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Factors Influencing Changes in Consumer Behavior amidst Post COVID-19 Pandemic

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Abstract: The COVID-19 pandemic had an immediate and significant impact on consumer behavior, radically changing attitudes and behaviors, as reflected in sales figures. While some researchers believed the pandemic would lead to lasting changes, others expected a return to pre-pandemic behavioral patterns. Despite this ambiguity, there has been little research on the factors influencing consumer behavior, especially about the demand for everyday goods. This study, rooted in the theory of planned behavior (TPB) and the protection motivation theory (PMT), investigated the determinants of consumer behavior in the purchase of daily necessities following the COVID-19 outbreak. In light of the possibility that the pandemic could have caused a new pattern of consumer behavior during the endemic phase, a convenience sampling of 1438 respondents was conducted. Using Partial Least Square Structural Equation Modelling (PLS-SEM), the present study found that choice, information, and perceived economic stability (PES) positively affected consumer behavior, while COVID-19 and risk had negative effects. Interestingly, stress had no impact on consumer behavior. These findings provide valuable insights for companies desiring to understand and anticipate customer behavior during and beyond the pandemic. The present study not only identifies the factors influencing consumer behavior but also enables salespeople to develop strategies to proactively address changes in consumer behaviors.

Keywords: *Choice, Consumer behavior, COVID-19 pandemic, Necessity goods, Risks*

1. Introduction and Background

In 2019, the global community was shaken by the COVID-19 pandemic. According to the World Health Organization (WHO), coronaviruses are categorized as viruses from the Coronaviridae family. These viruses affect both humans and animals. This pandemic led to the worst economic and social crisis in recent history (Donthu & Gustafsson, 2020; Kirk & Rifkin, 2020). As the virus progressed, the mobility of people and goods was restricted in most countries, as authorities were forced to impose full or partial lockdowns.

These measures disrupted markets and economic and social functions. Several new economic constraints emerged as a result of COVID-19 lockdown orders, including reduced disposable income and income security due to job losses or furloughs (Karpen & Conduit, 2020). In Malaysia in particular, it was reported that 140,608 people lost their jobs between March and August 2020 due to the pandemic (Hassan, 2021). The pandemic also affected industries such as tourism, entertainment, and food and beverage, especially restaurants (Martin, 2020).

Beyond the economic perspective, the pandemic also had a radical social impact, changing almost all aspects of daily living. Unexpected and unintended changes included social distancing, wearing masks, the deferment of public transportation, and travel restrictions. The COVID-19 pandemic was therefore much more than a health issue: It disrupted the world economy and healthcare systems while causing fear, terror, and uncertainty among people across the world (Islam et al., 2021; Naeem, 2021).

Although the long-term consequences of COVID-19 are unknown, it had a significant and immediate impact on consumer behavior. Consumer behavior is the study of individuals or groups who want to buy, use, evaluate, or dispose of products and services to satisfy their needs. Consumer behavior can change for a variety of

reasons, including personal, economic, psychological, contextual, and social (Di Crosta et al., 2021). However, in dramatic situations such as a natural disaster or the outbreak of a disease such as COVID-19, some factors have a greater influence on consumer behavior than others. This serious public health crisis profoundly changed consumer attitudes and behavior, as economic sales statistics show. According to a Nielsen Company study, the COVID-19 pandemic led to observable changes in consumer behavior and spending levels worldwide (Nielsen, 2020). The pandemic also changed consumption patterns. For example, some product categories (e.g., clothing) experienced reduced sales during the pandemic while others (e.g., entertainment products) experienced increased sales (Degli et al., 2021). Some researchers believed that the Covid-19 pandemic permanently redirected human behavior. However, Sheth (2020) pointed out that consumers might return to previous patterns following the lockdown, though at the time of this writing, this remains to be seen.

Therefore, it is important to examine the determinants that precede or follow consumer purchasing behavior, especially for everyday goods, after a pandemic takes place. Previous research in consumer psychology and behavioral economics has found that various psychological factors influence customer behavior in different ways (Durante & Laran, 2016; Asioli, 2017; Foxall, 2015). Under pandemic circumstances, it is unsurprising that the need to purchase essentials takes priority (Larson & Shin, 2018). However, research on the factors influencing changes in consumer behavior regarding essential goods due to the COVID-19 pandemic has received little attention (Lingqvist et al., 2021, Sheth, 2020). These factors include choice, COVID-19, information, perceived social equity, risk, and stress. Understanding consumer behavior is vital for predicting the purchasing behavior of potential customers. Since the COVID-19 pandemic may create a new consumer behavioral pattern during the endemic phase, this data can help companies understand how customers might behave both during this time and in the future. The study not only identifies the factors influencing consumer behavior but also allows sellers to plan tactics to proactively address these behaviors once they are aware of the changes in their consumers.

2. Literature Review

In this study, Ajzen's (1988) theory of planned behavior (TPB) and additional external variables were included to identify the elements that influence consumer behavior about necessity goods. In addition, this study explored the theoretical aspects of consumer buying behavior and the influencing factors, building on the work of Khaniwale (2015), who examined the relationship between consumer buying behavior and the variables that influence customers' buying processes and decisions (Khaniwale, 2015; Noel, 2017; Al-Salamin & Al-Hassan, 2016). Research shows that a consumer's purchasing behavior is strongly influenced by internal and external variables, including cultural, social, personal, and psychological factors.

Furthermore, it is crucial to analyze the theory of how individuals receive, understand and apply information in decision-making. During the COVID-19 epidemic and endemic phase, consumers received a wealth of information from various sources about safety protocols, product accessibility, and economic forecasts. An overabundance of information or conflicting messages could influence consumer decision-making by either helping or hindering the evaluation of essential items. Consumers can rely on reputable sources and look for concise, relevant information to make their purchasing decisions.

Consumer behavior for everyday goods

Consumer behavior has been described as the study of how people buy, what they buy when they buy, and why they buy (Kotler, 1994). This scientific field seeks to understand the consumer’s decision-making processes, which can help firms and marketers capitalize on buying behavior. Necessity goods are products or services that consumers are willing to buy irrespective of changes in their income levels, which is why these products are less sensitive to income level changes.

During the COVID-19 pandemic, consumer purchasing behavior concerning necessities called attention to the urgency of acquiring items relevant to avoiding COVID-19 and ensuring survival. Not surprisingly, in such an emergency, the need to buy necessities took priority (Larson & Shin, 2018). In general, consumers buy necessities regardless of whether they feel obligated to do so or whether they buy the product impulsively.

Since the outbreak of COVID-19, many researchers conducted studies to determine the impact of the disease

on people's lives and what effect it had on consumer behavior (e.g., Werner-Lewandowsk et al. 2021). In another study, a distinction between necessary and non-necessary products was recommended to better understand consumer behavior, especially in stressful situations (Di Crosta et al., 2021). The present study, however, focused on consumer behavior regarding daily necessities. Furthermore, this study investigated how variables such as choice, COVID-19, information, PSE, risk, and stress affect consumer purchasing behavior of daily necessities in the post-COVID-19 pandemic period.

Choice

The COVID-19 pandemic had a significant impact on consumer behavior concerning product choice. Consumers bought relatively more essential goods, health and hygiene products, and digital platforms (Das et al., 2022). Factors such as the fear of contagion, government measures, and changes in activities and travel influenced consumer choices, especially in terms of transportation choices and consumption behavior. Consumers prioritized safety, social distancing, and infection concerns in their decision-making, which led to increases in online shopping, contactless payment, and essential goods purchases (Rizvi, 2021). The pandemic also led to a shift towards e-commerce, with consumers buying more groceries and other goods online (McKinsey, 2020). These changes in consumer behavior were expected to evolve based on choices related to health, safety, and convenience (Das et al. 2022). Therefore, it is hypothesized that

H1: Choice significantly influences consumer behavior for everyday goods.

COVID-19

The current study explores how the fear of COVID-19 influences purchasing behavior. Fear, a basic human emotion, functions to protect us by alerting us to potential dangers and priming us to react with fight or flight responses. Simply put, fear functions as a natural warning system in our bodies, cautioning us to be careful and alert. With so many deaths worldwide, it is undeniable that this pandemic significantly affected individuals' mental and physical health (Rodríguez-Hidalgo et al., 2020). Consequently, it is not surprising that consumers became more cautious and altered their behavior during that time. Panic buying is an example of a phenomenon that occurs when fear and panic influence behavior. It is defined as herd behavior that occurs when consumers buy large quantities of products in anticipation of, during, or after a disaster (Di Crosta et al., 2021). Panic buying generally increases consumers' fear of supply shortages, exacerbating their purchasing behavior. Previous studies found that people fearful of a pandemic are more likely to gravitate towards products that reduce their risk of infection. For instance, appeals to fear are often positively associated with increased purchasing of personal protective equipment (Liu, et al., 2021). In addition, Addo et al. (2020) confirmed that fear of COVID-19 significantly influenced consumer behavior concerning necessities purchasing. However, it is still unclear to what extent the fear of COVID-19 influences consumer behavior in that study. Therefore, it is hypothesized that the

H2: COVID-19 pandemic significantly influences consumer behavior related to daily necessities.

Information

Up-to-date information is crucial in a pandemic situation, as it assists in understanding how consumers are protected. Themselves from COVID-19. The behavior of consumers regarding necessary goods can change as a result of the pandemic. For example, consumers might research or consult with other people to decide on the type or brand of essential items such as face masks or hand sanitizer. A McKinsey study (2020) reported that consumers around the world shaped their purchasing behavior differently, often influenced by information received from advertising on platforms such as Twitter, Facebook, Instagram or other online platforms. Consequently, they tended to spend their money on the type or brand of everyday goods that appealed to them. In a recent Trust Barometer Special Report (2020), the results showed that a third of respondents actively turned away from brands they perceived as responding inappropriately to the crisis, highlighting the power of social media to provide up-to-date information. Therefore, it is hypothesized that

H3: Information significantly influences consumer behavior about everyday goods.

Perceived Economic Stability (PES)

The COVID-19 pandemic had a profound impact on consumer behavior, with PES being an important factor. Several studies showed the influence of perceived economic stability on consumer behavior during and after the pandemic. For example, a 2022 study found that consumers' perceptions of uncertainty, scarcity, pandemic severity, and pressure, led to changes in purchasing behavior (e.g., panic buying and a preference for useful

products; Tao et al., 2022). Another study, conducted in an emerging country and published in 2021, examined the impact of COVID-19 on changing consumer behavior based on socioeconomic status and emphasized the need to understand how different consumer groups adjusted their purchasing behavior during the pandemic (Das et al., 2022). In addition, a literature review published in 2023 described the significant behavioral changes of consumers during the pandemic, including abnormal purchasing behavior and changes in consumer preferences, which have implications for consumer-oriented logistics (Cai et al., 2023).

These studies collectively suggest that PES plays a critical role in shaping consumer behavior during and after a pandemic. The uncertainty and economic impact of the COVID-19 pandemic led to changes in consumer purchasing behavior, with a preference for essential products, consumer durables, and online shopping. In the post-pandemic period, it will be critical for businesses and policymakers to understand the ongoing impact of perceived economic stability on consumer behavior to adjust their strategies and support consumer needs. Therefore, it is hypothesized that
H4: PES significantly influences consumer behavior for everyday goods.

Risks
Everything we do in our daily lives carries risks, whether it is driving, jogging, or even eating. The same risk applies to products and services. According to Bauer (1960), consumer behavior inherently involves risk in that every action has consequences that the consumer cannot be certain about with at least some of these consequences potentially being unpleasant. Researchers have analyzed that a purchase decision involves risk if the outcomes are associated with the decision. From a consumer behavior perspective, the consumption of goods during a pandemic is considered a risky phenomenon (Lee, 2009). In this study, the overall risk is determined based on the consumption process. It has some dimensions such as performance risk, social risk, physical risk, financial risk, psychological risk, and time loss risk (Mitchell & Harris, 2005). Consequently, this element should be taken into account. The likelihood that the consumer will be affected by the risk posed by the product or service they purchase can influence their behavior. However, some scientists believe that these risks need to be thoroughly researched to better identify consumer behavior and recommend appropriate solutions. Accordingly, it is hypothesized that the
H5: Risks significantly influence consumer behavior for everyday goods.

Stress
Stress can influence consumer behavior in various ways. Studies have shown that people react strategically in stressful situations by adjusting their spending behavior. Many consumption decisions, such as buying or remodeling a home and buying a new car, are classified as stressful events and ranked on a life events scale (Moschis, 2007). Stress related to consumption can be experienced before and after the purchase of a product. In addition, stress affects consumer behavior in the context of essential items. Many of us face difficulties that are stressful and unpleasant, triggering intense emotions. Although public health measures such as social isolation, distancing, and regulations are needed to prevent the spread of COVID-19, they can make us feel lonely, tense, and anxious. As a result, COVID-19 has had a wide range of stress-induced effects on consumer behavior. During the pandemic, stress was found to increase the purchase of daily necessities while simultaneously leading to decreased spending on non-essential items (Di Crosta et al., 2021). Therefore, it is hypothesized that
H6: Stress significantly increases the consumer purchasing of daily necessities.

3. Research Methodology

As Malaysia was expected to complete the transition from the pandemic to the endemic phase of the outbreak in June 2023, convenience sampling was used to collect the sample for the present study. Respondents were contacted via WhatsApp groups with a link to an online survey. According to the Department of Statistics Malaysia (DOSM, 2023), there will be 22.3 million people of working age (18 to 64) in Malaysia in 2023. According to Krejcie and Morgan (1970), the sample size based on population statistics was about 384. On the other hand, the GPower software determined a minimum sample size of 98 with six variables, a medium effect size (0.15) and a power requirement of 0.95, based on a predictive power of 0.80. Finally, after cleaning the data, only 1438 were deemed useful for the analysis.

The demographic part of the questions was followed by sections on consumer behavior for daily goods, choice, COVID-19, information, work management, risks, and stress. In the final sections, Likert scales from 1 to 7 were used, with 1 indicating the highest level of disagreement and 7 indicating the highest level of agreement. The sources used in the study were adapted and adopted based on the sources of Di Crosta et al. (2021) on consumer behavior for necessity goods, 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 PES and Cohen et al. (1983) and Al-Dubai et al. (2012) on stress.

4. Results

The study used kurtosis and multivariate skewness to test for normality. The common variance method (CMV) was the next issue to be investigated as the study involved the simultaneous collection of the independent and dependent variables from the same respondents. In addition to cross-loadings, average variance extracted (AVE), composite reliability (CR) and heterotrait-to-monotrait ratio (HTMT), the current study also examined the measurement model criteria. PLS-SEM modeling was used to evaluate the measurement and structural model. The path coefficients, standard errors, t-values, and p-values for the structural model were then displayed using a bootstrapping technique with 5,000 samples after confirming normality with Mardia's multivariate skewness and kurtosis.

Before this, respondents' demographics were analyzed. The analysis was then explained, starting with the measurement model and the structural model.

Table 1: Demographic of the Respondents

	Items	n	%
Gender	Female	1021	71
	Male	417	29
Age	≤20	156	10.85
	21-30	1110	77.19
	31-40	76	5.29
	41-50	64	4.45
	51-60	28	1.95
	>61	4	0.28
Education	Diploma or Certificate	433	30.11
	have not attended school	7	0.48
	Postgraduate	20	1.39
	Primary school	3	0.21
	Secondary school	98	6.82
	University Bachelor's degree	877	60.99
Employment	Government sector	125	8.69
	Housewife	4	0.28
	Private sector	161	11.2
	Retiree/pensioner	6	0.42
	Self-employed	91	6.33
	Students	1008	70.1
	unemployed	43	2.99
Marital status	Divorced or widowed	13	0.9
	Married	196	13.63
	Single	1229	85.47

Residential	rural	416	28.93
	suburban	357	24.83
	urban	665	46.24

Table 1 shows the demographic characteristics of the respondents in the current study. The sample consisted of 1438 individuals, with 71% being women and 29% men. The age of the respondents ranged from under 20 to over 61, with the majority being between 21 and 30 years old (77.19%). Regarding education level, 60.99% had a bachelor's degree, while 30.11% had a diploma or certificate. The majority of respondents were students (70.1%), followed by those working in the private sector (11.2%) and the government sector (8.69%). Regarding marital status, the sample was predominantly single individuals (85.47%) and most respondents lived in urban areas (46.24%). Multivariate skewness and kurtosis were assessed according to Hair et al. (2017) and Cain et al. (2017). The data collected for the study were not multivariate normal, as indicated by Mardia's multivariate skewness (b=5.6674, P<0.001) and multivariate kurtosis (b=82.2917, p<0.001). As a result, the bootstrapping approach was used in the study to obtain the standard errors when testing the structural models. A bootstrapping technique with 5000 replicate samples was used (Ramayah et al., 2018). Common Method Variance (CMV) was a concern in this study due to the simultaneous collection of the independent and dependent variables from the same respondents (Avolio et al., 1991). To control CMV, the study used a single common method factor approach, following the recommendations of Podsakoff et al. (2003) First, the PLS marker variable approach was used to construct a method factor (Ronkko & Ylitalo, 2010). Crowne's (1960) social desirability scale was chosen as the marker variable using four items collected in the same survey but not included in the tested model. The marker indicators were: 1. "I am sometimes annoyed when I do not get my way;" 2. "I am always careful about my clothes;" 3. "I am always polite, even to people who are unpleasant;" 4. "Sometimes I have insisted on getting things my way;" Second, a method factor was created using the marker indicators as an exogenous variable predicting each endogenous construct in the model. Finally, the study compared the method factor model with the base model and found that the significant paths in the base model remained significant in the method factor model. From this, we can conclude that the data did not exhibit a CMV problem.

Figure 1: Constructs of the Study

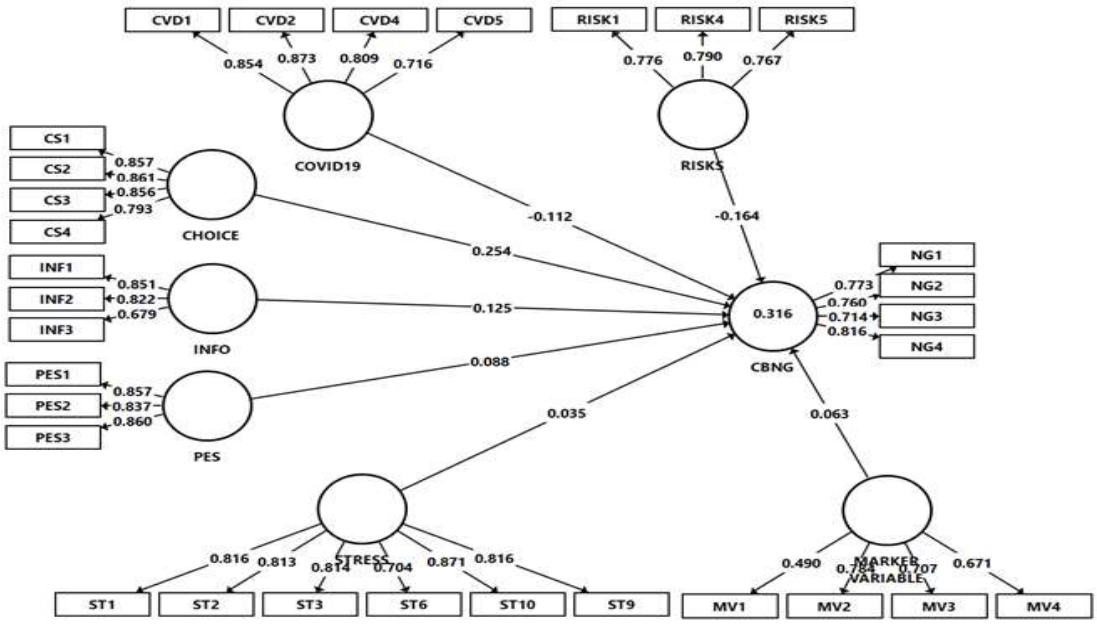


Table 2: Measurement Model

Variables	Item	Loading	CR	AVE
CBNG	NG1	0.775	0.851	0.588
	NG2	0.758		
	NG3	0.713		
	NG4	0.817		
CHOICE	CS1	0.857	0.907	0.709
	CS2	0.861		
	CS3	0.856		
	CS4	0.793		
COVID19	CVD1	0.854	0.887	0.664
	CVD2	0.873		
	CVD4	0.809		
	CVD5	0.716		
INFO	INF1	0.851	0.829	0.620
	INF2	0.822		
	INF3	0.679		
PES	PES1	0.857	0.888	0.725
	PES2	0.837		
	PES3	0.860		
RISKS	RISK1	0.776	0.822	0.605
	RISK4	0.791		
	RISK5	0.767		
STRESS	ST1	0.816	0.918	0.652
	ST2	0.813		
	ST3	0.814		
	ST6	0.704		
	ST9	0.816		
	ST10	0.871		

Next, the study continued with an examination of the measurement model. As suggested by Hair et al. (1998) and Ramayah et al. (2018), the indicator loadings, AVE and CR of the measurement model were tested. The criteria for these tests were that all indicator loadings should be greater than 0.5, the average value for each construct should be greater than 0.5, and the CR coefficient had to be greater than 0.7.

As shown in Figure 1 and detailed in Table 2, all indicator loadings exceeded 0.5, the AVE values ranged from 0.588 to 0.725, and the CR values ranged from 0.822 to 0.918. Thus, the requirements for indicator loadings, the reliability of the measures, and the convergent validity were all met.

Table 3: Discriminant Validity

	1	2	3	4	5	6	7
1. CBNG							
2. CHOICE	0.562						
3.COVID19	0.396	0.359					
4.INFO	0.592	0.704	0.520				
5. PES	0.379	0.329	0.292	0.527			

6. RISKS	0.493	0.431	0.373	0.553	0.329	[redacted]	
7. STRESS	0.068	0.126	0.274	0.125	0.067	0.133	[redacted]

Next, Henseler et al. (2015) introduced the Heterotrait-Monotrait (HTMT) ratio for testing discriminant validity, supplanting the Fornell and Larcker (1981) criterion. According to Kline (2011), if the HTMT value exceeds 0.85, or 0.90 as suggested by Gold et al. (2001), there are concerns about discriminant validity. On the other hand, if the HTMT ratio is below 0.85 or 0.90, the constructs are considered discriminable. As shown in Table 3, all HTMT values are below 0.85, which confirms the discriminant validity of all the constructs.

Table 4: Hypothesis Testing

	RELATIONSHIP	Std. Beta	Std. Dev	t-value	p-value	BCI LL	BCI UL	f^2	VIF
H1	CHOICE -> CBNG	0.266	0.034	7.855	0.000	0.211	0.321	0.068	1.519
H2	COVID19 -> CBNG	-0.12	0.03	4.054	0.000	-0.170	-0.072	0.016	1.295
H3	INFO -> CBNG	0.135	0.035	3.836	0.000	0.078	0.193	0.015	1.749
H4	PES -> CBNG	0.101	0.027	3.757	0.000	0.052	0.143	0.012	1.244
H5	RISKS -> CBNG	-0.173	0.027	6.37	0.000	-0.218	-0.130	0.035	1.234
H6	STRESS -> CBNG	0.029	0.024	1.232	0.109	0.002	0.095	0.001	1.082

Path coefficients, standard errors, t-values and p-values for the structural model were presented using a bootstrapping approach with 5,000 replicate samples as suggested by Hair et al. (2019) and Ramayah et al. (2018). Based on Hahn and Ang's (2017) critique that p-values are not a good criterion for testing the significance of hypotheses, several alternative methods were suggested, including the use of replication studies (Sawyer & Peter, 1983; Singh, Ang, & Leong, 2003), effect size estimates, and confidence intervals (Aguinis et al. 2010; Ely, 1999; Hubbard and Meyer, 2013; Lin, Lucas, and Shmueli, 2013). Therefore, several decision rules were used in the study, including the p-value criterion, effect size, and confidence intervals.

The current study used Cohen's (1988) criteria of 0.02, 0.15 and 0.35 to determine the effect size, reflecting small, medium and large effects, respectively. Table 4 shows that four relationships had a significant influence with a small effect size. The effect sizes for factors of choice, COVID-19, information and risks were small, with f^2 values of 0.068, 0.016, 0.015 and 0.035 respectively.

The criteria for the hypothesis test are also summarized in Table 4. As can be seen from the table, the study first examined the influence of six variables on consumer behavior. Overall, choice ($\beta = 0.266$, $p<0.01$), information ($\beta = 0.135$, $p<0.01$) and PES ($\beta = 0.101$, $p<0.01$) had a positive influence on consumer behavior, while COVID-19 ($\beta = -0.12$, $p<0.01$) and risk ($\beta = -0.173$, $p<0.01$) had a negative influence. As a result, support was found for hypotheses H1, H2, H3, H4 and H5. In contrast, the study found an insignificant relationship between stress and consumer behavior.

According to Hair et al. (2019), R^2 values of 0.75, 0.50, and 0.25 are considered significant, moderate and weak respectively by Hair et al. (2019). The explanatory power R^2 of the result in the sample was 0.313 (Q^2=0.181), which is considered reasonable for a model of this type. The variables account for 31.3 percent of the variation in consumer behavior.

Table 5: PLS-Predict

	PLS RMSE	LM RMSE	PLS-LM RMSE	Q^2_predict
NG2	0.751	0.748	0.003	0.183
NG4	0.691	0.696	-0.005	0.212
NG3	0.823	0.818	0.005	0.139
NG1	0.680	0.683	-0.003	0.179

The study also performed the PLS Predict analysis to see how good the predictive power was. Predictive validity refers to the ability of a set of measures for a particular concept to predict a particular outcome variable (Shmueli et al., 2019; Felipe et al., 2017). Predictive validity (out-of-sample prediction) was assessed using cross-validation with holdout samples, as described by Shmueli et al. (2019), who obtained k-fold cross-validated prediction errors and prediction error summary statistics, such as the root mean squared error (RMSE), mean absolute error (MAE), and mean absolute percentage error (MAPE), to assess the predictive performance of their PLS path model for the indicators and constructs. The equivalent Q^2 from the PLS-Predict study were NG1 (0.179), NG2 (0.183), NG3 (0.139) and NG4 (0.212), which were all greater than zero, indicating that the data was sufficiently predictive. Since the errors were normally distributed or symmetrical, the root mean square error (RMSE) was used. The RMSE showed that out of 4 items, half were negative and lower than the corresponding values in LM (see Table 5), indicating that the model had some predictive power.

Discussion

The current study aimed to investigate the determinants that influence consumer purchasing behavior, especially for everyday goods, after the COVID-19 pandemic. The study's findings on the positive impact of choice on consumer behavior align with the findings of Das et al. (2022) and Chernev, Böckenholt and Goodman (2015), suggesting that a wider choice of products can positively influence consumer behavior.

Furthermore, the current study found a positive relationship between information and consumer behavior, consistent with an earlier study by Broniarczyk and Griffin (2014), which supports the idea that providing consumers with more information can positively influence their behavior. In addition, the results suggested that PES had a positive influence on consumer behavior. This is in line with existing research by Mishkin and Serletis (2015) and Dholakia and Dholakia (2019), which indicates that the perceived stability of the economy can significantly influence consumer confidence, spending, and investment decisions.

On the other hand, the study's finding that COVID-19 negatively impacted consumer behavior aligns with previous research that has shown that the pandemic led to decreased spending, especially in sectors such as travel and hospitality (Sotgiu & Galati 2020; Di Crosta et al., 2021). In addition, numerous studies during the COVID-19 pandemic have shown the negative impact of risks on consumer behavior, leading to decreased spending and changing consumption patterns. As predicted, the result of this study is clearly in line with that of Sotgiu & Galati (2020).

Nevertheless, the study's finding that stress had no impact on consumer behavior contradicts some previous research. For example, a study by Luce, Payne, and Bettman (2000) found that stress influenced consumer behavior and led to impulsive decisions and changes in purchasing behavior. It is important to note that the discrepancy in the results of the study may be due to the specific context that was studied. The demographic characteristics of the respondents, as shown in Table 1, provide additional context for interpreting the current study's findings. The majority of respondents were young adults with a bachelor's degree, employed in the private sector or students, and residing in urban areas. These demographic insights about young consumers provide a better understanding of the consumer behavior patterns observed in the study, similar to Luqman et al. (2019). Undoubtedly, this demographic of young adults is less engaged and responsible compared to the older demographic, suggesting an insignificant relationship between stress and consumer behavior.

5. Implications and Recommendations

This study contributes to the understanding of consumer buying behavior in Malaysia by combining elements of the major theories of TPB and PMT. Given that consumer behavior is highly unpredictable, further research is recommended to thoroughly understand the extent to which these factors influence customers' purchasing decisions. This discovery is significant as it provides new insights into the psychological factors that influence purchasing decisions from the consumer's perspective. It also contributes to our understanding of the factors leading to changes in consumer behavior during the current health crisis. From a manufacturer's perspective, understanding these characteristics allows companies to gain a deeper understanding and anticipation of consumer buying behavior. This helps companies to develop more suitable products and marketers to devise more effective marketing strategies.

Limitations and Recommendations

This study has several drawbacks. First, consumers were selected for this study using a convenience sampling technique. It is recommended that future studies use appropriate probability sampling to address the problem of generalization. Second, the majority of the samples were mainly young adults. In the future, potential researchers should increase the number of respondents to cover other consumer segments. Third, the current study examined only a limited number of variables that influence changes in consumer behavior. Future studies should integrate other appropriate constructs based on the latest literature recommendations to obtain better predictive power for changes in consumer behavior regarding necessity items.

Conclusion

In summary, the results of the study provide valuable insights into the various factors that influence consumer behavior. The study showed that the choice of goods, information about the goods and PES had a positive influence on consumer behavior. Conversely, the study showed that external factors such as COVID-19 and risks had a negative influence on consumer behavior. The unexpected finding, however, is that stress had no impact on changes in consumer behavior, which contradicts some previous research in this area.

Overall, the results of the study highlight the complex relationship between various factors in shaping consumer behavior, emphasizing the need for further research to examine the nuanced relationship between stress and consumer behavior. The results of the study are valuable for businesses, policymakers and marketers to understand how different circumstances and individual characteristics can influence consumers' decision-making processes when choosing necessary goods, especially during a pandemic.

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