

THE INFLUENCE OF COVID-19 PANDEMIC ON CONSUMER CONSUMPTION BEHAVIOUR AND PATTERNS

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Abstract: *In 2019, a pandemic known as Covid-19 frightened people all over the world. Almost every element of our existence has been impacted socially during this pandemic period in addition to economically. The community must adjust to the new way of life as a result of these changes. The adjustments will reveal customer behaviour in recent times and create demand for goods to fill future needs. The purpose of this paper is to discuss the results of research on how Malaysia's Covid-19 pandemic-related restrictions have affected people consumption behaviour. Principal Components Extraction and Varimax Rotation were tested prior to the other statistical analysis. This study was then to determine how much and how differently the pandemic limitations had an impact on consumers' typical buying behaviours. Next, the study used an independent t-test, Chi Square and one-way ANOVA to analyse the problems related to respondents' demographics (gender and marital status), as well as the key variables of consumer consumption behaviour (behaviour on necessities goods, behaviour on non-necessities goods, risk, fear, choice, information, perceived economic stability, and stress). The test of differences showed that there were significant differences between the genders with regard to behaviour on non-necessities goods, risk, choice, and stress. A cross-sectional study, on the other hand, found no association between being a speedy shopper at the expensive store rather than at the normal stores and gender. For one-way ANOVA, at least one marital status category has a difference mean on nearly all of the significant variables (except necessities goods and choice). The study's findings are meant to provide businesses and entrepreneurs with some understanding of consumer behaviour and its trends both before and after the epidemic.*

Keywords: *Consumer Behaviour, Consumption, Covid-19 Pandemic*

Introduction

As Covid-19 spread across South East Asia starting March 2020, Malaysia had been under different phases of Movement Control Order (MCO). Since the first wave of Covid-19 occurred in Malaysia until the third wave in early September 2020, Malaysia had implemented the Movement Control Order (MCO) where business, schools and universities had to be shut down, and people were entreated to do work and study from home. The Covid-19 pandemic had extremely affected the global market as well as the consumer consumption behaviour which led to the most challenging period for the marketers. This pandemic has changed people's lifestyles, purchasing power and the consumption of goods and services. The buying patterns has also changed due to the strict Movement Control Order (MCO) that has open up to the new opportunities for marketers.

Roggeveen and Sethuraman (2020) indicate that consumers may be getting used to new methods of shopping and give the example of online grocery shopping with home delivery, which will likely become more common in the future as well. E-commerce has been prevalent during the Covid-19 pandemic and customers chose online shopping as their new buying platform. A survey in 2021 has found that 62% of the shoppers in South East Asia shopped online through apps and websites more frequently (Statista, 2021). The survey also revealed that 60% of the respondents in South East Asia shopped less at physical stores compared to pre-pandemic time. On the other hand, Shariff and Abd Hamid (2021) found that people tend to purchase online rather than offline shopping or in-person shopping for the safety reasons in avoiding Covid-19 virus infection. Furthermore, Statista.com reported that about 62% of Malaysian respondents minimised outdoor activities and increased their online purchases due to physical distancing practices. On top of that, the same survey also showed that Malaysians made more online purchases during the pandemic compared to only 6% of the respondents who indicated that they did not make any online purchases (Statista, 2021).

Understanding how the consumer consumption behaviour and buying patterns change due to Covid-19 are crucial and will provide significant information and guidelines for policymakers as well as practitioners to fit the changes. However, little research has investigated how pandemic Covid-19 affecting consumer consumption behaviour and buying patterns, especially in the Malaysian context. Therefore, while considering the limitations in the existing literature, this study attempts to investigate the influence of Covid-19 pandemic on consumer consumption behaviours and patterns namely behaviour on necessity goods, behaviour on non-necessity goods, risk, fear, choice, information, perceived economics stability and stress. This study argues that by examining the differences among the variables, the antecedents that influence consumer consumption behaviour and patterns could be clearly defined so that governments and marketers can take the imperative steps to avoid losses and gain income effectively. Similarly, the results of this study can be compared with the findings of other scholars who are also examining the influence of the Covid-19 pandemic on consumer consumption behaviour and patterns in different contexts which would further lead to the generalisation of findings.

Literature Review

The novel coronavirus disease (Covid-19) has impacted the daily life of many people. In an attempt to limit the spread of Covid-19, individuals have changed how and how much they produce and consume. The increasing threat of novel coronavirus is a public health crisis and hampers the macro economy as a whole.

Many studies investigate consumer shopping behavior related to the Covid-19 pandemic. Baker et al. (2020) examined household spending during the Covid-19 outbreak in the United States. It was found that decreased human movement has resulted in decreased spending across all categories. The fewer people move, the less they spend on restaurants or making purchases at brick-and-mortar stores. Gao et al. (2020) confirmed that the pandemic increases consumer behavior in purchasing food online. Otherwise, Salem and Md Nor (2020) focused on consumers shifting behavior from shopping at physical stores to e-commerce in Saudi Arabia during this Covid-19 pandemic. Werner-Lewandowska et al (2021) conducted research on the impact of restrictions during Covid-19 In Poland, The findings indicated 2020 lockdown during the global Covid-19 pandemic contributed to grocery stockpiling, which is due to the fact that most respondents purchased Fast Moving Consumer Goods (FMCG) less frequently than before the lockdown, thus buying larger quantities at a time and stockpiling.

The results of a study on the impact of the Covid-19 pandemic on consumer behavior conducted in the U.S. indicate that the Covid-19 pandemic changed consumers' product needs, shopping behavior, and post-purchase satisfaction levels. For example, since the beginning of the pandemic, consumers have avoided products in public places (stores, markets, malls) and increased virtual shopping and online shopping. The results also suggest that it may now be more difficult for retailers to gain customer loyalty because consumer satisfaction has decreased (Mason et al., 2020). A study conducted by Brandtner et al. (2021) in five major retail chains in Austria, indicates that show that there was a general and significant decline in consumer satisfaction due to the pandemic. The results also show a high impact of political regulations on consumer satisfaction.

Consumer consumption behavior (Behavior on Necessity Goods and Behavior on Non-Necessity Goods)

Situations during pandemic Covid-19 that potentially disrupt social lives, or threaten individuals' health, have been proven to lead to strong behavioral changes (Leach,1994). An example is panic buying, a phenomenon occurring when fear and panic influence behavior, leading people to buy more things than usual (Lins,2020). Consumer behavior tended to compulsively focus on purchasing essential goods, especially connected with preventing the virus, such as protective devices and sanitizing gel (Cannito et al.,2021). On the other hand, Hadler et al. (2021) found that in November 2020, 46% of surveyed customers used online grocery shopping, and 27% used grocery delivery services. Young people tended to purchase healthier food, and there was a higher demand for snacks and non-perishable foods. According to Chang and Meyerhoefer (2021), in Taiwan, online shopping was sensitive to media coverage, and customers seemed to purchase more grains, fresh fruit, vegetables, and frozen foods.

It has been argued that consumers may be more willing to spend money on necessities (vs. non-necessities) by making daily survival products readily available. Accordingly, recent research documented an increase in buying necessities products (i.e., utilitarian shopping) during and after a traumatic event (Larson and Shin,2018). However, other findings showed that impulsive non-necessities purchasing (i.e.,hedonic shopping) could also increase as an attempt to escape or minimize the pain for the situation. That is, non-necessities buying is used as an emotional coping strategy to manage stress and negative emotional states (Kemp et al, 2014).

Risk

Habib and Hamadneh (2021) conducted a study on the impact of perceived risk on consumer technology acceptance in online grocery adoption amid of Covid-19 Pandemic in India.

Consumer purchase intention and purchase behavior can be viewed as an example of risk-taking, based on the fact that any action taken by consumers will have consequences that they cannot predict with any degree of certainty, and at least some of which are likely to be unpleasant. If perceived risk is powerful in explaining customer behavior, consumers' reluctance to purchase online could be a direct result of perceived risk, particularly in emerging markets. The finding found perceived risk has significant impact on consumer shopping behaviour. In the amid Covid-19 pandemic, consumers are restricted to shop physically. In addition, consumers are also not interested in going to crowded physical shopping centers. The Covid-19 guidelines related to safety, physical distancing, closure, lockdown and other restrictions have influenced consumers to shop online.

Fear

Study by Eger et al (2021) suggested that fear appeal is an important variable mediating purchasing behavior. Focusing on online shopping, Eger et al. (2021) found that fear appeal had a significant relationship with the online purchase of products. In other words, customers found online shopping allowed them to deal with the risks of Covid-19.

Choice

Grashuis et al (2020) Using 32,400 choice decisions from a representative sample of 900 grocery shoppers in the United States, found that the trend in the Covid-19 pandemic causes significant differences in grocery shopping preferences. In situations where Covid-19 is spreading at an increasing rate, consumers are generally less willing to shop inside the grocery store. When Covid-19 is spreading at a decreasing rate, the relative importance of the purchasing method attribute is lower in its entirety. Consumers tend to take advantage of online media to carry out various processes in shopping. The amount of time at home provides an opportunity for consumers to find product information digitally. Some consumers will still make purchases digitally after receiving information from digital media (pure online shopping), but others will make purchases at physical stores after receiving digital information (webrooming) for direct product confirmation. However, as stated in previous studies, online stores are not able to provide all the needs of consumers like those in traditional / physical stores. Consumer needs that are not found in online stores include the need to see, touch, and feel the quality of the product directly (Baihaqi, 2018).

Information

During pandemic Covid-19, society is filled with news being broadcast through various media, including radio, the internet, traditional newspapers, emails, and social media, among others. The role of internet sources has steadily increased in recent years, and is one reason that differentiates Covid-19 from previous pandemics (Abd-Alrazaq et al., 2020). Exposure to online information sources refers to the number of online sources through which people receive information. Due to the availability of many electronic information sources, it is easy for an individual to search for and read information about a particular issue, such as in the current case, Covid-19, and related symptoms (Jokic-Begic et al., 2019). During a pandemic situation such as Covid-19, it can be difficult for individuals to organize all online information clearly and accurately (Balinska and Rizzo, 2009). As information is unclearly available even for news creators, this rush increases the presence of inaccurate information, which can further influence consumer shopping behaviour.

Perceived Economic Stability

Several studies have shown that household income has a significant impact in determining people's expenses (Heath, C.& Soll, 1996, Shefrin, & Thaler,1998). Not surprisingly, the research highlighted a positive relationship between income and spending levels (Ahmed et al.,2016). Interestingly, a different line of research pointed out that self-perceived economic stability is a more appropriate determinant of consumer behavior than actual income (Karlsson et al.,2005). The study of Karlsson et (2005) showed that, compared to families who considered themselves to have a good financial situation, households which considered themselves to be worse off economically than others reported fewer purchases of goods, perceived the impact of their latest purchase on their finance to be greater, and planned purchases more carefully. Valaskova et al (2021) conducted research to identify changes purchasing pattern among 425 Slovak respondents. Findings reveal the most important factors impacting consumers' financial situations established during pandemic Covid-19. Furthermore, a recent study in the context of the Covid-19 emergency showed that people who believed to have limited financial resources were the most worried about the future (Ceccato et al.,2021). Therefore, in the present study, we measured perceived economic stability factor.

Stress

A recent study recommended a differentiation between necessity and non-necessity products to better understand consumer behavior in response to stressful situations (Durrante and Laran, 2016). Durante and Laran (2016) proposed that people adopt strategic consumer behavior to restore their sense of control in stressful situations. Hence, high stress levels generally lead consumers to save money and spend strategically on products perceived as necessities. Importantly, regarding the impact of perceived stress due to the Covid-19 pandemic on consumer behavior, a recent study showed that the likelihood of purchasing quantities of food larger than usual increased with higher levels of perceived stress (Jeżewska-Zychowicz, 2020). In addition, Di Crosta et al (2021) administered an online survey to 3833 participants (age range 18–64) during the first peak period of the contagion in Italy found that stress has a specific role in predicting changes in consumer behavior related to necessities but not to non-necessities. Thus, stress being considered as factor to influence consumer consumption behaviour during Covid-19.

Research Method

Convenient sampling was used to obtain the sample for this study from November 2021 to January 2022. After being approached through Whatsapp groups, respondents were given a link to an online survey. According to the Department of Statistics Malaysia (DOSM), there was 22,3 million Malaysians of working age (16 to 64) in 2020. For the preliminary survey, 330 samples were collected. After being checked for blank spaces and straight lines, 309 survey responses were deemed to be valid.

The first part of the questionnaires covered demographics, the second parts about the consumer shopping behaviour pattern, the subsequent parts covered necessity goods, non-necessity goods, risk, fear, choice, information, perceived economics stability and stress. The cross-sectional study used Likert scales, which range from 1 for very strongly disagreeing to 7 for very strongly agreeing. The questionnaires were modified and incorporated from previous studies, such as those by Di Crosta et al. (2021) on necessity and non-necessity consumer behaviour, Di Crosta et al. (2021) on Choice, Hesham et al. (2021) on Covid-19 and risks, Di Crosta et al. (2021) on information , Di Crosta et al. (2021) on perceived economic stability and Cohen et al. (1984) and Al-Dubai et al. (2012) on stress.

To conduct the data analysis, the Statistical Package for Social Sciences for Windows was employed. To begin, the Kaiser-Meyer-Olkin (KMO) test was employed to determine the applicability of factor analysis. It was determined to be significant, thus factor analysis was performed. One of the most important methods is to employ factor analysis to analyse and assess the internal structure of instruments (Nunnally, 1978; Henson & Roberts, 2006). The instruments were then examined using principal component analysis with varimax rotation. After the instruments were confirmed, the data was checked for reliability using the Cronbach's alpha test. This is done to ensure that all questions in a variable measure the same underlying properties. These important variables were also tested for normality using kurtosis and skewness. The general skewness and kurtosis rules of thumb are 1 and 7, respectively. Furthermore, descriptive statistics (frequency) were used to define the socio demographics of respondents, as well as the mean scores for the main categories, and to examine the pattern of consumer shopping behaviour during the Covid-19 pandemic.

In the study's initial analysis, the means of the main variables (such as necessity goods, non-necessity goods, risk, fear, choice, information, perceived economic stability, and stress), as well as demographic factors (gender and married status) were compared using a test of differences. As an illustration, the effect size was established after comparing the mean scores of the important characteristics for male and female (gender subgroups) to see whether they were assessed differently (eta squared). Eta squared shows the proportion of the variance in the dependent variable that is explained by the independent variable (Pallant, 2001). Cohen (1988) guidelines were used in the study to evaluate the relevance of the impact size. To ascertain whether the means for various marital statuses differ, the main variables were then analysed in a One-Way Anova against marital status. In order to evaluate whether gender and the propensity to shop rapidly at expensive stores rather than the typical retailers were related, Chi square tests were utilised.

Analysis and Findings

The study first looks at the respondents' backgrounds. Approximately 53.1% (164) of respondents are between the ages of 21 and 30, followed by 19.4% (60) between the ages of 31 and 40, 17.5% (54) between the ages of 41 and 50, and 10% (31) are over the age of 51. A total of 197 (63.8%) women and 112 (36.2%) men makes up the group. Married people made up the majority (49.8% of respondents; 154); single people came in second (47.6%; 147); and divorced people made up the remaining (2.6%, 8). In terms of education, the majority of respondents (61.2%, or 189) have bachelor's degrees, while only 1.2%, or 4, were either completed elementary school or have not attended school at all.

Table 1: Demographic of Respondents

Item	Category	Frequency	Percentage
Age	21-30	164	53.1
	31-40	60	19.4
	41-50	54	17.5
	51-60	27	8.7
	>61	4	1.3
Gender	Female	197	63.8
	Male	112	36.2
Marital Status	Divorced	8	2.6
	Married	154	49.8

Education	Single	147	47.6
	Bachelor's degree	189	61.2
	Diploma or Certificate	76	24.6
	have not attended school	2	0.6
	Post graduate	13	4.2
	Primary school	2	0.6
Employment	Secondary school	27	8.7
	Government sector	110	35.6
	Housewife	1	0.3
	Private sector	74	23.9
	Retiree	6	1.9
	Self employed	31	10
income	Students	84	27.2
	unemployed	3	1
	2,001-5,000	160	51.8
	5,001-8,000	89	28.8
	8,001-11,000	34	11
	11,001-14,000	11	3.6
	14,001-17,000	5	1.6
	17,001-20,000	5	1.6
≥20,001	5	1.6	

The findings' first section discusses consumer purchasing trends prior to and during the pandemic. The initial part of the study was concerned with the locations and times of customer buying before the pandemic and during the lockdown as illustrated in Figure 1. From the 309 responses, it can be shown that 112 (36.2%) and 155 (50.2%) consumers visited hypermarkets and supermarkets, respectively, whereas only 13 (4.2%) and 29 (9.4%) of consumers visited local food stores and online retailers, respectively, before the pandemic. Supermarkets came in second at 100 (32.4%) while virtual retailers had the highest percentage during the restriction at 104 (33.7%). In contrast to 42 (13.6%) consumers who went to hypermarkets, 63 (20.4%) more people went to small grocery stores. This indicates that consumers shop in various locations both before and during Covid-19 pandemic.

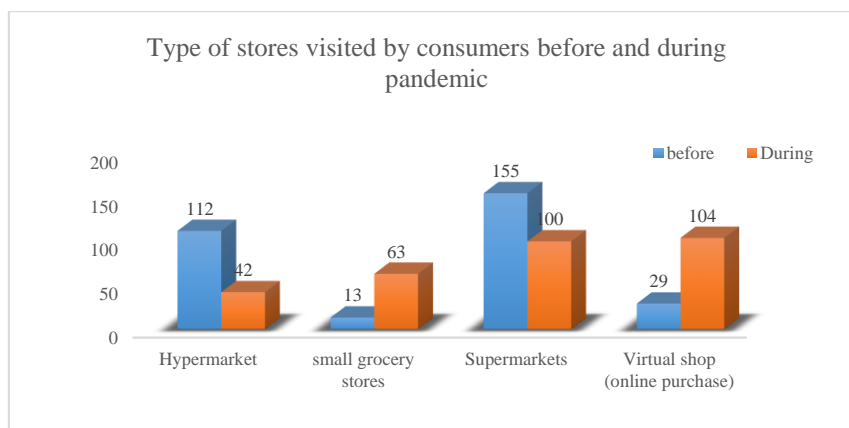


Figure 1: Types of Stores Visited by Consumers Before and During Covid-19 Pandemic

Shopping is done infrequently by respondents throughout the month, anywhere from daily to a few times (shown in Figure 2). The majority of people went shopping a few times per week, with that frequency ranging from 105 (34%) before the epidemic to 53 (17.2%) during it. For those who went shopping once or twice a month, that frequency ranged from 48 (15.5%) before the pandemic to 92 (29.8%) during it. It is evident that compared to before the pandemic, customers are shopping for food and groceries less frequently now.

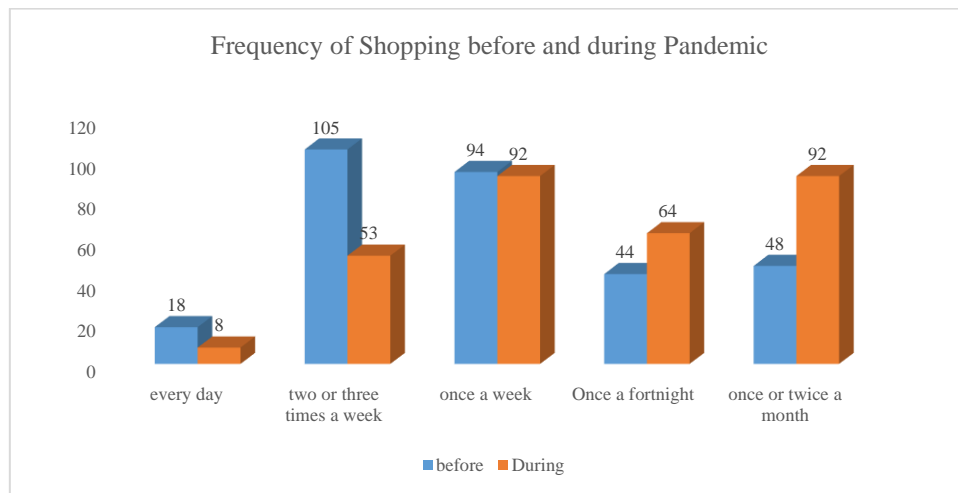


Figure 2: Frequency of Shopping Before and After Pandemic

The majority of respondents (174, 56.3%) reported stopping for groceries more than an hour before the pandemic. Customers cut back on their shopping time during the pandemic to 30–40 minutes (172, 55.7%), or around 15 minutes (93, 30.1%), as they were unwilling to risk contracting the deadly contagious virus.

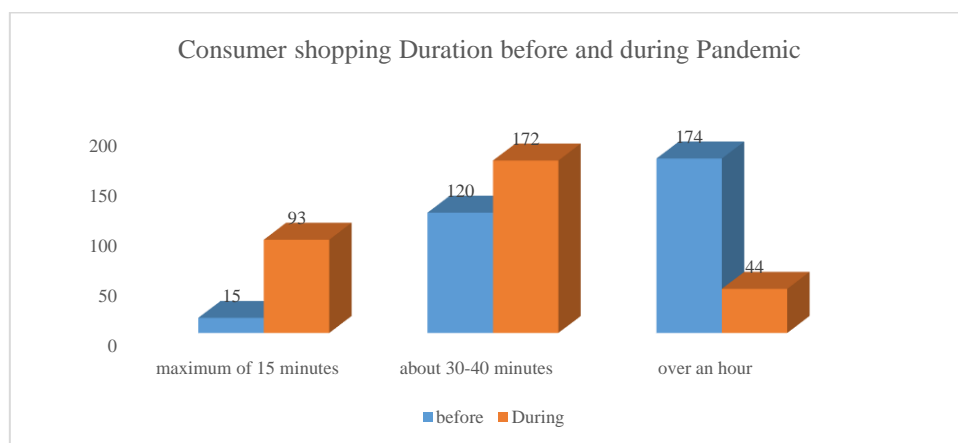


Figure 3: Consumer Shopping Duration Before and During Pandemic

The shopping habits of consumers did not considerably change between the pandemic and before it (see Figure 4). Most poll respondents enjoyed shopping all day between 10 a.m. and 10 p.m. based on the time that each person has available.

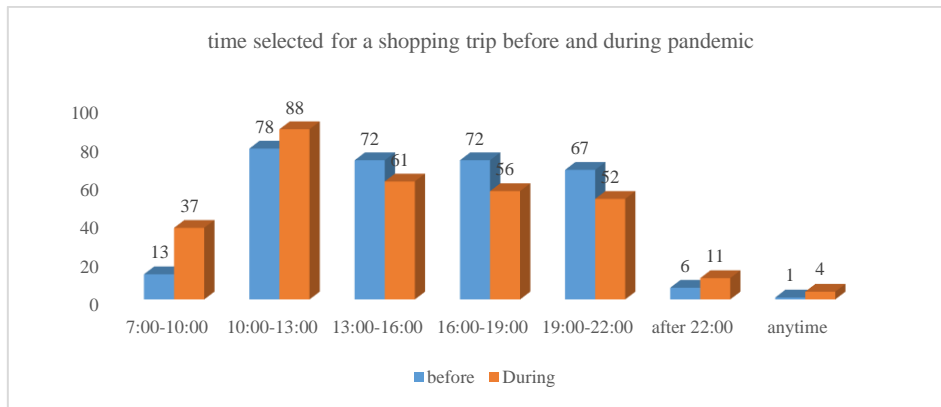


Figure 4: Time Selected for A Shopping Trip Before and During Pandemic

As the conclusion, the Covid-19 pandemic has undoubtedly altered consumer behaviour patterns. The number of online retail establishments has dramatically increased when it comes to store types. The Covid-19 pandemic caused consumers to buy less frequently, yet some continued to do so occasionally. It has been noted that during Covid-19, consumers curtailed their shopping trips in order to avoid contracting the pandemic's deadly virus.

Next, the study then went on to explain the factor analysis. The suitability of the data for factor analysis was evaluated using the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) procedure. As in Table 2, the study's KMO was 0.846, and since it was higher than 0.50, it suggested a meritorious index, indicating that it satisfied the condition. In addition, Barlett's test produced a value of 7849.84 with a significance level of 0.001. This demonstrated that the variables were not related, enabling factor analysis to be carried out.

Table 2: KMO and Barlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.846
Bartlett's Test of Sphericity	Approx. Chi-Square	5284.610
	df	496
	Sig.	0.000

The next step is to analyse community using exploratory factor analysis (EFA), which demonstrates how variation in observed variables can be attributed by a common factor. The level of communality is set at 0.5. After evaluating 40 items from the dataset, 32 of them met the communality criterion with extraction values more than 0.5; the remaining 8 items (C5, E1, F1, F2, K4, K5, K7 & K8) that were below 0.5 were then removed from the dataset. The value of the communalities increases with tighter correlation between the variable and the given parameters. If item C1's communality is 0.591, it can explain 59.1% of the factor. Similar to this, each of the other components has a value larger than 0.5, indicating that they are all able to fully explain the factor. The Measures of Sampling Adequacy (MSA), which is used to assess anti-image correlation, was then employed in the analysis. This value was obtained by looking at the diagonal value with the letter "a" next to each value in SPSS. The MSA requirements were met by 32 of the assessed items (above 0.5).

Table 3: Factor Analysis Results

items	1	2	3	4	5	6	7	8	Communalities	Anti-image correlation
C1.	0.758								0.591	.876 ^a
C2.	0.714								0.543	.816 ^a
C3.	0.708								0.549	.839 ^a
C4.	0.793								0.673	.842 ^a
D1.		0.867							0.768	.799 ^a
D2.		0.952							0.792	.722 ^a
D3.		0.595							0.659	.809 ^a
E2.			0.641						0.648	.817 ^a
E3.			0.711						0.672	.818 ^a
E4.			0.755						0.628	.843 ^a
E5.			0.764						0.682	.796 ^a
E6.			0.710						0.574	.808 ^a
F3.				0.832					0.748	.834 ^a
F5.				0.823					0.718	.882 ^a
F6.				0.908					0.852	.838 ^a
F7.				0.925					0.837	.841 ^a
G1.					0.757				0.699	.883 ^a
G2.					0.887				0.691	.862 ^a
G3.					0.899				0.737	.851 ^a
G4.					0.778				0.581	.846 ^a
H1.						0.567			0.715	.838 ^a
H2.						0.604			0.776	.741 ^a
H3.						0.872			0.812	.739 ^a
I1.							0.767		0.767	.899 ^a
I2.							0.898		0.794	.861 ^a
I3.							0.895		0.753	.896 ^a
K1.								0.850	0.654	.927 ^a
K2.								0.901	0.660	.909 ^a
K3.								0.870	0.758	.892 ^a
K6.								0.792	0.710	.870 ^a
K9.								0.813	0.641	.857 ^a
K10.								0.870	0.705	.841 ^a
Cronbach	0.727	0.774	0.785	0.901	0.849	0.722	0.836	0.923		
Eigenvalue	6.557	4.234	3.973	2.083	1.786	1.431	1.391	0.935		
% of variance	20.490	13.230	12.416	6.509	5.580	4.472	4.347	2.921	69.965	

Next, factor analysis was discussed. To ascertain which item belonged to which factor, the loadings were examined using a rotating component matrix. Due to the absence of independent and dependent variables in the data set, Principal Components Extraction and Varimax Rotation were utilized. As shown in Table 3, it was found that both the loading and the cross loading were greater than 0.5 according to Rotated Component Matrix. Based on Table 3, The study's summary of the relationship between the construct and the items was then shown in Table 4. For example, it was discovered that items C1, C2, C3, and C4 were associated to factor 1

(behaviour on necessity products), whereas D1, D2, and D3 were linked to factor 2 (behaviour on non-necessity goods) and so on and so forth.

Table 4: Factors Loading Coefficients and the Labels

Factors	Items	Loading coefficient
1 – Behaviour on Necessity Goods	C1, C2, C3 and C4	0.708 – 0.793
2 – Behaviour on Non-Necessity Goods	D1, D2 and D3	0.595 – 0.952
3 – Risk	E2, E3, E4, E5 and E6	0.641 – 0.764
4 – Fear	F3, F5, F6 and F7	0.823 – 0.925
5 – Choice	G1, G2, G3 and G4	0.757 – 0.899
6 – Information	H1, H2, and H3	0.567 – 0.872
7 – Perceived Economics Stability	I1, I2 and I3	0.767 – 0.898
8 – Stress	K1, K2, K3, K6, K9, K10	0.792 – 0.901

Table 5 presented the research's descriptive analysis. Consumer consumption behaviour during the COVID19 pandemic was somewhat above normal in terms of behaviour on necessary goods (M=4.271, SD=0.5972) and choice (M=4.3827, SD=0.6188). For behaviour on non-necessities goods (M=3.3182, SD=0.9385), risk (M=3.3942, SD=0.7962), information (M=3.9752, SD=0.7241), and PES (M=3.8738, SD=0.79744), the individuals were marginally different. Stress (M=2.8792, SD=0.9327) and fear (M=2.9877, SD=1.0548), on the other hand, were below average. Moreover, a normality test was performed on these data. The univariate skewness and kurtosis of all the variables that fell between 1 and 7 are displayed in Table 2. They indicate that the study's findings about risk, fear, choice, information, perceived economic stability, stress, and behaviour on necessities and non-necessities goods were normally distributed. Reliability tests were then performed on the main variables. According to Nunnally (1978), established scales have a reliability of 0.8–0.9. The study's Cronbach alpha, which ranged from 0.727 to 0.923, was higher than 0.7.

Table 5: Descriptive and Normality for the Major Variables

Variable	Mean	SD	Skewness	Kurtosis
NG*	4.2710	0.5972	-0.460	-0.548
NNG*	3.3182	0.9385	-0.163	-0.240
RISK	3.3942	0.7962	-0.057	0.094
FEAR	2.9877	1.0548	0.053	-0.804
CHOICE	4.3827	0.6188	-1.103	2.185
INFO*	3.9752	0.7241	-0.374	-0.024
PES*	3.8738	0.7974	-0.534	0.584
STRESS	2.8792	0.9327	0.049	-0.332

*Note: NG = behaviour on necessities goods, NNG – behaviour on non necessities goods, INFO – information, PES – perceived economic stability.

The mean scores for the main variables were examined using an independent sample t-test. Table 6 contains a summary of the research findings. A comparison is made between the gender and several variable means. Male and female consumers behaved very differently when it came to: 1) Behaviour on Non-Necessity goods for males (M=3.5238, SD=0.9499) and females (M=3.2014, SD= 0.9138; $t(307)=-2.939$, $p<0.01$); 2) Risk for males (M=3.5393, SD=0.7678) and females (M=3.3117, SD=0.8021; $t(307)=-2.435$, $p<0.01$); 3) Choice for males (M=4.1964,

SD=0.7185) and females (M=4.4886, SD=0.5275; $t(307)=3.765$, $p<0.01$) and 4) Stress for males (M=2.6845, SD=0.9471) and females (M=2.9898, SD=0.9083; $t(307)=2.797$, $p<0.01$). However, the effect size in the means for Behavior on Necessity Goods, Risk, Choice, and Stress were quite small (0.027, 0.19, 0.44, and 0.25 respectively), indicating that gender could account for 2.7%, 1.9%, 4%, and 2.5% of the variance respectively. The other four variables—Behavior on Necessity Good, Fear, Information, and PES—did not significantly differ in their mean scores by gender.

Table 6: Differences in the major variables by Gender

Gender	NG	NNG	RISK	FEAR	CHOICE	INFO	PES	STRESS
Male	4.2277	3.5238	3.5393	3.0571	4.1964	3.9732	3.8542	2.6845
Female	4.2957	3.2014	3.3117	2.9482	4.4886	3.9763	3.8849	2.9898
t-value	0.962	-2.939	-2.435	-0.872	3.765	0.036	0.326	2.797
p-value	0.168	0.002*	0.008*	0.192	0.000*	0.486	0.486	0.003*
Effect size	0.003	0.027	0.019	0.002	0.044	0.000	0.000	0.025

Note: $p<0.01$ *

Next, the main variables were then examined in a one-way anova against marital status (see Table 7). There were six variables that differed statistically significantly based on marital status. These six variables are: Behavior on Necessity Goods ($F(2, 306)=8.211$, $p<0.001$); Risk ($F(2, 306)=5.298$, $p<0.001$); Fear ($F(2, 306)=4.949$, $p<0.001$); Information ($F(2, 306)=7.968$, $p<0.001$); PES ($F(2, 306)=3.193$, $p<0.05$) and Stress [$F(2, 306)=12.943$, $p<0.001$]. Although there was a statistically significant difference in the mean scores across the groups, the real difference was quite small. For Behaviour on Non-Necessity Goods, Risk, Fear, Information, PES, and Stress, the effect sizes were computed using eta squared and were found to be small at 0.05, 0.03, 0.03, 0.05, 0.02, and 0.08, respectively.

Table 7: One-way ANOVA

	NG	NNG	RISK	FEAR	CHOICE	INFO	PES	STRESS
Divorced	3.9688	2.9167	2.8000	2.2750	4.3438	3.7083	3.7917	2.7917
Married	4.2305	3.1299	3.3026	2.8623	4.3117	3.8290	3.7641	2.6245
Single	4.3299	3.5374	3.5224	3.1578	4.4592	4.1429	3.9932	3.1508
F	2.1090	8.2110	5.2980	4.9490	2.1690	7.9680	3.1930	12.9430
sig	0.1230	<.001*	0.0050*	0.0080*	0.1160	<.001*	0.0420**	<.001*
effect size	0.0136	0.0509	0.0335	0.0313	0.0140	0.0495	0.0204	0.0780

Note: $p<0.01$ *, $p<0.05$ **

Not least among other things, were the cross-tabulation analysis's findings. The goal of the study was to determine whether gender and the propensity to shop quickly at expensive stores were related. Table 8 reveals that 48.2% (54) of males, as opposed to 55.8% (110) of females, declined to shop fast at more expensive stores in favour of standing in line at regular stores. On the other hand, 51.8% (58) of men and 44.2% (87) of women agreed that it was preferable to shop quickly in upscale stores than to stand in line at more mainstream ones. The two category variables did not significantly differ, as indicated by the chi square statistic value of 1.374. In other words, gender and choosing to shop fast at pricey stores rather than standing in line for a long time in a typical store are unrelated.

Table 8: Chi Square

Variable		N		Chi Square
Are you a quick shopper?				
		No	Yes	
Gender	Female	110	87	1.374 (0.241)
	Male	54	58	

Conclusion and Recommendation

This paper aims to present research on the effects of consumer behaviour on Malaysia's Covid-19 pandemic-related restrictions. In other words, it seeks to figure out the degree to which customers' routines and purchase habits have been impacted by the pandemic limitations. Principal Components Extraction and Varimax Rotation were tested prior to the other statistical analysis. Next, the associated with respondents' demographics (gender and married status) as well as the main variables in consumer consumption behaviour (Behaviour on Necessity Goods, Behaviour on Non-Necessity Goods, Risk, Fear, Choice, Information, Perceived Economic Stability, and Stress) were further examined using an independent t-test, a Chi Square, and a one-way ANOVA. When it came to Behaviour on Non-Necessity Goods, Risk, Choice, and Stress, the test of differences revealed that there were significant differences between the genders. In one-way ANOVA, nearly all of the significant variables have a different mean for at least one group of marital status (except Behaviour on Necessity Goods and Choice). On the other hand, a cross-sectional study found no connection between gender and the tendency to shop quickly at the expensive store as compared to normal stores. The research's findings are intended to give businesses and entrepreneurs a basic understanding of consumer behaviour and patterns both before and after the epidemic. However, this article focuses only on test of differences using independent t-test, chi square and one way ANOVA. It is suggested future research could proceed with relationship testing using multiple regression and predictive analysis using structural equation modelling (SEM) for better understanding of changes in consumer consumption behaviour and patterns.

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