The model 2i and 2ii show R square of 0.343 and 0.478, respectively. Therefore, it shows that 34.3% and 47.8% of behavioral strategy among respondent Redang and Perhentian Island can be explained by economic, health, environmental, politic shock and risk management while 65.7% and 52.2% of behavioral strategy might be explained by other variables, respectively.

In model 2i, the economic shock shows the highest beta of $\beta_2=0.173$, followed by risk management ($\beta_6=0.085$) and health shock ($\beta_3=0.074$). Consequently, it implies that the economic shock is dominant factor affecting behavioral strategy. It indicates that 1 unit increase in economic shock, risk management and health shock will increase 0.173, 0.085 and 0.074 unit of behavioral strategy, respectively. However, in model 2ii,

economy shock shows the positive result affecting behavioral strategy with $\beta_2=0.404$ followed by health shock ($\beta_3=0.215$), risk management ($\beta_6=0.167$) and environmental shock ($\beta_4=0.122$). Thus, it can be concluded that 1 unit increase in economy shock, health shock, risk management and environmental shock will increase 0.404, 0.215, 0.167 and 0.122 unit of behavioral strategy, respectively.

Table 6. Effect of pandemic shock's components towards behavioral strategies

Variables		Model			
		1 ⁱⁱ (Redang)		2 ⁱⁱ (Perhentian)	
		β	SE ₁	β	SE ₂
^{3,4} Constant	β_0	2.148 (12.816)**	0.168	0.806 (2.687)**	0.300
⁴ Economy shock	β_2	0.173 (4.483)**	0.039	0.404 (5.626)**	0.072
⁴ Health shock	β_3	0.074 (2.384)*	0.032	0.215 (2.844)**	0.075
⁴ Environmental shock	β_4	0.015 (0.463)	0.033	0.122 (1.997)*	0.061
⁴ Political shock	β_5	-0.052 (-0.997)	0.052	-0.024 (-0.327)	0.744
⁴ Risk management	β_6	0.083 (2.295)*	0.036	0.167 (2.228)*	0.073
<i>R Square</i>		0.343		0.478	
<i>ANOVA Model</i>	<i>F-value</i>	12.339**		26.753**	
<i>DW</i>		2.060		1.723	
<i>VIF</i>		< 5		< 5	

Notes: Dependent variable is Behavioural strategy; DW represents Durbin Watson and VIF represents variance inflation factor. The value in parentheses represent t-value.

* and ** Significant at 0.05 and 0.01 level, respectively

¹ and ² are independent variables for model 1 and 2, respectively

3. Discussion

Due to pandemic shock, respondents in Redang and Perhentian Island faced a change of their expenditure. The food expenditure and online purchase in Redang Island increased during MCO compared to before and after MCO. It can be related to the panic buying behaviour during MCO and in line with finding of Kaur *et al.* (2020) showed Malaysian fear was a vital variable in purchasing behavior during the MCO's first phase. Based on Loxton *et al.* (2020), it was occurred due to consumers shift their behaviour to focus on "panic buying" of non-durable goods leading to the basic needs are prioritised according to distress or anxiety. This change contradicts to Perhentian Island that the food expenditure and online purchase decline during MCO compared to before and after MCO. It shows that since respondents in Redang Island spent more during, they had to reduce their spending after MCO. It is due to the most Perhentian Island communities' income depend on tourism activities such as homestay, chalet and resort compared to Redang Island also depend on other activities such as grocery store and restaurant. Since respondents in Perhentian Island depend on tourism activities, they had to spend wisely on food and online purchase during MCO. Besides, Jung *et al.* (2020) clarified that majority consumers limited to use traditional shopping and switched to e-commerce to prevent from exposing to the disease. It led to a significant drop in expenditure. However, after MCO the tourism activities operated again, consequently, they can increase their expenditure on food and online purchase. Besides, the expenditure for medicine in Redang Island reduce while charity/almsgiving slightly decrease and almost have no difference during MCO. However, it recovered after MCO. Whereas there is slight increase medicine and charity/almsgiving in Perhentian Island and almost have no difference during MCO. It was reduced after MCO compared to before and during MCO.

Furthermore, expenditure for paying debt and liability, saving, investment, entertainment, public transport, eating outside and contribution to parents indicates the same situation for Redang and Perhentian Island in which it decreases during MCO. It recovered after MCO due to permission of new normal business operation. Nevertheless, show higher electricity and water bill consumption after MCO in Redang Island while there is a decrease in telecommunication bill during MCO. Meanwhile there is a slight change in water and telecommunication bill in Perhentian Island while electricity bill was declined during MCO. It is in line with household savings and consumption drop significantly and the average recovery time for individuals is almost one year (Martin *et al.* 2020).

From the findings, R square of model 1ii ($R^2=0.252$) value is greater than model 1i ($R^2=0.393$) indicating that around 14.1% behavioral strategy among respondents in Perhentian Island greater than Redang Island can be explained by pandemic shock. Besides, the beta coefficient of pandemic shock in model 1ii ($\beta_1=0.936$) is also greater than 1i ($\beta=0.350$). It implies that the pandemic shock more affects the Perhentian Island respondents'

behavioral strategy compared to Redang Islands'. It declares that more significant impact of pandemic shock on Perhentian Island respondents' behavioral strategy compared to Redang Islands'. It clarifies that the increase in 1 unit of pandemic shock will increase 0.936 units of Perhentian Island respondents' behavioral strategy compared to 0.350 for Redang Islands'.

The model 2ii shows an R square of 0.478 that is greater than model 2i ($R^2 = 0.343$). It shows that around 13.5% behavioral strategy among respondents in Perhentian Island greater than Redang Island can be explained by economic, health, environmental, politic shock and risk management. It clarifies that economic, health, environmental, politic shock and risk management more influence Perhentian Island respondents' behavioral strategy compared to Redang Islands'. It explains that respondents in Perhentian Island were more affected by COVID-19 pandemic shock compared to Redang Islands'. Redang Island respondents' behavioral strategy are influenced by economic, health and risk management while Perhentian Island respondents' behavioral strategy are influenced by economic, health, environmental and risk management. It could be seen that the important factor affecting Redang and Perhentian Island respondents' behavioral strategy is economic shock, respectively. While the second main factor affects respondents' behavioral strategy is risk management in Redang and health shock in Perhentian Island which are opposite for third factor. However, one of significant difference comparing on both model is Perhentian Island respondents' behavioral strategy is affected by environmental health such as having a psychological disorder, being under stress with family members and feeling stressed when faced with an emergency or MCO situation.

Conclusion and Recommendation

Since COVID-19 pandemic, tourism activities were affected due to the cancellation of Visit Malaysia Year 2020 Campaign and closing down of numerous hotels as well as led to a loss of revenue. The strategy of minimization of size of employees brought to the affected the income of communities especially those depended on the tourism activities including islands in Terengganu especially group of low income or B40. Consequently, it also affected the behaviour of community due to the pandemic in handling their behaviour to overcome their expenditure, health, safety and spiritual in adapting the new normal situation during pandemic. Therefore, this study is to determine the impact of COVID-19 pandemic shock on Redang and Perhentian Island communities' behavioral strategy. It is obtained that saving is the most affected in which it declined during the pandemic in both Islands. Most of respondents had to reduce their spending during pandemic to overcome expenditure problems. Furthermore, Redang and Perhentian Island respondents' behavioral strategy are impacted by economic, health and risk management. Besides, Perhentian Island respondents' behavioral strategy is also influenced by environmental shock.

This study contributes to determining how far the behavioral strategy among Redang and Perhentian's communities is affected by pandemic shock. Besides, the findings of this study could also be applied as guidelines for future research and strategies for several parties to overcome and adapt to the pandemic. Hence, from this study, among the suggestions identified the government need to emphasize the community to spend more wisely during pandemic instead of complying the standard operation procedure (SOP). Furthermore, it is suggested to determine the pandemic shock by dimensions of behavioural strategies such as behavior of handling stress, expenditure, spiritual practice and new normal habit. Besides, the mixed method that is combination of quantitative and qualitative research should be conducted as supplementary in acquiring the detailed information. Additionally, future research could carry out the analysis using secondary data such as panel data and time series data. Besides, among the constraints and challenges confronted in this study was the weather problem coupled with maintaining SOP compliance led to the extension of field work.

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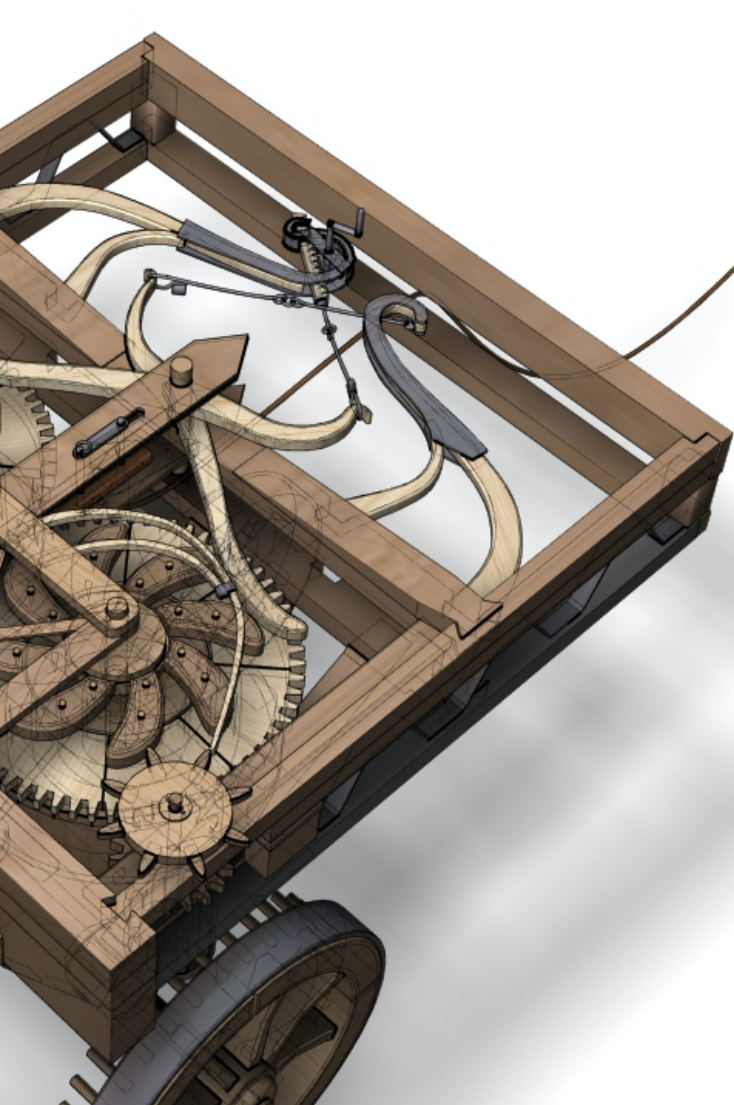
References

- [1] Azlan A. A., *et al.* 2020. Public knowledge, attitudes and practices towards COVID-19: A cross-sectional study in Malaysia. *PLoS ONE* 15(5). DOI: <https://doi.org/10.1371/journal.pone.0233668>
- [2] Bonacini, L., Gallo, G., and Scicchitano, S. 2020. Working from home and income inequality: risks of a 'new normal' with COVID-19. *Journal of Population Economics*, 34(1): 303–360.

- [3] Codagnone C, *et al.* 2020. Assessing concerns for the economic consequence of the COVID-19 response and mental health problems associated with economic vulnerability and negative economic shock in Italy, Spain, and the United Kingdom. *PLoS ONE* *PLoS ONE*, 15(5). DOI:<https://doi.org/10.1371/journal.pone.0240876>
- [4] Delbosc, A., Currie, G., Jain, T., and Aston, L. 2022. The 're-norming' of working from home during COVID-19: A trans-theoretical behaviour change model of a major unplanned disruption. *Transport policy*, 127: 15-21.
- [5] Elengoe, A. 2020. COVID-19 Outbreak in Malaysia. *Osong Public Health and Research Perspectives*, 11(3): 93–100.
- [6] Hashem, T. N. 2020. Examining the Influence of COVID 19 Pandemic in Changing Customers' Orientation towards E-Shopping. *Modern Applied Science*, 14(8): 59–76.
- [7] Hu, Z., Lin, X., Kaminga, A. C., and Xu, H. 2020. Impact of the COVID-19 epidemic on lifestyle behaviors and their association with subjective well-being among the general population in mainland China: Cross-sectional study. *Journal of medical Internet research*, 22(5). DOI: <https://doi.org/10.2196/21176>
- [8] Jose, R., *et al.* 2020. Public perception and preparedness for the pandemic COVID 19: A Health Belief Model approach. *Clinical Epidemiology and Global Health*. DOI: <https://doi.org/10.1016/j.cegh.2020.06.009>
- [9] Jung, H., Park, M., Hong, K., and Hyun, E. 2016. The impact of an epidemic outbreak on consumer expenditures: An empirical assessment for MERS Korea. *Sustainability*, 8(5): 454. DOI:<https://doi.org/10.3390/su8050454>
- [10] Kaur, K., *et al.* 2020. Impact of the first phase of movement control order during the COVID-19 pandemic in Malaysia on purchasing behavior of Malaysian consumers. *Journal of Humanities and Social Sciences Research*, 2(5): 131–144.
- [11] Khan, M. A. A., and Hashim, H. 2020. The Effect of Covid-19 on Tourism and Hospitality Industry In Malaysia, Resurgence In The Post-Pandemic Era: A Conceptual Criterion. *International Journal of Tourism & Hospitality Review* 7(2). DOI: <https://doi.org/10.18510/ijthr.2020.726>
- [12] Laato, S., Islam, A. N., Farooq, A., and Dhir, A. 2020. Unusual purchasing behavior during the early stages of the COVID-19 pandemic: The stimulus-organism-response approach. *Journal of Retailing and Consumer Services* 57. DOI: <https://doi.org/10.1016/j.jretconser.2020.102224>
- [13] Ling, G. H. T., and Ho, C. M. C. 2020. Effects of the coronavirus (COVID-19) pandemic on social behaviours: From a social dilemma perspective. *Technium Social Sciences Journal*, 7(1): 312–320.
- [14] Liu, X., *et al.* 2020. Psychological status and behavior changes of the public during the COVID-19 epidemic in China. *Infectious Diseases of Poverty* 9(1). DOI: <https://doi.org/10.1186/s40249-020-00678-3>
- [15] Long, V. J., and Liu, J. C. 2021. Behavioural changes during the COVID-19 pandemic: Results of a nationwide survey in Singapore. *Annual Academic Med Singapore*, 50(3): 222–231.
- [16] Loxton, M., *et al.* 2020. Consumer behaviour during crises: Preliminary research on how coronavirus has manifested consumer panic buying, herd mentality, changing discretionary spending and the role of the media in influencing behaviour. *Journal of Risk and Financial Management*, 13(8). DOI:<https://doi.org/10.3390/jrfm13080166>
- [17] Mahdzan, N.S., *et al.* 2020. An exploratory study of financial well-being among Malaysian households. *Journal of Asian Business and Economic Studies*, 27(3): 285-302. DOI: <https://doi.org/10.1108/JABES-12-2019-0120>
- [18] Martin, A., Markhvida, M., Hallegatte, S., and Walsh, B. 2020. Socio-economic impacts of COVID-19 on household consumption and poverty. *Economics of disasters and climate change*, 4(3). DOI:<https://doi.org/10.1007/s41885-020-00070-3>
- [19] Murakami, E., Shimizutani, S., and Yamada, E. 2020. Projection of the Effects of the COVID-19 Pandemic on the Welfare of Remittance-Dependent Households in the Philippines. *Economics of Disasters and Climate Change*. DOI: <https://doi.org/10.1007/s41885-020-00078-9>

- [20] Ozili, P. 2020. COVID-19 in Africa: socio-economic impact, policy response and opportunities. *International Journal of Sociology and Social Policy*. DOI: <https://doi.org/10.1108/IJSSP-05-2020-0171>
- [21] Papageorge, N. W., *et al.* 2021. Socio-Demographic Factors Associated with Self-Protecting Behavior during the COVID-19 Pandemic. *Journal of Population Economics* 34. Available at: <https://link.springer.com/article/10.1007/s00148-020-00818-x>
- [22] Rashid, N. K. A., *et al.* 2018. Determinants of Muslim Household Basic Needs Consumption Expenditures. *Jurnal Ekonomi Malaysia*, 52(1): 283–295.
- [23] Robert BĘBEN, Sylwia KUCZAMER-KŁOPOTOWSKA, Anna MŁYNKOWIAK-STAWARZ & Izabela PÓŁBRAT 2021. Tourist Behavioral Intentions during the COVID-19 Pandemic. The Role of Reactance, Perceived Risk and Protection Motivation. *Journal of Environmental Management and Tourism*, 12(8): 2129–2147.
- [24] Sharma, A. and Jhamb, D. 2020. Changing Consumer Behaviours towards Online Shopping - An Impact of Covid 19. *Academy of Marketing Studies Journal* 24(3). Available at: <https://www.abacademies.org/articles/changing-consumer-behaviours-towards-online-shopping--an-impact-of-covid-19-9298.html>
- [25] Sheth, J. 2020. Impact of Covid-19 on Consumer Behavior: Will the Old Habits Return or Die? *Journal of Business Research*, 117: 280-283. DOI: <https://doi.org/10.1016/j.jbusres.2020.05.059>
- [26] Szymkowiak, A., Gaczek, P., Jeganathan, K., and Kulawik, P. 2020. The impact of emotions on shopping behavior during epidemic. What a business can do to protect customers. *Journal of Consumer Behaviour* 20(1). DOI: <https://doi.org/10.1002/cb.1853>
- [27] Wang, E., *et al.* 2020. Consumer food stockpiling behavior and willingness to pay for food reserves in COVID-19. *Food Security*, 12(4): 739–747.
- [28] Wolf, M. S., *et al.* 2020. Awareness, attitudes, and actions related to COVID-19 among adults with chronic conditions at the onset of the US outbreak: a cross-sectional survey. *Annals of internal medicine*, 173(2). DOI: <https://doi.org/10.7326/M20-1239>
- [29] Yau, E. K. B., *et al.* 2020. The behaviour changes in response to COVID-19 pandemic within Malaysia. *The Malaysian Journal of Medical Sciences*, 27(2): 45–50.
- [30] *** Department of Statistic Malaysia. 2020. Sumary of Findings: Special Survey 'Effects of COVID-19 on the Economy and Companies/Business Firms'. Available at: https://www.dosm.gov.my/v1/index.php?r=column/cone&menu_id=RkJtOThJSiBJNStOV1liM1JsKzdZUT09
- [31] ***Study on the Impact of Movement Control Order (MCO) to Household (HH) Expenditure 2020. Statistic Department of Malaysia. Available at: https://www.dosm.gov.my/v1/uploads/files/6_Newsletter/Newsletter%202020/DOSM-BPHPP_1-2020-Series-9.pdf

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