Association of Socio-Demographic and Socio-Economic Factors with Consumer's Decision-Making in Food Purchases: A Case Study among Low-Income Consumer During Covid-19 Pandemic in Malaysia

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Abstract
This study was conducted to determine how socio-demographic and socio-economic factors influenced the decision-making process of low-income households in Malaysia in food purchases during the pandemic. A total of 1791 low-income respondents were selected randomly through both online and face-to-face surveys conducted with strict procedures. The results revealed that most of the respondents were female (51.4%), Bumiputera (81.5%), aged between 25-30 and 31-40 (29.1%) with an average monthly household income between MYR1001-2000 (37.1%). Household needs (63.7%), price (39.9%), halal status (25.5%), and product quality (19.8%) were the critical factors that affected the decision-making. Additionally, the study found that the premises that offer low prices (33.1%), a variety of prices and brands (26.9%), and a diverse range of products (16.8%) were among the factors that influenced the respondents' decision-making. Respondents were classified into six types of consumer profiles: Hipsters, Confused, Quality-concerned, Planning, Hedonistic, and Habitual Consumers. Gender, age, marital status, household size, ethnicity, education level, household income, and occupation significantly influenced these six types of consumer profiles (p<0.05). In conclusion, low-income consumers were more focused on household needs, price, halal status, and product quality when making food purchase decisions, and socio-demographic and socio-economic factors played a critical role in influencing consumer decision-making.

Introduction

The tastes and lifestyles of Malaysian consumers are changing with the times. The needs and wants of consumers in 1990 were significantly different from the present; the main drivers that change consumers' aspirations and lives are the country's development and economic progress. This refers to the Gross Domestic Product (GDP) in Malaysia. In 1999, GDP increased by 5.4 per cent; in 2021, GDP grew by 16.1 per cent (Ministry of Finance Malaysia, 2021). Increasing GDP can help Malaysia to meet the challenge of moving households towards the middle class. A country's priority is to reduce hardcore poverty, that is, those who suffer from a shortage of necessities such as food and shelter. The increase in GDP has formed a more capable middle-class segment. Income changes are an essential factor in changing consumer tastes. What used to be categorised as a will, such as cars and mobile phones, has become a necessity for current consumers.

Besides that, globalisation and economic liberalisation have led to the production transition to countries with the potential to carry out production. This has resulted in consumers in Malaysia having various choices in purchasing goods and services (Sabri & Hashim, 2017). International trade occurs because globalisation and economic liberalisation have paved the way for suppliers to market their products abroad. However, this is a good thing for consumers as it has a wide selection of goods, but it can lead to confusion in choosing goods and services (Steenkamp, 2019).

Socio-demographic and socio-economic characteristics also influenced the decision-making and preference of consumers in purchases. A thorough marketing study with Slovak customers at least 16 years old has been conducted for this reason. The study results demonstrate a strong relationship between respondents' preferences for branded goods and the chosen socio-demographic factors (gender, age, education, and income). However, this relationship varies in type and severity (Kral, et al., 2020). Yilmaz-Ersan, Ozcan, and Akpinar-Bayizit (2020) also reported that higher levels of education, income, and gender were associated with a greater likelihood of probiotic dairy product awareness, knowledge, and decision-making purchases among women in Bursa, Turkey. Furthermore, age is one of the characteristics impacting consumer purchasing behaviour and attitudes about pricing, according to (Slabám 2019). According to Sumi (2018), in the study of the effect of socio-economic characteristics on the purchasing behaviour of green tea consumers in Dhaka city, students and young adults aged 20 to 30 have shown a greater interest in drinking green tea on a daily to males, women consume more green tea. People with high incomes and levels of education are more likely to purchase green tea.

In addition, new norms due to the COVID-19 pandemic have caused consumers to have little or no choice but to adapt their lives and indirectly shape new lifestyles and tastes. The pandemic has accelerated the digital economy in Malaysia with a sudden increase in online transactions. It happens in Malaysia and Southeast Asian countries such as the Philippines, Indonesia, Thailand, and Singapore. The pandemic has also forced consumers to deal with traders virtually, learn to be proficient with fintech, and change living conditions in a state of movement and direct contact in social relations. As a result, lifestyles, and routines, such as

the need to work from home and explore new interests while staying at home, also provide more significant opportunities for the e-commerce industry to expand globally.

Furthermore, during the COVID-19 pandemic, comments regarding COVID-19's effects on the food and agriculture markets in the general press cover the effects on growers, processors, retailers, and consumers. In the context of the food market, economists have discussed the significantly changed patterns of household food spending Goddard (2020), focusing on the significant shift from food service sales to food retail sales during the pandemic. Food and beverage markets have also been impacted by an outer trend in online shopping (Albrecht, 2020). Moreover, owing to the shortage of supply and possibly owing to panic buying behaviours, the supply and demand of food were out of balance during this challenging time Ellison et al (2020), and this situation has since been reproduced throughout a large portion of the rest of the world.

Hoarding and stock-outs in grocery shops were further aggravated by the unfamiliarity of bare store shelves (a result of early hoarding activity), which heightened fear and uncertainty about future food pricing and availability (Ehlen et al., 2009; Lusk & McCluskey, 2020). Additionally, COVID-19 has altered how individuals purchase, with fewer households making in-person grocery store journeys and more households using online grocery shopping (Redman, 2020; International Food Information Council, 2020). The household's principal shopper(s) and underlying food values influence some food purchases. According to recent food industry studies, taste is the primary determinant of food choices, followed by price, healthfulness, convenience, and environmental sustainability (International Food Information Council, 2020). A broader set of food values (taste, price, nutrition, environmental effect, appearance, convenience, safety, origin, justice, tradition, and naturalness) were offered by Lusk and Briggeman (2009). According to their research, consumers value safety more than anything else, followed by nutrition, flavour, and price.

However, no study has been done to measure socio-demographic and socio-economic factors on food purchase decisions during the COVID-19 pandemic. Some households may prioritise price over other considerations because of the dramatic rise in unemployment and rising food prices. Additionally, given the observed increases in stockpiling behaviour during the COVID-19 pandemic, households might focus more on storability. Thus, this study aims to identify the association of socio-demographic and socio-economic factors with the decision-making of low-income consumers in Malaysia in food purchases during the COVID-19 pandemic, especially with the types of consumer markets.

Methodology
Study Design
This study was descriptive and uses a quantitative approach through the collection of secondary and primary data based on the objectives of the study, which are to identify the decision-making of low-income consumers in Malaysia in food purchases during the COVID-19 pandemic and to determine the association of socio-demographics with the types of consumers identified.

The quantitative approach is in the form of a survey that uses a questionnaire as an instrument of data collection. This method was chosen because the study involved a large group of respondents. The questionnaire contains questions in 'open-ended answers' and

Likert scales (disagree to agree strongly). This study is a cross-sectional study, which collects data only once.

Study Location and Sampling

The survey was conducted in all states in Malaysia on users aged 18 years and above, including the Federal Territory of Putrajaya and the Federal Territory of Kuala Lumpur, with a breakdown of 107 respondents for each state and territory. Using simple random sampling, the proposed total number of respondents was 2,000 from various socio-economic and socio-demographic backgrounds. According to Dillman (2000), most social science researchers use 5 per cent of sample errors due to human error factors such as answering carelessly, unanswered questions, and so on. However, the researchers of this study chose to use 3 per cent of the sampling error. Therefore, a total of 2,000 is sufficient for this study. However, 1791 respondents were involved in this study, with a response rate of 89.6%.

Instruments

The study utilized a questionnaire divided into seven sections, namely: Part A - Respondent's Background, Part B - Household Expenditures, Part C - Choice and Purchase Decision, Part D - Preference and Lifestyles, Part E - Consumer Choice Factor, Part F - Consumerism Knowledge and Skills, and Part G - Consumer Skills and Behavior. However, this article only focuses on the findings of Part A and Part C. Part A gathers information about the respondent's profile, such as gender, age, ethnicity, number of household members, marital status, employment status, highest level of education, total monthly income, total monthly gross income of the household, area of residence, and facilities owned by the respondent. On the other hand, Part C is about purchasing choices and decisions, including the factors that influence consumers when buying essential goods and choosing the premises where they will purchase them. Respondents answered nineteen questions about their purchasing preferences, using the Likert scale with five scales. The scale ranges from 1, meaning very insignificant, up to 5, which indicates significant importance.

Data Collection

Data collection was done online and self-administered. Email intermediates and social media were used to increase the reach and number of respondents who would answer the questionnaire. However, due to the constraints faced by the COVID-19 pandemic, data was only collected by 1791 compared to 2000, where 1591 questionnaires were collected face-to-face with respondents and another 200 online. The ethics committee (Faculty of Human Ecology, Universiti Putra Malaysia) approved the ethics before the study could be done. The consent form was given to the selected respondents to get their approval before they answered the questionnaire.

Data Analysis

The study data were analysed descriptively and inferentially using the Statistical Package for Social Science (SPSS- version 23) software. In this case, the overall objectives of the study are analysed descriptively. Multiple linear regression was used to identify the association of the socio-demographic background of respondents with the consumer profiles identified.

Results and Discussion

Socio-demographic Background

The number of respondents analysed was 1791. The respondents' background presented includes socio-demographic, i.e., gender, age, ethnicity, marital status, number of household members, and place of residence (Table 1), and socio-economic background, i.e., education level, employment status, and income (Table 2). The respondents were female (57%) and male (43%). Regarding age, 58.2% of respondents were between 25 and 40. The age range of respondents ranged from 17 to 72 years, with an average age of 33.62 years. In terms of ethnicity, the survey data showed that the percentage of Malay ethnic was higher (75%) compared to Chinese (11.4%) and Indians (6.6%).

The respondents surveyed who married was 59.4%, and single respondents were 40.6%. The number of members in the household ranges from one person to 15 people. The large household size of up to 15 people usually describes an extended family in which they live together for several generations. However, most respondents had the number of household members ranging from 1 to 5 people (76.3%). A few respondents had more than 11 family members (0.3%). Regarding the residential area, households are divided into four categories: village, suburban, town, and city. The results showed that almost 65 per cent of the respondents surveyed lived in suburban and urban areas.

Socio-economic Background

The socioeconomic background presented is education, employment, and income. These three variables are interrelated; the literature study shows their association with consumption behaviour. Generally, the percentage of respondents with a higher education (diploma or higher) is quite large (48%). Only about 3% of respondents had a primary school education or no formal education. The level of education has to do with the status of employment.

The results also showed that almost 70% of the respondents were employed in the formal sector, either in the public sector (33.2%) or the private sector (36.7%). The category of non-working respondents, homemakers, and students is 15%, who are likely to have no income. Nevertheless, there is no doubt that some of them have income through ancillary jobs such as online businesses. The category of pensioners may also have income and may not have income. Regarding the respondent's monthly income, the survey shows that some respondents have no income until the income reaches MYR20,000. Respondents' average and median income were MYR 2445.86 and MYR 2000 per month, respectively. A total of 18% of respondents stated that they had no income. Almost 80% of respondents surveyed earned MYR3000 and below. In other words, most of them consist of the B40 income group.

Meanwhile, household income is generally higher, where the average and median are MYR 4065 and MYR3100 respectively. The income range ranges from zero income to MYR30,000. Compared to the respondent's income with household income, the percentage with no income decreased to 10.4%, and only 50% remained in the MYR 3000 income category and below. However, the average household income of the respondents to this study is significantly lower than the average monthly income of Malaysian households of MYR7901.

Table 1
Respondent's Socio-demographic Background (N=1791)

Variable	Frequency (n)	Percent (%)
Gender		
Male	770	43.0
Female	1021	57.0
Age (Years)		
<19	18	1.0
19-24	347	19.4
25-30	521	29.1
31-40	521	29.1
41-50	204	11.4
51-60	143	8.0
>60	37	2.1
Mean: 33.62		
Ethnic		
Malay	1343	75.0
Chinese	204	11.4
Indian	118	6.6
Bumiputera (non-Malay)	118	6.6
Others	8	0.4
Marital status		
Single	727	40.6
Married	1064	59.4
Household size (Person)		
1-5	1366	76.3
6-10	419	23.4
11-15	6	0.3
Mean: 4.07		
Residential area		
City	80	4.5
Town	1078	60.2
Suburban	227	12.7
Village	406	22.7

Table 2
Respondent's Socio-economic Background (N=1791)

Variable	Frequency (n)	Percent (%)
Education		
No formal education	11	0.6
Primary school	48	2.7
Secondary school	536	29.9
Certificate	337	18.8
Diploma	381	21.3
Degree	401	22.4
Master/PhD	77	4.3
Occupation		
Government servant	594	33.2
Public sector	657	36.7
Business people/ self- employed	239	13.4
Housewives	79	4.4
Students	167	9.3
Retired	32	1.8
Not working	23	1.3
Monthly individual income (MYR)		
<1000	322	18.0
1000-2000	665	37.1
2001-3000	408	22.8
3001-4000	176	9.8
4001-5000	104	5.8
>5001	116	6.5
Mean: 2445.86		
Monthly household income (MYR)		
<1000	187	10.4
1000-2000	401	22.4
2001-3000	306	17.1
3001-4000	238	13.3
4001-5000	208	11.6
>5001	451	25.2
Mean: 4065.00		

Household's Decision-making in Food Purchases

Table 3 lists the factors that respondents considered most significant when choosing where to buy their household's food, including needs, religious requirements, current trends, comfort, and societal reputation. According to Table 3, respondents claimed that needs (63.7%), religious claims (15.7%), and comfort/practical (14.0%) were the three main factors influencing their household buying selections.

Table 3

Respondent's Decision-making in Food Purchases (N=1791)

Variable	Frequency (n)	Percent (%)
Need	**1141**	**63.7**
Religious requirements/compliance with Islamic law	281	15.7
Comfort/practical	250	14.0
Current trends	103	5.8
Societal reputations	16	0.9

Factors Influencing the Food Purchases

Table 4 below shows the survey results on factors influencing customers' purchasing decisions on food. The variables include purchase frequency, price, halal certification, quality, brand, sales service, eco-friendliness, country of origin, and product size or quantity. The survey found that price was the most influential factor, with 39.9% of respondents citing it as a significant consideration. Halal certification was also necessary, with 25.5% of respondents indicating that they preferred products with this certification. Quality was also a significant factor, with 19.8% of respondents stating they valued it highly. Brand, sales service, eco-friendliness, country of origin, and product size or quantity were less critical in influencing customers' purchasing decisions.

Table 4

Factors Influencing the Food Purchases of Respondents (N=1791)

Variable	Frequency		Percent
	(n)	(%)	
Price	715	39.9	
Halal certification	457	25.5	
Quality	354	19.8	
My practices	95	5.3	
The brand	76	4.2	
Sales Service	35	2.0	
Eco-friendliness	27	1.5	
Country of origin (Malaysia)	19	1.1	
Small size or quantity	13	0.7	

Factors Influencing the Choice of Premise in Food Purchases

Table 5 presents the key factors that influence the choice of purchase premises, which include affordable prices, friendly service, a wide range of products, brand choice, and availability of facilities such as parking and cleanliness. The survey results revealed that most respondents (33.1%) considered affordable prices the most important factor when selecting household food purchase premises. Moreover, 26.9% of the respondents preferred a wide choice of

brands and prices, while 16.8% chose places with different foods. On the other hand, the availability of facilities such as parking and payment counters was considered the least crucial, with only 3.2% of respondents considering it an essential factor.

Table 5
Factors Influencing the Choice of Premise in Food Purchases among Respondents (N=1791)

Factor	Frequency (n)	Percent (%)
Offer low prices	593	33.1
A wide selection of brands and prices	481	26.9
There are different types of foods	301	16.8
Hygiene	249	13.9
Seller-friendly service	109	6.1
Facilities (parking, payment counter)	58	3.2

Consumer Decision-Making Profiles
A diverse range of consumers influences the consumer decision-making process. A study was conducted to explore the various factors involved in this process. The study found six decision-making profiles of consumers: Hipster Consumers, Confused Consumers, Quality Concerned Consumers, Planning Consumers, Hedonistic Consumers, and Habitual Consumers. The distribution of items for each of these categories is outlined in Table 6.

Table 6 data suggests that Hipster Consumers have their favourite brands (21.3%) that they repeatedly buy. However, they highly disagree on purchasing expensive brand options (28.7%). On the other hand, Confused Consumers find it difficult to choose a store to buy from (20.3%) and often get confused (15.9%) due to the variety of consumer goods brand options. Quality Concerned Consumers prioritise choosing the best product (33.8%) and consider high-quality products important (27.4%). Planning Consumers are cautious with their spending (35.8%) and plan their purchases well (32.2%). Hedonistic Consumers enjoy buying new and exciting items (22.1%) and consider shopping as a fun activity in their lives (21.6%). Finally, Habitual Consumers prefer shopping at the same store (11.3%) but do not like to waste their time shopping (27.5%).

Table 6
Consumers' Decision-making Profile of Respondents (N=1791)

Statement	Strongly disagree		Disagree		Neutral		Agree		Strongly agree	
	n	%	n	%	n	%	n	%	n	%
HIPSTER CONSUMERS										
My clothes are updated according to the latest fashion changes.	377	21.0	394	22.0	573	32.0	322	18.0	125	7.0
I like to buy the most popular brands.	333	18.6	405	22.6	568	31.7	318	17.8	167	9.3
Fashion and attractive chic are essential for me.	351	19.6	426	23.8	543	30.3	312	17.4	159	8.9
More expensive brands are often my choice.	514	28.7	479	26.7	464	25.9	245	13.7	88	4.9

I have a favourite brand that I buy repeatedly.	148	8.3	218	12.2	491	27.4	552	30.8	382	21.3
CONFUSED CONSUMERS										
The more I know about a product, the harder it is for me to choose the best one.	155	8.7	269	15.0	601	33.6	466	26.0	300	16.8
Sometimes, choosing which store to buy a particular item is challenging.	118	6.6	257	14.3	587	32.8	466	26.0	363	20.3
There is a massive selection of product brands out there (market) that often get me confused.	188	10.5	259	14.5	612	34.2	448	25.0	284	15.9
QUALITY CONCERNED CONSUMERS										
Getting a quality product is essential.	75	4.2	123	6.9	493	27.5	609	34.0	491	27.4
In general, I try to choose the best product.	44	2.5	64	3.6	419	23.4	658	36.7	606	33.8
I set high standards and expectations for the products I buy.	263	14.7	363	20.3	611	34.1	365	20.4	189	10.6
PLANNING CONSUMERS										
I plan my shopping activities well.	25	1.4	84	4.7	473	26.4	633	35.3	576	32.2
I am careful with my expenses.	31	1.7	66	3.7	456	25.5	596	33.3	642	35.8
I used to shop fast.	129	7.2	211	11.8	689	38.5	463	25.9	299	16.7
HEDONISTIC CONSUMERS										
Buying something new and exciting was fun in my life.	110	6.1	204	11.4	619	34.6	463	25.9	395	22.1
Shopping has been a fun activity in my life.	117	6.5	248	13.8	606	33.8	434	24.2	386	21.6
A product does not need to be perfect or the best for satisfaction.	245	13.7	322	18.0	550	30.7	408	22.8	266	14.9
HABITUAL CONSUMERS										
I go to the same store every time I go out shopping.	179	10	335	18.7	680	38	394	22.0	203	11.3
Shopping in the store is a waste of my time.	493	27.5	443	24.7	494	27.6	243	13.6	118	6.6

The Association of Socio-demographic and Socio-economic Factors with Consumers' Decision-making Profile

Multiple Regression analyses have been conducted to identify the relationship between socio-demographic and socio-economic factors with each consumer's decision-making profile, as shown in Tables 7a and 7b. The results indicate that age was the main factor in the 'Hipster Consumers' profile, with β = 0.112. Among the demographic characteristics, ethnicity has the most negligible contribution at β = - 0.009. However, among the demographic characteristics that were significant with 'Hipster Consumers' were marriage (p = 0.031), number of households (p = 0.042), age (p = 0.000) and household income (p = 0.046).

The 'Confused Consumers' profile was mainly associated with ethnicity, with β = 0.077, and the only variable that has the least significant (p = 0.002) contribution was education, with β = 0.020. Ethnicity is also the main contributor to the 'Quality Concerned Consumers' profile, with β = 0.051, and the only variable with a significant contribution (p = 0.048). The variable with the most minor contribution to this category was household income, with β = 0.004. For the 'Planning Consumers' profile, ethnicity was also the main contributing factor, with β = 0.077, and the demographic that contributed the least was employment, with β = 0.007. However, several variables have a relationship with the 'Planning Consumers' profile, such as the number of households (p = 0.045), education (p = 0.005), and ethnicity (p = 0.003).

Gender was the main contributing factor to the 'Hedonistic Consumers' profile, with β = 0.107, and ethnicity has the most minuscule contribution, with β = 0.018. Several variables have a relationship with this category, such as gender (p = 0.000), number of households (p = 0.019), age (p = 0.001), employment (p = 0.006), and household income (p = 0.025). Finally, for the 'Habitual Consumers' profile, gender was the main contributing factor, with β = 0.132, and marriage had the most negligible contribution, with β = 0.008. Some variables have a relationship with the 'Habitual Consumers' category, such as gender (p = 0.000), education (p = 0.010), and occupation (p = 0.004).

Table 7a
The Association of Socio-demographic and Socio-economic Factors with Consumers' Decision-making Profile

Variable	Model 1		Model 2		Model 3	
	β	t	β	t	β	t
Gender	0.016	-0.623	-0.029	-1.140	-0.022	-0.849
Marital status	-0.064*	-2.160	-0.048	-1.587	0.017	-0.559
Household size	0.052*	2.036	- 0.024	-0.930	0.035	1.359
Age	0.112**	4.127	0.044	1.595	0.024	0.855
Education	0.049	1.844	0.020	0.736	0.044	1.636
Ethnicity	-0.009	-0.372	0.077**	3.039	0.051*	1.981
Occupation	-0.012	-0.450	-0.042	-1.532	0.008	0.302
Household income	-0.058*	-1.995	-0.033	-1.118	0.004	0.138

Model 1: Hipster Consumers, R^2 = 0.029, Adjusted R^2 = 0.024; Model 2: Confused Consumers, R^2 = 0.016, Adjusted R^2= 0.011; Model 3: Quality Concerned Consumers, R^2 = 0.008, Adjusted R^2 = 0.003.
*p<0.05; **p<0.01

Table 7b

The Association of Socio-demographic and Socio-economic Factors with Consumers' Decision-making Profile

Variable	Model 4		Model 5		Model 6	
	β	t	β	t	β	t
Gender	0.036	1.418	0.107**	-4.236	0.132**	5.220
Marital status	0.019	0.618	-0.043	-1.463	0.008	0.260
Household size	-0.051*	-2.004	0.060**	2.349	0.031	1.227
Age	-0.047	-1.721	0.087**	3.205	-0.025	0.916
Education	0.074**	2.795	0.020	0.743	0.068**	2.581
Ethnicity	0.077**	3.018	0.018	0.697	-0.020	-0.784
Occupation	0.007	-0.272	-0.074**	-2.739	0.078*	-2.899
Household income	-0.038	-1.312	-0.065*	-2.244	0.014	-0.472

Model 4: Planning Consumers, R^2 = 0.023, Adjusted R^2 = 0.018; Model 5: Hedonistic Consumers, R^2 = 0.036, Adjusted R^2 = 0.031; Model 6: Habitual Consumers, R^2 = 0.027, Adjusted R^2 = 0.022.
*$p<0.05$; **$p<0.01$

Discussion

This study's results show an association between socio-demographic background and the socio-economic and decision-making of respondents in food purchases. During the COVID-19 pandemic, most respondents were more concerned with household needs than other purchasing factors. Food should be sufficient in quantity even if the nutrient requirement is not achieved as dietary guidelines recommend. The study by Shamsul et al (2014) also reported that low-income households in rural areas of Peninsular Malaysia preferred quantity over quality in food purchases. Indeed, the overall state of the economy would influence purchasing power and consumption, particularly food consumption. Home food security will be impacted by this pandemic. According to Syafiq et al (2022), family poverty was highly related to food insecurity in the home due to the low income of the household. Reduced household income had a detrimental impact on buying power, as well as on the availability of food and the level of food security in the home (Tran et al., 2020). Lower food security directly impacts household members' food consumption and nutrient intake to varied degrees (Kansiime et al., 2021).

When it comes to food choices, there are three main categories of factors that influence consumer decisions (Chen & Antonelli, 2020). While research from various fields such as nutrition, psychology, social science, and marketing has provided different perspectives, these categories remain consistent. The first category is food-related features, which include intrinsic features such as colour and aroma, and extrinsic features such as packaging and information. The second category is individual differences, which include biological factors like hunger, appetite, and taste, physical factors like access, cooking skills, and time, psychological factors such as mood and stress; cognitive factors such as attitudes and beliefs, and social factors such as family and peers. The third category is societal characteristics, which include culture, monetary factors like pricing and income, and policy. According to this study, the most critical factors in food purchasing decisions are price, halal status, and quality, aligning with the above-mentioned categories.

According to a study conducted by Billah et al. (2021) on Thai Muslim and non-Muslim consumption behaviour, the halal status of food products was a significant factor in

consumers' purchase decisions. The study revealed that knowledge and habits related to halal cuisine had the most significant impact on customer behaviour and purchase intention. The research findings highlight that understanding consumer preferences for halal food can influence their behaviour as consumers, especially regarding sustainable consumption. Similar results were reported by (Purwanto & Sudargini, 2021). The brand reputation of processed food items that have received halal certification is enhanced because most consumers believe that halal-certified food brands are of high quality and safe for consumption. Muslims reject brands of goods that are non-halal certified.

Survey respondents have indicated that they prefer establishments offering various food brands, options, and low prices when purchasing food. The pandemic has caused a decrease in income and spending, leading many consumers to cut costs, make decisions about which meals and products are necessary, and reduce their use of certain items. As a result of this trend, consumers may opt for less expensive alternatives within the same category, leading to a decline in demand for more specialised and costly food items. This shift towards more affordable and non-specialized options will continue as consumers anticipate further income decreases (Cranfiled, 2020).

On one hand, people and households may make a more concentrated effort to eat food that has been produced at home, since it may have better nutritional and health benefits. However, on the other hand, the demand for prepared, heat-and-eat food products and meal kits may increase because of the increased challenges of household management and personal time use. Both rising demand for ingredients and convenience foods can be predicted. Thus, the decision-making on food premises during food purchases also can be changed (Cranfield, 2020).

In addition, this study also found that respondents were classified into six profile categories based on their decision-making: Hipster Consumers, Confused Consumers, Quality Concerned Consumers, Planning Consumers, Hedonistic Consumers, and Habitual Consumers. The respondents in the Hipster Consumers profile always buy branded foods and will repeat buying the branded item. Hipster Consumers are a controversial middle-class social group that is admired and criticised. Hipsters are often portrayed as young individuals who belong to the cultural middlemen segment of the middle class, and who engage in specific reflexive and current consumer behaviours, usually in gentrified metropolitan areas, and connected to the creative industries (le Grand, 2020). Many respondents in the Confused Consumers profile struggle with making decisions when purchasing food due to the variety of food types and brands available. Chauhan & Sagar (2021) stated that confusion among consumers is commonly defined as an uncomfortable state of mind during decision-making, which can have emotional and behavioural effects on their choices. This confusion represents a significant gap in the pre-purchase stage of consumption and filling it can lead to a higher uptake of products and consumption among consumers.

As reported in this study, consumers concerned about quality always look for products that meet their essential needs. They are particular about the products they purchase and have high expectations for quality. These consumers are more likely to value a product's quality over its price. According to a recent study by First Insight (2023), 51% of consumers value a product's quality and value more than its price, compared to only 30% who prioritise price over quality. This represents a significant shift from the past, where quality was considered

when purchasing. The study also showed that external factors, such as COVID-19, a recession, and inflation, have changed how consumers perceive value It is important to keep in mind that quality and pricing are not contradictory, but rather complementary. By deeply understanding the demands and preferences of customers, a product can be developed to meet their requirements, reducing the time and money spent on development. This will enable a product of superior quality at a lower price, ultimately benefiting customers (First Insight, 2023).

The term "Planning Consumers" in this study refers to individuals who carefully plan their shopping activities, are mindful of their expenses, and prefer to shop quickly. According to various studies, Planning Consumers are known to plan their food shopping and meal preparation. They often utilise nutrition guides, budget tips, local food directories, and digital platforms to help them make healthy, sustainable, and personalised choices (PWC, 2021). Planning Consumers tend to shop less frequently but buy more fresh food than other consumers (Renner et al., 2020). Hedonistic Consumers seek pleasure and happiness from their products, after their basic needs for food, clothing, and shelter have been met (Hu & Min, 2022). This pleasure is often associated with a particular brand. The definition can be attributed to this study, which found that respondents enjoyed buying new food products and considered food shopping fun. The stereotype of a hedonistic consumer is that of a materialistic individual, focused on their desires, and consumes at high levels, with little regard for society. The consumer's multi-sensory, imaginative, and emotional experiences with a product are the critical components of hedonistic consumption (Hu & Min, 2022).

Besides that, this study also reported that respondents who went to the same store and felt that shopping was not a waste of time were classified as Habitual Consumers. The phrase "habitual buying behaviour" pertains to making purchases without much contemplation or emotion and without considering other product options. This behaviour is usually associated with products people use frequently, or even daily. Consumers who engage in habitual buying tend to put little thought or effort into their choices and often make quick decisions when selecting and purchasing products (Wood & Neal, 2009).

The six consumer profile categories were associated with the respondents' socio-demographic and socio-economic factors. The socio-demographic factors linked to these profiles included gender, age, marital status, and household size, while the socio-economic factors included education level, occupation, and household income. These findings were consistent with a previous study that suggested that personal identity, such as age, gender, ethnic identity, and education, could influence food choices (Chen & Antonelli, 2020). Larson and Story (2009) also reported that macro-environmental factors, such as income, socioeconomic status, and food prices, impacted individual food choices. The costs of buying and preparing nutrient-dense foods, which are typically higher than energy-dense foods, can often act as a barrier to good nutrition for low-income groups. The higher costs of healthy choices or diets can further strengthen the socio-economic disparities in diet quality, as highlighted by (Darmon & Drewnowski, 2015).

Ramya and Mohamed Ali conducted a study in 2016 and found that various factors affect consumer behaviour. Personal factors were identified as a key variable that affects purchasing decisions, and these include age, occupation, income, and lifestyle. Age is a significant personal factor that impacts purchasing behavior as people tend to buy different things at

different stages of their lives. As people's life cycles change, their preferences and tastes also change. Another personal factor that influences purchasing decisions is occupation or line of work. Different professions have different lifestyles and purchasing considerations, which affect their buying behaviour. For instance, a doctor's buying habits are different from those of a lawyer, teacher, clerk, businessperson, landlord, and so on. Income level is another factor that determines a person's consumption pattern as it determines their purchasing power. Therefore, people's purchasing habits vary based on their income levels. Other studies also reported the association of socio-demographic and socio-economic factors with consumer profiles or behaviour (Pavol et al., 2020; Yilmaz-Ersan et al., 2020; Slabá, 2019).

Conclusion and Recommendation

This study aims to investigate how socio-demographic and socio-economic factors influence the decision-making process of low-income households in Malaysia when purchasing food during the COVID-19 pandemic. The analysis revealed that low-income consumers in Malaysia prioritise household necessities, price, halal certification, and product quality when making food purchases. These consumers prefer stores that offer a wide range of food items and brands at affordable prices. Additionally, the study classified consumers into six categories based on their decision-making behaviour: Hipster, Confused, Quality-concerned, Planning, Hedonistic, and Habitual Consumers. Gender, age, marital status, household size, education level, occupation, and household income were associated with consumer behaviour when making food purchase decisions.

After the pandemic, it was suggested that further research be conducted to evaluate the decision-making behaviour of low-income consumers when it comes to food purchases. To measure the differences in decision-making behaviour regarding food purchases and to determine how responsible parties can lessen the gap between high-, middle-, and low-income consumers in the market, the study can also be carried out among middle-income and high-income consumers in Malaysia.

Acknowledgement

References

Albrecht, C. (2020). Study: Online sales to hit $143 billion by 2025. *The Spoon*. Retrieved from https://thespoon.tech/study-online-grocery-sales-to-hit-143-billion-by-2025/

Billah, A., Rahman, M. A., & Hossain, M. T. (2020). Factors influencing Muslim and non-Muslim consumers' consumption behavior: A case study on halal food. Journal of Foodservice Business Research, 23,4, 324-349. Retrieved from https://doi.org/10.1080/15378020.2020.1768040

Chauhan, V., & Sagar, M. (2021). Consumer confusion: a systematic review and research directions. Journal of Consumer Marketing, 38, 4, 445-456. Retrieved from https://doi.org/10.1108/JCM-03-2020-3705

Chen, P. J., & Antonelli, M. (2020). Conceptual models of food choice: Influential factors related to foods, individual differences, and society. Foods, 9, 12, 1898. Retrieved from http://dx.doi.org/10.3390/foods9121898

Cranfield, J. A. L. (2020). Framing consumer food demand responses in a viral pandemic. Canadian Journal of Agricultural Economics, 68,2, 151-156. Retrieved from https://doi.org/10.1111/cjag.12246

Darmon, N., & Drewnowski, A. (2015). Contribution of food prices and diet cost to socioeconomic disparities in diet quality and health: A systematic review and analysis. Nutrition Review, 73, 643–660.

Ehlen, M. A., Michael L. B., & Andrew, J. S. (2009). Cognitive modeling of household economic behaviors during extreme events. In Social computing and behavioral modeling, ed. Huan, L., John, S., and Michael J. Y., 76–84. New York, Springer.

Ellison, B., McFadden, B., Rickard, B. J., & Wilson, W. N. L. (2021). Examining food purchase behavior and food values during the COVID-19 pandemic. Applied Economic Perspectives and Policy, 43(1), 58-72. Retrieved from
https://doi.org/10.1002/aepp.13118

First insight. (2023). Price vs quality: What matters most to consumers? Retrieved from https://www.firstinsight.com/blog/price-vs-quality-what-matters-most-to-consumers

Goddard, E. (2020). The impact of COVID-19 on food retail and food service in Canada: Preliminary assessment. Canadian Journal of Agricultural Economics 68(2): 157–161.

Hu, Y., & Min, H. (2022). Enjoyment or indulgence: What draws the line in hedonic food consumption? International Journal of Hospitality Management, 104, Retrieved from https://doi.org/10.1016/j.ijhm.2022.103228.

International Food Information Council. (2020). "2020 food & health survey." Retrieved from https://foodinsight.org/2020-food-and-health-survey/

Kral, P., Janoskova, K., Lazaroui, G., & Suler, P. (2020). Impact of selected socio-demographic characteristics on branded product preference in consumer markets. Management & Marketing, 15, 4, 570-586.

Larson, N., & Story, M.A. (2009). Review of environmental influences on food choices. Annals of Behavioral Medicine, 38, 56–73.

le Grand, E. (2020). Representing the middle-class 'hipster': Emerging modes of distinction, generational oppositions and gentrification. European Journal of Cultural Studies, 23, 2, 184-200. Retrieved from https://doi.org/10.1177/1367549418772168

Li, J., Hallsworth, A. G., & Coca-Stefaniak, J. A. (2020), Changing grocery shopping behaviours among Chinese consumers at the outset of the COVID-19 outbreak. Tijdschrift Voor Economische en Sociale Geografie, 111, 574-583. Retrieved from
https://doi.org/10.1111/tesg.12420

Lusk, J., & Briggeman, B.C. (2009). Food values. *American Journal of Agricultural Economics,* 91, 1, 184–196.

Lusk, J., & McCluskey, J. J. (2020). Consumer behavior during the pandemic. *CAST Commentary Economic Impacts of COVID-19 on Food and Agricultural Markets.* Retrieved from https://www.cast-science.org/wp-content/uploads/2020/06/QTA2020-3-COVID-Impacts.pdf.

Ministry of Finance. (2021). Siaran media KDNK Malaysia berkembang 16.1% bagi suku kedua 2021: ekonomi terus di landasan pemulihan. Retrieved from
https://www.mof.gov.my/ms/berita/siaran-media/kdnk-malaysia-berkembang-16bagi-suku-kedua-2021-ekonomi-terus-di-landasan-pemulihan

Purwanto, A., & Sudargini, Y. (2021). Exploring factors affecting the purchase intention of halal food products : An empirical study on student consumers. International Journal of Social and Management Studies, 2, 4,13–21. Retrieved from https://doi.org/10.5555/ijosmas.v2i4.46

PWC. (2021). Preparing for tomorrow's consumers today: The future of consumer markets. Retrieved from https://www.pwc.com/gx/en/consumer-markets/future-of-consumer-markets/future-of-consumer-markets-report-2021.pdf

Ramya, N., & Ali, M. S. (2016). Factors affecting consumer buying behavior. International Journal of Applied Research, 2,10, 76-80.

Redman, R. (2020). Online grocery sales to grow 40% in 2020. *Supermarket News.* Retrieved from https://www.supermarketnews.com/online-retail/online-grocery-sales-grow-40-2020

Renner, B., Baker, B., Cook, J., & Mellinger, J. (2020). The future of fresh: Patterns from the pandemic. Deloitte Insights, Retrieved from https://www2.deloitte.com/us/en/insights/industry/retail-distribution/future-of-fresh-food-sales/pandemic-consumer-behavior-grocery-shopping.html

Sabri, M. F., & Hashim, A. H. (2017). Consumers in the new millennium. Serdang: UPM Press.

Slaba, M. (2019). The impact of age on the customers buying behaviour and attitude to price. Littera Scripta, 12, 2, 146-160. Retrieved from https://doi.org/10.36708/Littera_Scripta2019/2/0

Sumi, R. S. (2018). Effect of socio-economic characteristics on the purchasing behavior of green tea consumers of Dhaka city. ASA University Review, 12, 1, 63-75.

Syafiq, A., Fikawati, S., & Gemily, S. C. (2022). Household food security during the COVID-19 pandemic in urban and semi-urban areas in Indonesia. Journal of Health Population & Nutrition, 41, 4. Retrieved from https://doi.org/10.1186/s41043-022-00285-y

Tran, B. X., Nguyen, H. T., Le, H. T., Latkin, C. A., Pham, H. Q., Vu, L. G., Le, X. T. T., Nguyen, T. T., Pham, Q. T., Ta, N. T. K., Nguyen, Q. T., Ho, C. S. H., & Ho, R. C. M. (2020). Impact of COVID-19 on economic well-being and quality of life of the Vietnamese during the national social distancing. Frontiers in Psychology. 11, 1–9.

Wood, W., & Neal, D.T. (2009). The habitual consumer. Journal of Consumer Psychology, 19, 4, 579-592. Retrieved from https://doi.org/10.1016/j.jcps.2009.08.003

Yilmaz-Ersan, L., Ozcan, T., & Akpinar-Bayizit, A. (2020). Assessment of socio-demographic factors, health status and the knowledge on probiotic dairy products. Food Science and Human Wellness, 9, 39, 272-279. Retrieved from https://doi.org/10.1016/j.fshw.2020.05.004