Consumer Confidence and Intention to Save During COVID-19 in Malaysia

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Abstract

This study compares gender, ethnicity, age, and income groups to the consumer confidence index in Malaysia during the period of COVID-19. Despite the widespread concern about consumer behaviour during the COVID-19 pandemic, the Consumer Confidence Index (CCI) measurement using micro-data has gained less publicity. This study aims to look at the four facets of consumer confidence: current personal finances (CPF), expected personal finances (EPF), current economic conditions (CEC), and buying conditions (BC). This study explores the correlation between consumer confidence and willingness to save for future consumption. Simultaneously, this study determines if the pandemic has shifted consumer behaviour towards precautionary savings. An online survey was done to collect data from 681 Malaysians, and the data were quantitatively evaluated using a statistical software package known as SPSS. The findings indicate people are less confident in current personal finance (CPF) than in the other three dimensions, with females being less confident than men, M40 being less confident than B40, and Malay being less confident than other races. This study discovers that Malay ethnic groups are 3.49 times more likely to have the intention to save than other ethnic groups. B40 households are 1.294 times more likely to save than other income groups. Consumers with less confidence in their buying condition are 0.689 times more likely to have the intention to save. Consumers who lack confidence in their finances are 0.613 times more likely to save. In contrast to others, a consumer who is less confident in the present economic climate is 0.306 more likely to have the intention to save. The findings suggest that government financial help is essential to instil consumer confidence in the face of the COVID-19 pandemic, justifying financial aid programmes targeted at B40 families, small enterprises, and job creation.

Keywords: COVID-19, consumer confidence, precautionary saving, Malaysia

1.0   Introduction

The severity of COVID-19 has exacerbated the economic slump, which is substantially higher than the 2008 recession. The widespread infections of this virus have been causing public health problems worldwide. As this virus's devastating and pernicious effects are widely known, the Malaysian economy and financial markets are under severe pressure. Presumptions of the financial market from economic experts and alternative economists suggest a decline in economic growth, leading to another global recession that may increase global instability. The government's abrupt implementation of the MCO put the economic sectors at stake. The Group Chief Economist of AmBank, Anthony Dass cites that the virus triggers significant disruptions in the tourism, travel, engineering, and agriculture sectors. Ergo, many workers are out of jobs due to reduced or non-existent wages. In the first two months of 2020, the Malaysian Prime Minister at that time predicts that the tourism sector will risk losing RM 3.37 billion. The coerced closing of SMEs and utilities would lead not only to irreversible closure and the loss of many jobs, but also to the bankruptcy of individuals. Personal consumption expenditure has been affected as the pandemic has provoked a dramatic shift in consumer confidence and behaviours. In the US, consumers rely on unemployment benefits, personal savings and credit to sustain their consumption activities (Kobayashi et al., 2020; WHO, 2020). Stéphane and Pedro (2011) claim that the Consumer Confidence Index is a good predictor of consumption. Studies focused on the conceptualisation of consumer confidence have been extensively published in the literature. However, studies regarding consumer confidence and its relationship with the theories of consumption that deviates from the permanent income hypothesis, in the context of uncertainty, justified for 'precautionary savings' arguments are limited. The fluctuation of consumption expenditure during crises highlights the importance of exploring consumer behaviours during the COVID-19 period, especially the impact of this pandemic on consumer confidence and saving intention.

This study thus analyses the Consumer Confidence Index during COVID-19 by contrasting Malaysians on their ethnicity, age, as well as between low- and high-income classes. Additionally, this study investigates a consumer precautionary savings strategy that demonstrates that consumers do or don't, expect saving on influencing future spending decisions. There has been no study to our knowledge

that has accounted for consumers' financial behaviour based on price of goods, their financial status, or their economic circumstance. Consequently, this study emphasised microdata analysis to gauge the Consumer Confidence Index and the intent to save. There are two primary research questions in this study. First, does the COVID-19 pandemic affect consumer confidence differently based on gender, income group, age, and ethnicity? Additionally, what impact do consumer perceptions of current personal finance (CPF), expected personal finance (EPF), current economic condition (CEC) and buying condition (BC) have on their intentions to save? As a result, this study's main objective is twofold: (1) to assess the effect of the COVID-19 pandemic on the Consumer Confidence Index (CCI), and (2) to examine the causal relationship between CPF, EPF, CEC, BC, and consumer saving intentions.

2.0 Literature Review

2.1 Consumer Confidence

People's views on the current and prospective state of the economy are referred to as 'consumer confidence' (Suzanna, Shereen and Eslam, 2022). The Consumer Confidence Index (CCI) has a direct relationship with the state of one's financial position and outlook on the general economy. Higher consumer confidence reflects consumption growth, suggesting a growing economy, while slower consumer buying signals economic decline. Consumers will be more secure about raising their spending when they are more enthusiastic about the state of the economy.

Consumer expectations and the current condition index are the two critical inputs of the CCI equation, and they hugely affect the calculation's outcome. The CCI covers the following details in large strokes: existing market conditions, business trends in the next six months, existing job trends, upcoming job prospects, and also household revenue in the subsequent six months. However, consumer confidence in an overall business environment, personal finances, and spending are the essential parts of the CCI computation. Consumer surveys are commonly used to obtain information on the consumer's level of confidence. Since there is no established method of surveying, various countries use different assessment methods. Customer trust surveys are conducted in 45 countries, according to Curtin (2007). Since then, the data has extended to include Malaysia, India, Japan,

and consequently many other countries. A comprehensive survey is used to calculate and publish consumer confidence index. Consumer confidence data has become increasingly relevant for economic growth in recent years.

Liquidity limitations or income disparities impair the buying intentions of the consumer. The 2007–2009 financial meltdown is regarded as the worst financial crisis since the great depression, which led to failure in some national economies. Policymakers and academics agree that the loss of consumer confidence in the financial markets exacerbated the crisis. Furthermore, researchers discover that CCI is a reliable indicator of consumer buying behaviour in some instances. Other relevant literature also looks at how confidence plays a part in modern consumption theories and how these theories foresee consumer purchasing behaviour in the future. Consumer confidence may help to predict whether people will buy in the future because the Consumer Confidence Index could be taken as a measure of the current consumer confidence.

Consumer confidence was first assessed at the end of the 1940s. This was achieved through the use of George Katona's Index of Consumer Sentiment. In 1967, the Conference Board developed the Customer Confidence Index (CCI) as a follow-up to the ICS. The World Values Survey Association periodically performs large-scale surveys on confidence and other social trends. These surveys allow people to evaluate the levels of confidence in their families, neighbours, and those from various nationalities and faiths. The University of Chicago National Opinion Research Center currently carries out related works.

Confidence is thought to be characterised as the feeling of trust. According to Webster's dictionary, the word 'confidence' means trusting, putting your trust, relying on, having a conviction, or believing. Often the words confidence and trust are used as synonyms, as a result (Adams, 2005). Concepts may share interpretations but do not have identical meanings. If trust is the belief that you can rely on others, confidence is the assurance that something is under control so the ambiguity is kept to a minimum (Siergist et al., 2006). However, since the word 'confidence' denotes trust, it stands to reason that factors that could affect trust would influence confidence in an economic process. In the field of economics, the principle of confidence is linked to predictability. Anticipating with a high degree of confidence will give rise to optimism while anticipating uncertainty breeds pessimism (Akerlof & Shiller, 2010).

When confidence level decreases, people reduce their spending, as well as their financial investment, and resort to money assets. Under any scenario, businesses will cease expanding, and investments will be put on hold. The rate of industrial production decreases, and the jobless rate increases. Keynes says that confidence in consumers and manufacturers is a central explanation of economic volatility (Van Aarle and Kappler, 2012). Confident individuals pay less to protect themselves from economic coercion and avoid funnelling their money to bribery, security defence, or taxation. Increased investment and further economic growth are often fuelled by a climate of political confidence in highly respectable society.

We know of the impacts of the CCI on households or consumer spending behaviour, but not the exact mechanisms by which it exerts those influences (Dees and Brinca, 2013). Some studies reveal macroeconomic factors to have the predictive ability in consumer confidence. (Helena and Alain, 2003; Selim and Seyfettin, 2017; Batchelor and Dua, 1998; Garner,1991; Ludvigson, 2004; Afshar, 2007; Matsusaka and Sbordone, 1995.

2.2 Consumer Confidence and Saving Behaviour

Literature has discussed the connection between confidence and economic decisions in-depth, particularly emphasising two main factors. First, the literature focuses on the conceptualisation of confidence and its function in modern consumer theories. Confidence is interpreted as 'precautionary savings' claims in the form of supposed household volatility to justify anomalies from the permanent income hypothesis. The literature has long tried to determine if confidence indexes incorporate other forms of knowledge, especially concerning economic understanding. The query is if present and historical values of variables such as earnings, unemployment, inflation, or demand could justify optimism or, more generally, if confidence measures have some predictive values when used in conjunction with these factors in forecasting economic outcomes.

While this evidence is typically inconsistent, most researchers make a statistically significant connection between ongoing and prospective confidence measures and economic factors. Certain scholars stress the crucial position of confidence indices in predicting cycles of extreme economic fluctuation, such as recessions and recoveries, or during periods of severe economic or political upheaval. During these times, marked changes in consumer confidence can

provide helpful information about consumption trends. The argument for 'precautionary savings' is made in light of potential household volatility. Most researchers see significant statistical correlations between the current and future confidence indicators and economic variables. Some stress the importance of confidence measures when predicting periods of high economic uncertainty, such as recessions and recovery. These intervals are typically associated with increased consumer confidence fluctuations, implying that significant shifts in consumer confidence can be helpful to consumption indicators (Stéphane Dées and Pedro Soares Brinca, 2011).

When households faced uncertainties, such as during the 2007 and 2009 economic recessions, they raised their savings rates by decreasing consumption and economic growth (Mody et al., 2012). Mody's findings are consistent with the precautionary savings model, which state that the greater the uncertainty about labour income, the greater the household savings. The results are convincing because income-wealth ratio, monetary policy, demographic data, global economy, and financial stress were used as control variables corroborating the study's results. During the 2007 and 2009 upswing, the evidence indicates that extra household saving habits are for precautionary savings.

Studies related to precautionary savings using micro or primary data are minimal. Microdata has been used in Japan to explore precautionary savings concerning two types of insecurity: income and social security (Murata 2003). Murata(2003) analysed panel data from respondents who had been contacted every October for six years. He discovered that households with small families that did not receive transfer income from the family made precautionary savings in light of social security uncertainties. Additionally, respondents began saving when they were young. This analysis suggests that volatility risks are minimised by splitting the risk over lives. When small families spread their assets and investments over a long period, they lower the degree of volatility. However, this study found no relationship between labour income uncertainty and precautionary savings.

Aneta (2017) investigates whether the Consumer Confidence Index has predictive power in explaining aggregate household propensity to save using time-series data for Poland. The findings confirm the importance of consumer confidence in stimulating household savings. Nofsinger (2012) describes household behaviour in boom and bust economic cycles. He found that in boom times, a

decrease in saving rate and the increase in debt load spurs economic growth. On the other hand, households repay debt and save more in bust times. Kosny (2013) provides evidence that savings decrease in rapid economic growth and increase in a slower economic growth period. This phenomenon can be explained through the importance of precautionary savings. Browning and Lusardi (1996) conclude that the precautionary saving motive has a role in explaining saving behaviour. Much evidence shows that the uncertainty in the economy causes greater saving rates (Carroll et al., 2012; Mody et al., 2012; Bande and Riveiro, 2013; Ceritoglu, 2013; Chamon et al., 2013; and Mastrogiacomo and Alessie, 2014).

Microdata-based studies on household savings in Malaysia are also scarce. Lee Hock Lock (1971), drawing on the Keynesian theory of savings, examined the factors that influence saving and analysed data from 1356 respondents. 40 per cent of the respondents saved for retirement, child care, and schooling, 20 per cent saved for home purchases, car purchases, and other uses, 10 per cent saved for business advancement, and 5 per cent saved for children's marriages and social and religious gatherings. This study was complemented by Arifin Md. Salleh et al (2002). They used the life cycle theory to examine the saving behaviour of the Malaysian community in Melaka. Demographic variables such as age, household size, education level, strata, and racial identity play a significant role in saving models. Both of these studies omitted uncertainty from their analyses.

Thus, this study will investigate how consumers react to uncertain conditions, and whether they will save for future consumption or not. The precautionary savings are theoretically deduced from the utility function u (C), where u (C') is convex. This means that as income volatility increases, the suit's utility expectation for each expected consumption value increases proportionately. Thus, the desire to save grows as uncertainty grows (Romer, 1996). According to Menegatti (2007), when households anticipate future uncertainty, the utility of a suit from increased consumption in the future is greater than the loss of utility (marginal disutility) from decreased consumption in the future. Thus, risk-averse households can save to prepare for potential uncertainty and limit utility losses.

According to the literature review, households raise their savings in times of uncertainty as a precaution. As such, this study examines the Consumer Confidence Index and consumers' intention

to save as a precautionary measure for future consumption during the COVID-19 pandemic.

2.3 The Theory of Consumer Behaviour

This section examines consumer behaviour. An analysis was done to ascertain the relationships between consumer behaviour and consumer confidence. Friedman (1957) maintains that individuals' total consumption is largely dictated by their lifetime income. The Permanent Income Hypothesis (PIH) principle asserts that consumer spending depends on permanent income. Transient fluctuations in earnings have little impact on overall consumption. The PIH is stated as follows:

$$C_t = Y_{Pt} \tag{1}$$

This equation equates to an increase in consumption and a permanent flow of income. Consumption at time t is denoted by C_t, while Y_{Pt} represents permanent profits at time t. The current value of wealth is defined as permanent income: Y_{Pt}. Brigitte and Marc-Andre (2002) define Y_{Pt} as:

$$Y_{Pt} = r \left[A_t + \sum_{i=0}^{\infty} \rho^{i+1} \; E_T \, Y_{Lt+i} \right] \tag{2}$$

in which r denotes the actual rate of interest, while A_t denotes the true value of an individual's income at the start of time t, $\rho = 1/(1+r)$ is the element of discount, Y_{Lt} is true labour earnings, and E_T is the expectation operator that is conditional on the individual's knowledge at time t.

Hall (1978) claimed that the current consumption could not be anticipated by making predictions based on previous behaviour. There have been many tests based on the random walk theory. These include classifying consumers into the categories of 'life-cycle' and 'rule of thumb' (Campbell and Mankiw, 1990). Campbell and Mankiw (1990) accrued a share of about 0.5 for each consumer group, concluding that the PIH is accurate for only a subset of the population. Another drawback of PIH is that it involves the compilation of disparate data. This data is termed as 'excess sensitivity' or 'variability in consumption in income' (Flavin 1981). To examine the connection between the

change in income and change in consumption, Sher (1995) uses microdata.

Factors that manifest excess sensitivity are liquidity limitations and cautious savings. 'Liquidity limits' means people cannot borrow at will (e.g., because of inadequate access to credit or high-interest rates) and their expenditures should be determined by permanent income instead of by their current income. The word precautionary savings means circumstances in which the expected utility of individuals increases in the event of declines in income by cutting current expenditure and accumulating reserves. It cannot be by PIH in itself that consumer confidence will help predict consumption. Consumer confidence indices have real value, given that they have insights into the anticipated future profits when adjusting for liquidity constraints or instability.

Katona (1975) has taken a ground-breaking philosophical approach to consumption. According to Katona, consumer spending is based on consumption capability and willingness. The consumption in this model relies on the confidence people have in their future finances. The core premise of psychological theory is that consumers are guided by a need to buy, which economic factors cannot justify. Contrary to economic assumptions, many businesses depend on variables that are not quantifiable, such as global turmoil or conflicts. According to this idea, an involuntary drop in confidence will lead to a non-foreseen decrease in consumption.

The willingness to consume is inversely proportional to the level of uncertainty. Also, if a consumer's perceived financial status has little effect on consumption, marginal instability decreases it. Confidence has to express risk appraisal in consumers' perceptions to be convincing. This appraisal only concerns expenditure strategies, as economic insecurity is reflected in this ambiguity. As a result, the psychological perspective can be resolved with the need for precautionary savings.

2.4 The Study Hypothesis

According to Ludvigson (2004), higher consumer confidence levels reduce uncertainty about the future and diminish the precautionary motive for saving. Higher consumer confidence is associated with a higher level of consumption. Savings increase in periods of slower economic growth and decrease in fast-growth periods (Kos´ny, 2013). In general, the precautionary saving theory predicts

that higher levels of uncertainty lead to higher precautionary savings (Grigoli et al., 2014). Therefore, the hypothesis of this study is the lower the Consumer Confidence Index, the higher the household's saving intention.

3.0   Methodology

This study utilised a unique methodology to conduct the survey. An online survey was conducted in Malaysia between 18 May 2020 and 20 July 2020. The survey was sent through email, Facebook, and WhatsApp since the COVID-19 pandemic was still spreading, and the movement control order (MCO) was implemented throughout the country. This survey gathered 681 respondents aged 18 to 74 years old. On average, the participants were about 31.2 years old (SD = 11.23). The average age of participants was 31.21 years (SD = 11.23). Women comprised 73.9 per cent of the sample (503 participants), and 26.1 per cent of the sample (178 participants) were male. 80.76 per cent of the respondents were from B40 households, and 19.23 per cent were from M40 households. 60.2 per cent of respondents were single, and 39.8 per cent were married. A majority (40.4 %) of the sample reported being employed, while 59.6 per cent reported not working. 74.3 per cent of the respondents were Malays, 15.4 per cent were Chinese, 7.3 per cent were Indian, and 2.9 per cent were of other ethnicities.

The Universiti Sains Malaysia Human Research Ethics Committee approved all procedures under the approval code USM/JEPeM 19-23, and all participants provided their informed consent before the study was conducted. The permission to carry out questionnaires on consumer confidence and saving intentions was granted, and participants were required to fill out questionnaires about these topics. This questionnaire was derived from prior research and included nine questions measuring consumer confidence. An indicator of how consumers see the financial and economic markets for the next six months was taken from an indicator established by Merkle and Sussman (2003). The question was given a rating of 1 to 3, with 1 implying 'Better' (favourable response), 2 implying 'Same', and 3 implying 'Worse' (unfavourable response) was put in place. The general economic condition components were ranked from 1 to 3 with 1 referred to as a 'Positive moment,' 2 referred to as a 'Neither good nor poor moment,' and 3 referred to as a 'Bad moment.' The CPI tracked changes to the price over some time, with 1 serving as a

benchmark of 'Rise', 2 as 'Stay the same' and 3 as 'Fallen'. If the percentage of favourable response is greater than the percentage of unfavourable response, the CCI is more than 100 and otherwise.

This study evaluated the impact of questionnaires on the Consumer Confidence Index based on the questions used by Jeff and Charles (2003). The CCI questionnaire combined data from thirteen questions to estimate consumer confidence. Ten questions regarding three assessments: current personal finance (CPF), current economic condition (CEC), and buying condition (BC), and three questions were developed on the expected personal finance (EPF) as stated in Table 2. Consumer confidence is typically seen as an unnoticed or latent feature. A factor analysis technique would look to discover a single factor that is important to the connections between the five measures. To put it another way, the loadings of each survey variable upon the common factors give an estimation of the variable's overall contribution and the sum of those loadings estimates the total variation explained by the common factor.

1. Current Personal Finances (CPF): This question examines whether people's financial circumstances have deteriorated significantly.
2. Expected Personal Finance (EPF): This question investigates whether people are worried about their employment and working arrangement.
3. Current Economic Condition (CEC): This question investigates people's perceptions about the current economic condition.
4. Buying Conditions (BC): This question investigates people's daily expenses.

An established rule of thumb for the index of Consumer Confidence (CCI) following Jeff and Charles (2003) is stated as follows:

$$CCI_t = \sum_{j=1}^{5} \left(P_{jt}^f - P_{jt}^u \right) 100 + 100 \tag{3}$$

where P_j^f f denotes the sample proportion responding favourably at time t, to the jth question,

P_j^u u = denotes the proportion of the sample responding negatively at time t, to the jth question. The basic formula concerning individual responses is formulated as follows:

$$CCI_t = \sum_{j-1}^{5} \sum_{i=1}^{n} \frac{X_{ijt}}{n}(100) + 100 \tag{4}$$

where X_{ijt} = 1 if jth respondent responds favourably to the answers to question jth at time t, while X_{ijt} = -1 if jth respondent provides an undesirable answer to the jth question at time t, and X_{ijt} = 0 if the jth respondent gives a similar or pro-con answer to the jth question at time t.

The analysis described in this study used the second formula to calculate each part of the query, following Jeff and Charles (2003). The CCI was constructed as follows. For each question, the relative score was calculated as (a) the difference between the percentage of respondents giving 'favourable' responses and the percentage giving 'unfavourable' responses, plus (b) the value of 100. In the report's first segment, interviewees who were unsure how to respond were classified as missing data and excluded from the analysis. This was done to eliminate the possibility of systemic variations caused by differences in the frequency of those responses.

In order to understand consumers' saving intentions, this study employed a binary logistic regression. The equation is as follows:

$$Y = \alpha + \beta_1 X + \beta_2 CPF + \beta_3 EPF + \beta_4 CEC + \beta_5 BC + \varepsilon \tag{5}$$

where
Y = Yes or No answer for intention to save
X = vector of households characteristics variables
CPF = current personal finance
EPF = expected personal finance
CEC = current economic condition
BC = buying condition
ε = error term

Since the category variables were used as dependent variables in the study, equation (6) implemented a general logistic regression model that defined the significant factors influencing consumers' behavioural intent to save.

$$\text{Logit} = \ln[P/(1-P)] = \alpha + \beta_1 X + \beta_2 CPF + \beta_3 EPF + \beta_4 CEC + \beta_5 BC + \varepsilon \tag{6}$$

where P indicates the probability of the consumer's desire to save, which is constant and the coefficient variables of 1 to 5. α is constant while β1-β5 corresponds to the variable's coefficient.

4.0 Results and Discussions

4.1 Demographic Profile of The Respondent

Consumer confidence was calculated based on thirteen questions, the results of which were arranged in an index. Consumer confidence is generally considered a variable that is not observed or latent. There would be a single 'unobserved factor' or the cause of the association between the five variables being studied. The distribution of the values for each survey factor over the common dimensions provides an estimation of the overall magnitude of the variables' influence. Table 1 shows the demographic profile of the respondents.

Table 1 : Demographic Profile of the Respondent

		Percentage
Age	Baby Boomers (57-77)	2.9
	Gen X (42-56)	19.8
	Gen Y (27-41)	34.1
	Gen Z (2-26)	43.2
Gender	Male	26.1
	Female	73.9
Educational level	No education	0.1
	Primary education (UPSR)	0.4
	Secondary education (SRP / PMR / PT3 / SPM / STPM)	10
	Higher education (Diploma / Bachelor / Master / PhD)	89.3
Income	B40	56.0
	M40	30.0
	T20	14.0
Current Occupation	Private sector employee	23.1
	Public sector employee	26.0
	Self-employed	9.3
	Unemployed	40.4
	Other	1.3

Note: B40 households refer to households whose income groups are in the bottom 40 %, M40 refers to households whose income groups are in the middle 40 % of income earners, and T20 households refer to households whose income groups are in the top 20 %.

4.2   Exploratory Factor Analysis

The EFA is used to derive various measurements from a set of data and to evaluate the credibility of constructs (Hair, Black, Babin, & Anderson, 2010). A sum of thirteen constructs from the study was analysed using the LPC (version 20). Before conducting the EFA, the adequacy of data was assessed. In SPSS, all items were inserted and factor analyses were carried out without rotation. As coefficients were extracted from the correlation matrix, almost all of the coefficients were found to be statistically significant. Kaiser's Meyer-Olkin (KMO) value of 0.644 was higher than the proposed value of 0.60 (Kaiser, 1970). The significance of the data factorability was proved by Bart's Test to be good with a high level of significance (Bartlett, 1954). To evaluate the optimal number of variables, EFA was done with an Eigenvalue cut-off of 1.0. The rotation protocol was 'Varimax' and the principal component analysis was used for extraction. Each calculation in the EFA test should place a greater emphasis on its main construct.

The following criteria were used to validate the items using EFA: (1) the item must have a substantial loading on the pre-defined factor which is higher than 0.5, and (2) pre-defined factors should not be allowed to cross-load on an item. This analysis concentrated on the questions that were used to create the Consumer Confidence Index. There are four indexes in this study, namely:

1. Current Personal Finances (CPF): to investigate whether people have a major worsening financial condition.
2. Expected Personal Finance (EPF): to investigate whether people are worried about their employment and working arrangement.
3. Current Economic Condition (CEC): to investigate people's perceptions of the current economic condition.
4. Buying Conditions (BC): to investigate people's daily expenses.

The results of the EFA test are depicted in Table 2. Table 2 demonstrates that EFA uncovers four constructs with the average factor loading greater than, or equal to, 0.5 for each of their respective factors. They were current personal finance (CPF), expected personal finance (EPF), current economic condition (CEC), and buying condition (BC) centred on the constructs' loaded items. For the subsequent study, these four constructs and associated items were utilised.
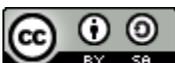
Besides that factor analysis normally identifies a specific factor, it also frequently predicts how individuals will respond to the dimension, especially in question. A linear combination of the variable questions is used to determine the index, with each question related to the underlying element as maximally as possible. Unlike other indices, the Consumer Confidence Index could derive average importance by equal valuing of all questions.

Table 2 : Exploratory Factor Analysis

No	Items	Components			
		1	2	3	4
CPF1	Take a cut in wage or salary during COVID-19	0.777			
CPF2	Get laid off or fired during COVID-19	0.831			
CPF3	Had a business lose money or fail during COVID-19	0.688			
CPF4	Have you or your spouse been unemployed and looking for work during the COVID-19 period?	0.777			
EPF1	Is it ever the case that your household runs out of money to purchase food during the MCO period?		0.747		
EPF2	Do you eat the same things for several days in a row because you don't have any cash on hand?		0.791		
EPF3	Do you ever cut the portion of meals or miss meals when there is not enough food in the house during MCO?		0.785		
CEC1	What are your household circumstances of financial status after the implementation of MCO?			0.402	
CEC2	Has your income changed due to the MCO?			0.585	
CEC3	Are you worried about your jobs and working conditions (pay, job position, and benefits) at your current workplace in light of the COVID-19 pandemic?			0.514	
CEC4	What do you think of the present economic situation in comparison to before the COVID-19 pandemic?			0.737	
BC1	Have the costs of goods and services changed after the COVID-19 pandemic?				0.695
BC2	Did you change your daily expenses during the MCO?				0.765

4.3 Reliability and Validity Analysis

The current study applied Hair et al. (2010)'s guidelines for examining construct durability and validity. With regards to the

construct measured in Table 3, the Cronbach Alpha value was above 0.5, while the CR value was above 0.5 which shows reliability. Convergence was tested by looking at the Average Variance Extracted (AVE). It shows that the AVE value have been exceeded 0.5, indicating that the questionnaire can reflect the characteristics of each research variable in the model (Hair, et al., 2010).

Average variance extracted (AVE) is greater than 0.5, indicating that the measurement questions can better reflect the characteristics of each research variable in the model

Table 3 : Reliability and Validity Estimates

Constructs	No of items	Cronbach's Alpha value	Average Variance Extracted	Composite Reliability
Current Personal Finances (CPF)	4	0.748	0.593	0.853
Expected Personal Finance (EPF)	3	0.729	0.540	0.818
Current Economic Condition (CEC)	4	0.748	0.592	0.853
Buying Conditions (BC)	2	0.638	0.534	0.525

4.4   Current Personal Finance

Current personal finance examines whether people's financial situations have deteriorated significantly. Table 4 summarises current personal finances. A score of 100 means neutrality, a score lower than 100 means the financial situation has deteriorated, implying a lack of confidence, and a score more than 100 means improvement in conditions, implying high confidence. According to Table 4, all ages were financially affected by the COVID-19 pandemic. The confidence index was very low. Baby boomers were the most financially impacted by the COVID-19 pandemic, followed by Gen Y, Gen Z, and Gen X. Females were more financially challenged than males. Malay was more financially affected than Chinese and Indian, and M40 households were more financially affected than B40 households. Overall, all Malaysian were financially affected by the COVID-19 pandemic and the Consumer Confidence Index was very low, which was 25.87.

These findings are consistent with the study by Muhammad Amjad Khan et al. (2021). As older adults have limited savings and do

not have access to financial loans, COVID-19 troubled their financial life. On 27 March 2020, the Malaysian government unveiled the Prihatin Rakyat Economic Stimulus Package (PRIHATIN) to help soften the financial impacts of COVID-19 on its citizens, by providing cash including RM 250 for individual government pensioners, healthcare services, and food items.

Table 4 : Current Personal Finance

Age (years)		% of Positive response	% of Negative response	CCI
	Baby Boomers (57-77)	5.00	82.50	22.50
	Gen X (42-56)	10.93	75.17	35.75
	Gen Y (27-41)	6.92	83.52	23.40
	Gen Z (2-26)	13.42	81.55	31.87
Gender	Male	13.83	79.25	34.75
	Female	6.25	85.85	20.40
Race	Malay	8.20	83.76	24.50
	Chinese	40.20	42.85	97.35
	Indian	39.22	46.42	92.80
Income	B40	8.10	79.10	29.00
	M40	6.90	85.65	21.25

4.5   Expected Personal Finance

Expected personal finance examines whether individuals are concerned about their jobs and working conditions. People of all ages had low confidence levels about their expected personal finance. Gen Y was the most worried about their jobs and working conditions. Gen X was more confident than Gen Z. Baby Boomers were the most confident, maybe because most of them relied on the financial aid of their children and relatives, and therefore no reason why they needed to worry about their job and working conditions. These findings are inconsistent with the findings by Muhammad Amjad Khan et al. (2021). During the COVID-19 pandemic, some businesses retrenched older employees, who were usually given higher salaries to reduce their expenses. The worst scenario was the employees would unlikely be employed again. Females were less confident in their future personal finance compared to males. Malay was the most worried about their jobs and working conditions compared to the Indian and Chinese. This may be because most of the Malay were employees or salary-paid workers, whereas most of the Chinese and Indian were employers.

M40 households were more concerned about their jobs and working conditions compared to B40. This may be because B40 households received aid from various agencies and most of the government programmes focused on helping B40 households. M40 households were considered not to have monetary difficulties as much as B40. Even though the COVID-19 pandemic also impacted M40 households, not much attention was addressed to them.

This finding is consistent with the study done by Mohamad Sidek Jantan et al. (2021). It is important to have financial security. Consumers need to prepare financial planning and budgeting to ensure that they will not spend more than their income and avoid wasting money and buying only necessary goods. According to Mohamad Sidek Jantan (2021), emergency funds are very important. Financial planning and budgeting help consumers ensure that they will have the right amount of money at the right time. Overall consumer confidence was very low, indicating that people are very worried about losing their job. These findings are consistent with the fact that unemployment is rising, particularly in urban areas, among 20 to 24 years old and remains persistently high among 15 to 19 years old. Sabah state recorded the highest unemployment among male youth, while other states reported high female youth unemployment (Lee Hwok Aun, 2020).

Table 5 : Expected Personal Finance

Age		% of Positive response	% of Negative response	CCI
	Baby Boomers (57-77)	18.33	55.00	63.33
	Gen X (42-56)	14.80	67.56	47.23
	Gen Y (27-41)	15.40	71.13	44.26
	Gen Z (2-26)	15.30	69.96	45.33
Gender	Male	18.16	63.33	54.83
	Female	13.66	72.16	41.50
Race	Malay	8.03	72.33	35.70
	Chinese	18.43	62.30	56.13
	India	13.33	45.00	68.33
Income	B40	19.03	63.33	55.70
	M40	10.33	78.3	32.03
Overall		15.30	69.47	45.87

4.6 Current Economic Condition

The current economic condition examines how people perceive the current economic climate. According to Table 6, Gen X and Baby Boomers had a more optimistic view of the current economic condition compared to Gen Y and Gen Z. Males and females had the same perception of the current fiscal climate as both were quite not confident about the current economic condition. However, Indians had a more optimistic view of the current economic situation than the Chinese and Malay. B40 households were less confident than M40 households. Overall, people were quite worried about the current economic condition.

These findings are consistent with the survey conducted by the Department of Statistics, Malaysia (DOSM). The survey revealed that nearly half of the self-employed respondents (46.6 %) lost their jobs during the implementation of the movement control order (MCO). 71.4 per cent of self-employed respondents had the amount of saving enough for only less than a month's expenses. 67.8 per cent of firms/business companies had no source of income. Therefore, 53.4 per cent of companies/business firms could only survive for one to two months as they could not pay their workers full salary (Sidah Idris et el., 2020).

Table 6 : Current Economic Condition

Age		% of Positive response	% of Negative response	CCI
	Baby Boomers (57-77)	1.50	7.25	94.25
	Gen X (42-56)	15.17	20.52	94.65
	Gen Y (27-41)	15.07	35.45	79.62
	Gen Z (2-26)	14.45	38.37	76.07
Gender	Male	14.35	36.50	77.85
	Female	14.60	37.70	76.90
Race	Malay	15.05	56.72	58.33
	Chinese	26.56	54.88	71.68
	India	28.15	42.49	85.66
Income	B40	11.25	41.40	69.85
	M40	21.90	28.12	93.77
Overall		14.48	37.40	77.07

4.7 Buying Condition

Buying condition investigates people's daily expenses. There were no differences in buying conditions between age group, gender, race, and income, as shown in Table 7. All consumers were confident about their daily expenses. However, the elderly were less confident in their daily expenses compared to other age groups. These findings indicate that there was no change or just a little change in the cost of goods as people did not change their expenses during the COVID-19 pandemic. This finding is consistent with Nielson (2020). MCO initially changes the behaviour of consumers by stockpiling shelf-stable foods and increasing online shopping behaviour. Then, limited stock availability increased the price of some goods and consumers started to reduce their shopping trips. Price increased caused people returned to their original daily routines (Nielson, 2020).

Table 7 : Buying Condition

Age		% of Positive response	% of Negative response	CCI
	Baby Boomers (57-77)	30.00	35.00	95.00
	Gen X (42-56)	37.95	29.00	108.95
	Gen Y (27-41)	40.90	27.20	113.70
	Gen Z (2-26)	40.80	26.50	114.30
Gender	Male	48.60	18.00	148.60
	Female	45.30	14.75	130.55
Race	Malay	47.45	12.35	135.10
	Chinese	41.45	27.15	114.30
	India	43.00	27.00	116.00
Income	B40	44.30	16.35	127.95
	M40	50.35	11.25	139.10
Overall		46.20	15.55	130.65

4.8 Consumer's Intention to Save

The logistic regression model was found to be statistically significant ($\chi 2 = 89.5$, df = 10, N = 681, $p < 0.05$). Consequently, the R-squared estimated by Cox, Snell, and Nagelkerke found the gap in saving intentions between 12.3 and 16.5 per cent by independent variables. The Hosmer and Lemeshow model fitness test was not significant as a consequence of which the good model fitness was seen in the Chi-square test ($\chi 2 = 12.39$, df = 8, $p > 0.05$).

Table 8 : Model specification test

Test		Chi-square	df	Sig.
Omnibus Test		89.478	10	0.000
Hosmer and Lemeshow Test		12.390	8	0.135
Cox & Snell R Square	0.123			
Nagelkerge R Square	0.165			

Table 9 shows that, Malay ethnicity (B = 1.252, $p < 0.05$), total household income (B = 0.257, $p < 0.05$), buying condition (B = -0.373, $p < 0.05$), current personal financed (B = -0.49, $p < 0.05$), and current economic condition (B = -1.185, $p < 0.05$) impacted consumer saving plans. However, expected personal finance was not significant (B = -0.18, $p > 0.05$). Malay ethnicity was more likely to have the intention to save, which was 3.49 times higher than other ethnicities. B40 households were more likely to have the intention to save, which was 1.294 times higher than other income groups. Consumers who lacked confidence in their purchasing situation were 0.689 times more likely to save. Consumers who had little confidence in their present financial situation were 0.613 likelier to choose to save. Consumers who were less optimistic about the present state of the economy had more intention to save.

Table 9 : Predictor Variables

	B	S.E.	Wald	df	Sig.	Exp(B)
1. Age	-0.167	0.098	2.914	1	0.088	0.846
2. Ethnicity:			15.620	3	0.001	
3. Ethnicity:(Malay)	1.252	0.579	4.669	1	0.031	3.496
Ethnicity:(Chinese)	0.623	0.614	1.030	1	0.310	1.864
Ethnicity:(India)	0.356	0.657	0.293	1	0.588	1.427
4. Total household income	0.257	0.112	5.297	1	0.021	1.294
5. Gender:(Male)	0.127	0.190	0.447	1	0.504	1.136
6. BC	-0.373	0.158	5.552	1	0.018	0.689
7. EPF	-0.180	0.154	1.375	1	0.241	0.835
8. CPF	-0.490	0.207	5.596	1	0.018	0.613
9. CEC	-1.185	0.196	36.345	1	0.000	0.306
10. Constant	4.076	1.025	15.816	1	0.000	58.920

5.0   Conclusion

This study investigates the Consumer Confidence Index and the intention to save during the COVID-19 period in Malaysia. The study discovered that people are less secure in their current personal finances (CPF) as compared to their expected personal finances (EPF), current economic condition (CEC), and buying condition (BC). In addition, the study shows that females have less confidence than men, the M40 group has less confidence than the B40 group, and Malay has less confidence than other races. Apart from that, the Malay ethnic group is more likely to have a saving intention that is 3.49 times higher than that of other ethnic groups. B40 households are 1.294 times more likely to have the intention to save than other income groups. Consumers who are less confident in their purchasing situation are 0.689 times more likely to save than others. Consumers with less confidence in their current personal finances are 0.613 times more likely to save than others. Consumers who are less optimistic about the current economic situation are 0.306 more likely to save than others.

The government spent money as a stimulus package to encourage its citizens to have confidence in their socioeconomic and monetary conditions and further support distressed local economies to facilitate long-term recovery. It would include the discovery of new methods of productivity and operation, as well as a bolstering of social support systems in times of stress. It supports increased attempts to limit or eliminate job-related and financial insecurity vulnerabilities. Therefore, this study suggests that government financial assistance is essential for consumers to be more confident in facing the COVID-19 pandemic. This study supports the existing fiscal policies, such as financial assistance implemented by the government, particularly in supporting the B40 households and small businesses and creating job opportunities. At the same time, government policy should also include M40 households. The government must intervene quickly and effectively to control the spread of the epidemic, evaluate the consequences for various facets of people's lives, especially those negatively impacted by the outbreak, close the gaps and disparities, and encourage equality. Much of the vulnerable and deprived groups receive the hardest hit, which calls for serious attention in the approach to policymaking. On the other hand, the government has insufficient resources to assist vulnerable groups over the long term. As a result, financial literacy has become critical for the public, especially in financial management and contingency planning for economic shocks.

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