Information Management and Business Review (ISSN 2220-3796)
Vol. 15, No. 2, pp. 54-67, June 2023

Modelling Online Shopping Behaviour Patterns among Higher Education Consumers: A Structural Equation Modelling (SEM-AMOS) Approach

Siti Hasma Hajar Mat Zin[1*], Siti Haslini Binti Zakaria[2], Balkiah Moktar[3] & Rumaizah Binti Che Md Nor[4]
[1]Mathematical Sciences Studies, College of Computing, Informatics and Mathematics, Universiti Teknologi MARA (UiTM), Johor Branch, Malaysia
[2]Faculty of Business Management & Professional Studies, Management Science & University (MSU), University Drive, Shah Alam, Selangor, Malaysia
[3]Mathematical Sciences Studies, College of Computing, Informatics and Mathematics, Universiti Teknologi MARA (UiTM), Perlis Branch, Malaysia
[4]Mathematical Sciences Studies, College of Computing, Informatics and Mathematics, Universiti Teknologi MARA (UiTM), Sarawak Branch, Malaysia
hasmahajar@uitm.edu.my[1*], siti_haslini@msu.edu.my[2], balkiah@uitm.edu.my[3] & rumaizah@uitm.edu.my[4]

Abstract: Online shopping is a phenomenon that is growing rapidly all over the world. Since 2020, Malaysian consumers have shifted their preference towards online shopping to fulfill their daily needs compared to shopping in a traditional store. Due to this reason, it is vital to identify the characteristics that affect consumers' online shopping behavior between various online websites for business owners to improve their online marketplace. However, only a few studies on online shopping behavior patterns among consumers across different online shopping platforms have been conducted in Malaysia. Therefore, this study was conducted to identify the factors influencing online shopping behavior patterns among Malaysian consumers. The factors involved were web characteristics, external stimulus, affection, and cognition. Data was collected using an online questionnaire, and a cross-sectional research design was used for this study. SPSS version 26.0 and AMOS version 21.0 were used to analyze the data gathered. A total of 371 students and staff were selected randomly from Universiti Teknologi MARA (UiTM) in Malaysia. The results show that the best online shopping platform in Malaysia that is preferred by respondents is Shopee. Only two constructs were statistically significant for online shopping behavior, web characteristics, and cognition. However, the direct effect of external stimulus and affection is not statistically significant. In conclusion, e-businesses should enhance the functionality, usability, and appearance of their websites. Effectively enhancing consumers' perceptions of online shopping could potentially have a positive influence on both their purchase intent and behavior.

Keywords: *Web characteristics, external stimulus, cognition, affection, behavior.*

1. Introduction and Background

Nowadays, online shopping is a global phenomenon that is expanding quickly. Consumers' online shopping habits have been permanently altered because of the pandemic Coronavirus Disease 2019 (COVID-19). A related study by the United Nations Conference on Trade and Development (2020) found that 50 percent of the respondents from nine countries prefer to shop online more frequently. Additionally, they used the internet more frequently for news, medical information, and online entertainment. Due to the COVID-19 epidemic, consumers in developing nations are moving towards a more digital lifestyle. These developments will have an ongoing impact even when the global economy starts to recover. In Malaysia, consumers continue to prioritize online shopping for their daily requirements over traditional in-store shopping. According to an IPSOS Malaysia survey conducted in 2022, online shopping among consumers appears structured, with individuals displaying a consistent inclination towards online shopping even two years after the country reopened due to COVID-19.

Based on, Daroch, Nagrath, & Gupta (2021), online shopping refers to the act of purchasing items directly from the seller without the need for an intermediary. It is often referred to as the process of buying and selling products online. It also has other names such as e-shop, e-store, internet shop, webstore, virtual store, and online store (Singh & Sailo, 2013). Online retailers describe every item in text, with photographs, and with multimedia components, in contrast to physical stores. Many online retailers include links to pages with a variety of additional product information (Rahman, et al., 2018). Potential customers will use the internet to access relevant information for specific items or services during online purchasing. To satisfy their perceived

demands, individuals then assess the choices and choose the one that best satisfies their criteria. Lastly, the transaction is carried out by Javadi, Dolatabadi, Nourbakhsh, Poursaeedi, & Asadollahi (2012). The term online shopping attitude describes individuals' sentiments and emotions toward engaging in online purchases (Li, 2022). According to Javadi et al, (2012), some internet shoppers are adventurous explorers, fun seekers, and shopping lovers, while others are technology muddlers who detest waiting for deliveries.

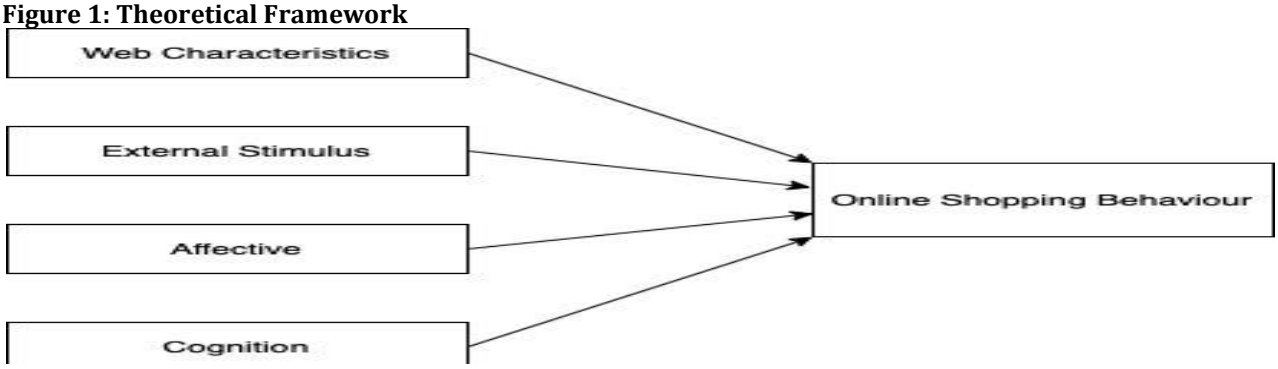
Consequently, more research is now being done to better understand the unique traits of online shopping by concentrating on online consumer behavior. There are several reasons why consumers prefer to shop online. Some consumers prefer to buy online since they can save time due to hectic schedules (Huseynov & Ozkan, 2016; Mittal, 2013). Besides that, convenience, fun, and speed are the other factors driving consumers to purchase more online (Lennon, Ha, & Lyons, 2009). Consumers who shop online also benefit more because they may save time, avoid using cash, and choose the product they want (Yazid, Wel, & Omar, 2016; Yulihasri, Islam, & Daud, 2011). Using an e-commerce platform allows customers to find everything they need under one roof (Saeeda, Naqvib, & Memon, 2020). The number of customers and sales through online shopping has grown consistently over the previous ten years, according to Ozen & Engizek (2014). More businesses are becoming so interested in the e-commerce industry's rapid growth and rising market value that they invest in developing online shopping websites to provide customers with more options (Wu & Tsai, 2017).

The majority of businesses with an online presence manages logistics and fulfilment, carry out e-commerce marketing and sales activities, and more using an online shop or platform. Nowadays, all e-commerce platforms are making a lot of effort to expand their user bases and find the best marketing strategies (Wang, 2021). In Malaysia, the most popular e-commerce websites are Lazada and Shopee (Vasudevan & Arokiasamy, 2021). Another study by Isa, Shah, Palpanadan, & Isa (2020) found that Shopee, Lazada, and Food Panda were the top three shopping websites that customers visited the most since they all supplied the basic everyday goods that customers needed. The elements of a comfortable website, such as an attractive design, nice users, a choice of native language, the amount of uploaded information, and the updating of the product specifications, were factors that influenced customers to purchase online via this platform. However, knowledge and understanding of customers' views towards internet purchasing appear lacking. This is especially true for Malaysia, where online shopping is still fairly new, and consumers are less experienced and frequently more skeptical.

Therefore, this study will be conducted among the current users of online shopping in Malaysia to study the online shopping behavior pattern between different online shopping platforms and determine the factors that influence consumers' decisions among the many e-commerce retailers, with the following objectives:

- To investigate if there are differences in online shopping behavior patterns among consumers between different online shopping platforms.
- To identify the relative strengths of all factors in influencing online shopping behavior patterns.
- To determine how web characteristics, external stimuli, and affective and cognitive processes influence consumer online shopping behavior patterns. The theoretical framework, which is adapted from Wu & Tsai (2017), is shown in Figure 1. The framework consists of four independent variables and one dependent variable. The independent variables are web characteristics, external stimulus, affective, and cognition. Meanwhile, the dependent variable is the pattern of online shopping behavior.

Figure 1: Theoretical Framework



2. Literature Review

Shopping Online Platforms in Malaysia: The transition in the business world is happening due to the rise in technology, leading to the phenomenon that shopping has become more convenient. Nowadays, online shopping has gained preference and popularity due to its convenience, enabling consumers to shop from anywhere and at any time, thereby eliminating the necessity to visit physical stores or shops. According to Afzainizam, Fahmy, Hanif, Muqri, & Firdhaus (2021), this transition will affect those companies or people who still stick with the old business method. This is because, in Malaysia, people tend to change their habit of shopping to online shopping due to a few factors such as time, price, and the variability of items. There are more than 20 online shopping platforms in Malaysia, such as Lazada, Taobao, Zalora, Shopee, etc. Based on the results of a survey conducted by Ipsos reported that 82% of the respondents in this study chose to shop using Shopee for the past six months, followed by Lazada (31%), Facebook (18%), GoShop and Mudah (6%) and TaoBao and Instagram (5%). This study also revealed that most Malaysians preferred Shopee as their online shopping platform due to its user-friendly.

Fast delivery, customer reviews, prices and promotions offered by this platform. Results from a study by (Mustakim, Hassan, Sauid, Ebrahim, & Mokhtar, 2022) are used to support this conclusion. They revealed that perceived usefulness, perceived usability, perceived trust, and perceived convenience significantly influenced customer satisfaction on Shopee. To retain customers, online retailers must comprehensively understand customers' perceptions, satisfaction, and intentions toward online shopping. (Musa, Nasaratnam, Rethinam, Varatharajoo, & Shanmugam, 2022), concluded that the convenience of online shopping, delivery time, and site design were significant for customer satisfaction. Meanwhile, consumers' attitudes toward online shopping and perceived behavioral control significantly influence the consumer's intention to engage in online shopping in Malaysia (Wen, Satar, Ishak, & Ating, 2020). However, Afzainizam et al, (2021) demonstrated that the key reason that prevents online shopping is a lack of product information, customer service, delivery time, payment options, and product quality.

Website Characteristics: Due to the expansion of the Internet in the 1990s and the development of internet technology, social and business practices have transformed (Visinescu, Sidorova, Jones, & Prybutok, 2015). Individuals nowadays prefer online shopping instead of shopping at stores or shops. In the context of running an online business, Rasli, Khairi, Ayathuray, & Sudirman (2018) emphasized that the most important factor requiring consideration is the quality of the website. However, the website characteristics may impact the sales and performance in online business operations differently according to the product involvement (Mallapragada, Chandukala, & Liu, 2016). A study by Isa et al (2020) found that the top three customer-preferred online shopping websites are Shopee, Lazada, and Food Panda. They also concluded that the attractive design of the website, user-friendly, selection of different languages, provided information and updated product details were the factors that can attract customers to retain online shopping. This result is consistent with the finding by Lee & Kozar (2006), which found that customers considered the system's quality as the most important criterion when selecting online websites. Instead, system quality, safety, and friendly users while navigating the website also attracted customers to use the online website. According to Shalini & HemaMalini (2015), there is a correlation between website attributes and attitudes, trust, and intentions toward online shopping. This means that website characteristics will impact online shoppers. Besides that, attitude and trust also play the main role in leading customers to buy the products via online shopping. However, they also revealed that online shopping website characteristics do not influence consumers' intention to purchase online.

External Stimulus: According to Youn & Faber (2000), the marketing and retail environments are influenced by external variables. Shopping environments include store size, atmosphere, design, and format, whereas the marketing environment comprises multiple sales and promotional activities. Pritchett, Pritchett, & Kotler, (2003) stated that the external stimuli that affect consumers' purchasing decisions include marketing, products, pricing, distribution, promotions, etc. The advertising and purchasing terms serve as indicators of external stimuli. The size of the store, the environment, the layout, and the configuration are terms of purchase, whereas the offers and promotional activities are terms of presentation (Vishnu & Raheem, 2013). According to Sawyer (1984), in addition to being influenced by internal elements like personal ideas and values, people's attitudes will also alter when exposed to external stimuli. Kimiagari & Malafe (2021) found

that external and internal stimuli significantly affect consumer behavior patterns through social media platforms. A study by Lee & Chen (2021) on online commerce about impulsive behavior found that perceived usefulness directly affects enjoyment but not the urge to buy impulsively.

Consumer's Attitude: The consumer's attitude comprises three components which are affection, cognition, and behavior (Wu & Tsai, 2017). Fihartini et al (2023) defined affection as an emotional characteristic such as satisfaction. According to Peter, Olson, & Grunert (1999) affection is broken down into emotions, particular feelings, moods, and judgments. On the other hand, affection is the expression of one's comprehension of a subject through their response, whether they like or dislike it (Hanna & Wozniak, 2001). Meanwhile, cognition refers to psychological characteristics, such as emotional intelligence (Fihartini, Ramelan, Karim, & Andriani, 2023). Besides that, consumer cognition is defined as their perception, beliefs, and knowledge of the attitude's subject matter. It typically derives from personal experience or other relevant sources (Wu & Tsai, 2017). Peter, Olson, & Grunert (1999) stated that cognition is the understanding and perception of an attitude's subject matter as a result of combining information learned about it directly or from other sources.

Consumer behavior is defined as their purpose or action toward the subject of their attitude. For instance, the possibility that he or she would act in a particular manner or perform a certain action. Based on Ajzen (1985), in terms of customer behavior, the behavior aspect of attitude is frequently represented in their purchase intention. In response to the pandemic, Zeng, Lin, & Zhou (2023) studied the attitudes towards this situation. Besides that, (Das, Sarkar, & Debroy, 2022) conducted a study on consumers' changing behavior during the pandemic phase. Compared to Wu & Huang (2023), it was focused on the current live-streaming trend and its effect on consumers' behavior. Tao, Sun, Liu, Tian, & Zhang (2022) examined the psychological impact of consumers amidst the pandemic situation. In understanding consumers' behavior, Wu, Wang, Ding, & Mo (2023) utilized the cognitive-emotional part as their primary concern.

3. Research Methodology

Respondents and Sampling Method: The population in this study is students and staff from Universiti Teknologi MARA (UiTM), Malaysia. The students and staff from all campuses were chosen randomly as respondents in this study. Depending on the complexity of the model, Hair, Black, & Babin (2010) suggested a minimal sample size.

Table 1: Model Characteristics using Structural Equation Modelling (SEM)

Model Characteristics (Number of latent constructs and items)	Minimum Sample Required
Five or fewer latent constructs. Each latent has more than three items	100
Seven or fewer latent constructs. Each construct has more than three items	150
Seven or fewer latent constructs. Certain construct has less than three items (under identified model)	300
Large number of latent constructs. Certain constructs have less than three items (under identified model)	500

Table 1 was used to determine the minimal sample size for this study, which was 300 observations. Therefore, a total of 371 students and staff were selected randomly from all campus branches in Malaysia. The sampling method used is convenience sampling. This method was used because it is typically affordable and is simple to execute with easily available subjects.

Data Collection Methods: This study was conducted through an online survey created with Google Forms to gain information from the respondents. This approach was chosen due to its many benefits and applicability for this study. The advantages include a lower budget requirement because the survey is sent via email and can be distributed to a large number of respondents at once, and busy respondents can complete the survey whenever it is convenient for them. The data was collected once over two months. A set of questionnaires adapted from other researchers was used to measure the factors contributing to online shopping behavior patterns. The questionnaire used is a survey adapted from Wu & Tsai (2017). There were two primary

sections in the questionnaire. The first section (Section A) contains four items on demographic information such as gender, education level, age group, and UiTM branch. The second section (Section B) consisted of preference for online shopping platforms and another 39 items measuring the respondents' level of agreement on five variables, which are web characteristics, external stimulus, affection, cognition, and behavior. The interval scale matrix with pre-coded numerical scales was used for the responses in this section. A 7-point scale was used to evaluate the extent of the respondent's viewpoint. Scores range from 1 for "strongly disagree" to 7 for "strongly agree". Table 2 shows each variable listed in the questionnaire.

Table 2: Number of Measurement Items

Variables	Number of Question	Per variable
Web characteristics	10	Q2 – Q10
External stimulus	12	Q11 – Q22
Affection	6	Q23 – Q28
Cognition	6	Q29 – Q34
Behavior	6	Q35 – Q40

4. Results

Descriptive Statistics: Table 3 shows the characteristics of the entire sample in terms of gender, age, and online platform preferred by the respondents selected in the study.

Table 3: Descriptive Statistics

Variable	Frequency	Percentage
GENDER		
Males	108	29.1%
Females	263	70.9%
Total	**371**	**100%**
AGE (years old)		
18-25	232	62.5%
26-30	15	4.00%
31-35	27	7.30%
36-40	38	10.2%
41-45	24	6.50%
More than 45	35	9.40%
Total	**371**	**100%**
PLATFORM PREFERED		
Shopee	321	86.5%
TikTok	16	4.30%
Lazada	14	3.80%
Zalora	9	2.40%
Others	11	3.00%
Total	**371**	**100%**

Respondents for this study consist of 29.7% males (108 respondents) and 70.9% females (263 respondents). The respondents' ages ranged between 18 and 25 years (62.5%), which is the highest group, while the lowest group is between 26 and 30 years (4.0%). The best online shopping platform preferred by respondents is Shopee (86.5%), followed by TikTok (4.3%), Lazada (3.8%), Zalora (2.4%), and the remaining platforms between 1.1% and 0.3%.

Reliability Analysis: The study of the characteristics of measurement scales and the components that make up such scales is known as reliability analysis. When using tests with standard items, Cronbach's alpha is used, which is based on the average correlation of the items inside the test. It is based on the average covariance among the components if the items are not standard. The range of Cronbach's alpha, which may be considered a correlation coefficient, has a range of 0 to 1 (Coakes, 2007). Each component's dependability was evaluated using the Cronbach's alpha (coefficient). For each construct, the internal consistency measure

of the assessed items must exceed a minimum value of 0.6. The reliability test is carried out to confirm the instrument's dependability for web characteristics, external stimuli, affection, cognition, and online buying behavior. Cronbach's Alpha is higher than 0.7 for all structures, according to Table 4. According to Sekaran & Bougie (2016) and Awang (2012), Cronbach's Alpha values greater than 0.6 indicate that the instruments are sufficiently reliable for research.

Table 4: The Reliability Assessment for All Constructs

Variables	Number of items	Cronbach's Alpha (n = 371)
Web characteristics	8	0.925
External stimulus	11	0.930
Affection	6	0.897
Cognition	5	0.798
Online Shopping Behaviour	6	0.903

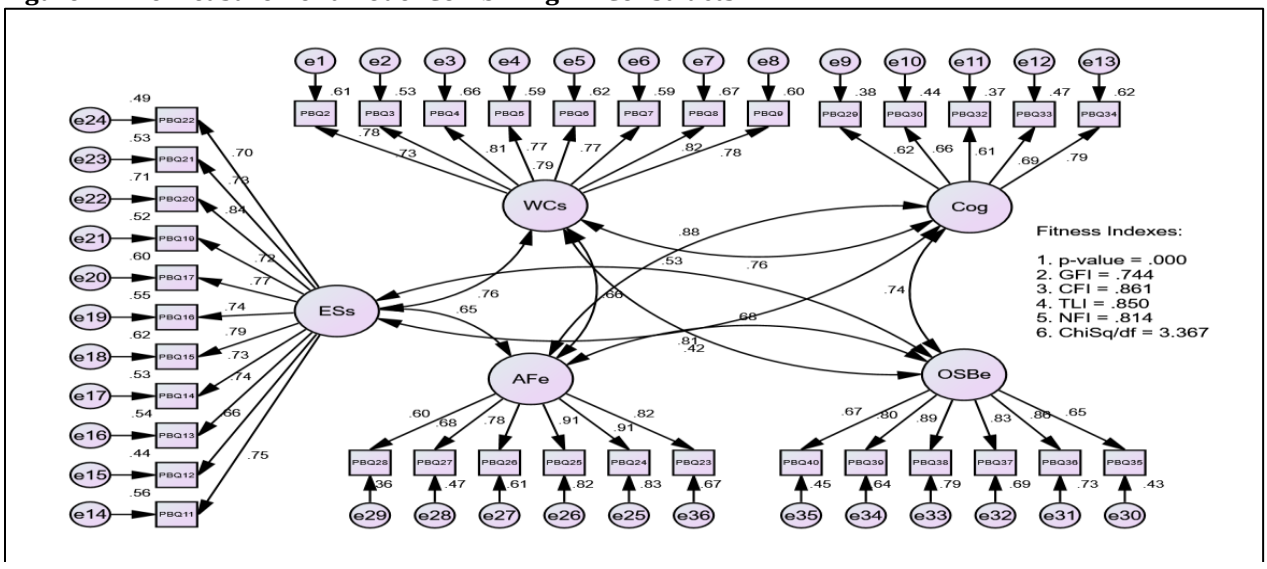
Normality Test: Before proceeding with SEM, the normality assumption was examined. According to Table 5, which measures skewness and kurtosis, skewness values range from -0.957 to -0.214. While the kurtosis values show that the value is between -0.212 and 1.973. These findings demonstrate that all constructs' skewness and kurtosis values are normally distributed. The data is considered to be normally distributed if the absolute values of skewness and kurtosis are 2.0 or less, according to (Hair, Black, & Babin, 2010).

Table 5: The Reliability Assessment for All Constructs

Variables	Mean Score	Skewness	Kurtosis
Web characteristics	5.643	- 0.957	1.973
External stimulus	5.116	- 0.265	- 0.212
Affection	5.431	- 0.755	0.529
Cognition	5.202	- 0.558	0.097
Online Shopping Behaviour	4.677	- 0.214	- 0.585

Structural Equation Modelling (SEM): This test is a combination of factor analysis and multiple regression analysis. It is employed to examine the structural relationship between latent constructs and measurable variables. The SEM technique consists of two steps: assessing the measurement model and assessing the structural model. The measurement model shows how the underlying latent construct and the response items are related. Before developing the structural model, the researcher must evaluate the model for one-dimensionality, validity, and dependability. The interrelationships between the constructs in the study are shown by the structural model.

Figure 2: The Measurement Model Combining All Constructs



According to Zainudin et al (2017) the study must validate the measurement model for each of the model's latent constructs to ensure it is valid, dependable, and unidimensional before conducting the SEM. Validation is carried out using Confirmatory Factor Analysis (CFA). The measurement methodology for pooled CFA for each of the five components is shown in Figure 2. The measuring model for five latent components must satisfy the convergence validity, concept validity, and discriminant validity requirements for validity. According to Figure 2, despite the factor loading being above 0.6 for each item, the Fitness Indexes did not meet the required level. Redundant items could be the reason for the low fitness indices. The redundant items can be found using Modification Indexes (MI), where a value of MI > 15.0 indicates the pair of items is redundant. The modification process must be conducted one at a time till the fitness indices reach the appropriate level. Figure 3 below displays the modified final measurement model.

Figure 3: The Final Measurement Model (Pooled-CFA) Combining Five Constructs

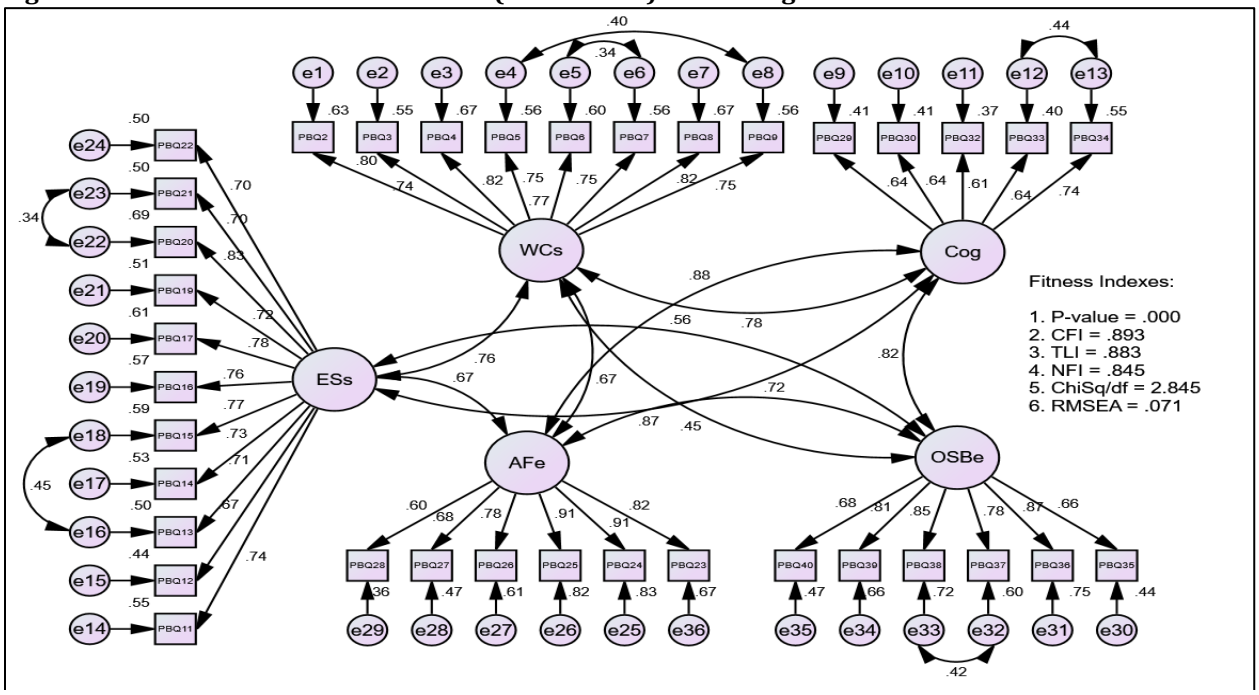


Table 6: The Fitness Indexes Assessment for the Measurement in Figure 2

Name of Category	Name of Index	Index Value	Comments
Absolute Fit	RMSEA	0.071	The required level is achieved
Incremental Fit	CFI	0.893	The required level is achieved
Parsimonious Fit	Chisq/df	2.845	The required level is achieved

In Table 6, the construct validity is evaluated using the measurement model's fitness indices. According to numerous studies (Hoque, Awang, Jusoh, & Muda, 2017; Zainudin, Habsah, Fauzilah, Abu Shams Mohammad, & Kamaruzaman, 2017 & Awang, 2012), the index values have reached the necessary degree of construct validity. Following the acceptance of fitness indices, the Average Variance Extracted (AVE) and Composite Reliability (CR) procedures are used to evaluate convergence validity and reliability. According to Zainudin et al. (2017), the minimum value for AVE is 0.455, and the minimum value for CR is 0.6. The findings demonstrate that every concept and item in the measuring model met the necessary value. This shows that each component of the model in Figure 2 is available for further analysis. Table 7 summarises the outcomes of AVE for convergent validity and CR for construct validity.

Table 7: The Summary of AVE and CR for Five Constructs

Construct	Items	Factor Loading	AVE	CR
	PBQ2	0.80		
	PBQ3	0.74		
	PBQ4	0.821		
	PBQ5	0.80		
Web Characteristics	PBQ6	0.80	0.618	0.928
	PBQ7	0.75		
	PBQ8	0.82		
	PBQ9	0.75		
	PBQ11	0.74		
	PBQ12	0.70		
	PBQ13	0.71		
	PBQ14	0.73		
	PBQ15	0.80		
External Stimulus	PBQ16	0.80	0.546	0.930
	PBQ17	0.80		
	PBQ19	0.72		
	PBQ20	0.83		
	PBQ21	0.71		
	PBQ22	0.71		
	PBQ23	0.82		
	PBQ24	0.91		
	PBQ25	0.91		
Affection	PBQ26	0.80	0.636	0.911
	PBQ27	0.70		
	PBQ28	0.60		
	PBQ29	0.64		
	PBQ30	0.64		
Cognition	PBQ32	0.61	0.510	0.838
	PBQ33	0.64		
	PBQ34	0.74		
	PBQ35	0.70		
	PBQ36	0.90		
Online Shopping Behaviour	PBQ37	0.80	0.635	0.912
	PBQ38	0.85		
	PBQ39	0.81		
	PBQ40	0.70		

Figure 4: The Structural Model of Online Shopping Behavior

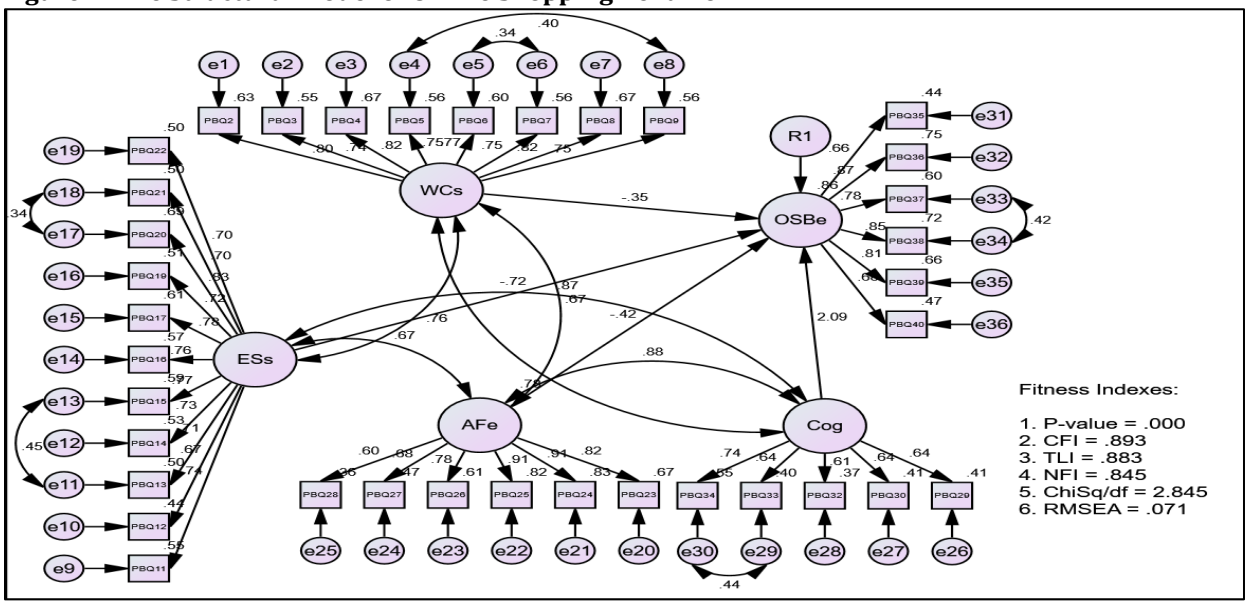


Figure 4 depicts the estimation outcomes and the interrelationship between the constructs. R2 for the model has a value of 0.66. It indicates that 66.0% of the total variation in online shopping behavior is described by web characteristics, external stimulus, affection, and cognition. At the same time, most fitness indices are good because their values are still within acceptable limits, and their factor loadings are above the necessary threshold of 0.6. Table 8 presents the estimator of the direct effect between constructs. The findings of this study revealed that only two constructs were statistically significant to online shopping behavior, which are web characteristics and cognition. However, the direct effects of external stimulus and affection are not statistically significant.

Table 8: The Regression Path of the Coefficient and Its Significance

Construct	Path	Construct	Beta	p-value	Result
	←	Web Characteristics	-0.383	0.011	Significant
Online	←	External Stimulus	-0.720	0.092	Not Significant
Shopping	←	Affective	-0.437	0.358	Not Significant
Behaviour	←	Cognitive	2.367	0.014	Significant

Discussion

The results of the findings showed that only two variables are significant towards online shopping behavior, which are web characteristics and cognitive. An analysis of the findings reveals the correlation between web characteristics and online shopping behavior to be statistically significant (p-value < 0.05). This result was in line with earlier research. The website design strongly predicts online shopping behavior (Pandey & Parmar, 2019); (Rahman, et al., 2018). The key elements of a successful website are entertainment, irritation, utility, attitude towards the site, and intention to return. These elements influence consumers' online shopping behavior. Another finding also shows that the intention to shop online is moderately correlated with website attributes. Website characteristics are one of the main issues consumers have concerning their purpose to shop online (Chincholkar & Sonwaney, 2017; Shaheen, Cheng, & Lee, 2012). Either favorably or negatively, web-based factors affect consumers' online shopping behavior. According to Gupta, Ruchi, & Ashish (2010), the two aspects customers are most interested in when using a website are navigation and content.

A website's identity, categorization of material, use of color, layout and space, graphics, and information presentation are all significant considerations. The user interface design of a website user interface is what makes it appealing to visitors, encouraging them to return more frequently and remain on the site longer. According to Rahman, et al., (2018), customers may appreciate purchasing more from a website store that

uses value-added search engine features and provides a challenging experience. Besides that, the findings reveal the correlation between cognitive and online shopping behavior is significant (p-value < 0.05). The findings supported the theory that cognition has a relationship with online shopping behavior among consumers. Based on Wu & Tsai (2017) consumer behavior and cognition are revealed to have a highly strong influence relationship. It indicates that if a customer begins making purchases online, it will be used to positively affect their perception of online buying. Park, Lee, & Han (2007) stated that the consumers' cognition will influence their purchase intention during the buying process, and the values they perceive will affect their satisfaction level in turn.

Yadav, Goel, & Sharma (2020) used several cognitive factors such as complexity, relative advantage, trust, trialability, and observability. Their finding found that these factors illustrate how respondents perceive the usefulness of online buying. Online shoppers feel they have more options when making purchases. The potential of a transaction increases as a consumer's satisfaction with the values perceived increases (Bei & Chiao, 2001). However, this study reveals that the correlation between external stimuli and online shopping behavior is not significant (p-value > 0.05). While consistent with other research findings, no correlation between the variables was not found in the other research studies. This study shows that different respondents or demographic variables will have different elements of external stimulus that influence online shopping behavior among consumers. External stimulus can be divided into several sub-factors, none influencing the consumer's online shopping behavior. Based on a previous study (Khalil & Raza, 2018), the results indicate that store environment.

Income level has a significant impact on consumers' purchasing decisions, whereas credit card use has the least effect. A study by Li (2022) was also conducted to determine the influence of purchasing behavior and external stimulus, including peer and professional evaluation. Positive reviews from peers and professional advice offered online both show low positive effects on customers' purchasing decisions, with coefficients less than 0.2. It means consumer purchases are not based on internet reviews and peer judgments. This finding may be helpful to marketing managers and marketers to understand consumer purchase behavior and the importance of major influencing elements of external stimulus. Because of these assumptions and support from a few works of literature, the existing theory does not need to be adjusted. This study also reveals that the correlation between affection and online shopping behavior is not significant (p-value > 0.05). There are four categories of affection: emotions, specific feelings, moods, and judgments (Peter, Olson, & Grunert, 1999). Specific emotions influence online shopping behavior differently. Lerner & Tiedens (2006) claim that various feelings of control and uncertainty caused by same-valence emotions have varied consequences for shopping behaviors.

However, researchers discovered that fear was the emotion most significantly connected with arousal. On the other hand, Wierzba, et al., (2015) observed a weak correlation between discrete categories of emotions and excitement in shopping behavior. On the contrary, Kuleh & Setyadi (2016) claimed that when purchasing in person, emotions matter a lot. The relationship between affection and shopping behavior is based on positive emotional connections and close interpersonal relationships. Similarly, Mis (2022) indicates that positive emotions toward internet shopping influence individuals' purchasing decisions. By assessing customers' attitudes toward online purchasing, it may be concluded that consumers have positive views that point to excellent, enjoyable, and favorable attitudes toward online shopping. Das, Sarkar, & Debroy (2022) suggested that both positive and negative emotions affect people's online shopping decisions. Since there is a small disparity between current and previous studies, we can claim that the differences between demographic variables in this study will affect identifying the elements influencing online shoppers' emotions. It showed a statistically significant correlation between internet shopping activity and demographic factors (Cinar, 2020).

5. Managerial Implications and Recommendations

As a consequence of the COVID-19 lockdowns, the e-commerce industry expanded rapidly. Due to this, marketing distribution channels that had previously placed a strong emphasis on traditional methods have started using online platforms. With a vibrant economy, generous government subsidies for digital technology, and a sizable young population, Malaysia has become a desirable e-commerce market in Southeast Asia. In Malaysia, the online business is a collaborative government and commercial sector project

to boost online shopping and aid in the nation's economic recovery. Additionally, it aims to assist local businesses impacted by the pandemic. More than 8.2 million consumers have benefited from this mission, which has successfully produced more than RM 945 million in sales. This mission has also had a positive effect on businesses' adoption of the digital strategy, leading to an increase in new job prospects for Malaysians. Therefore, the government should continue to support online retailers to ensure this industry's success. First and foremost, the government must direct online retailers to provide information on how to resolve problems.

In addition, as many banks and financial institutions as possible should work with businesses to make the e-payment process simple and convenient. Aside from that, online businesses also need to be aware of the different regulatory frameworks that control the sector. To avoid any fines or penalties issued by the appropriate authorities, business owners must guarantee that rules relating to registration, advertisements, and handling customer data, among others, are followed. It is essential for business owners engaged in e-commerce to abide by the relevant laws to gain the trust of their online customers. Besides that, to attract more consumers to online shopping, online retailers and business owners may develop more focused and effective online retail operations that meet the demands and expectations of their new online shoppers. When consumers believe an online store would benefit them, e-commerce will be useful. Retailers must persuade consumers to encourage more individuals to make online purchases to increase online sales. Online businesses should implement a good website. Websites are made to provide consumers with options for selecting from a variety of products online.

As compared to shopping outside, which takes more time, consumers will have a wide range of options for their desired purchases. Online retailers' appealing web designs and user-friendly websites will influence customers' decisions to buy the products they genuinely want. Business owners should also offer websites that are full of helpful information and make sure that the websites they explore strictly follow security principles. Additionally, to keep current consumers and draw in new ones, online marketers should deploy cutting-edge, creative, and attractive sales advertising activities through their websites. On the other hand, the consumer's attitude or perception will have an impact on online shopping. Thus, trust is very important because the consumer perceives transaction risk in the online environment as higher when the buyer does not directly interact with the seller and the things they intend to buy. Retailers must start by lowering consumers' perceived risks. To protect consumers online, the government also must implement the legal framework. More individuals are motivated to shop online due to the law's ability to better safeguard their interests.

Conclusion

This study has identified the factors that influence online shopping behavior patterns among consumers. The findings showed that only two constructs were statistically significant to online shop behavior, which are web characteristics and cognitive. However, the variables of external stimulus and affective are not statistically significant. Since there are considerable differences in the behavior of customers from this population who have different types of online buying, it follows that distinct techniques should be developed. From the findings, e-businesses should enhance the functionality, usability, and appearance of their websites. Additionally, it is vital to regularly update and maintain the website content to guarantee its accuracy and superior quality. Online retailers must ensure consumers can make purchases on their websites in the simplest, most convenient way feasible. Easy-to-use websites will encourage new customers to make a purchasing decision and increase their likelihood of making additional purchases.

By successfully enhancing consumers' perception of online buying, it may be possible to positively influence both their purchase intent and behavior. It has been discovered that favorable effects on consumers' cognition influence their propensity to repurchase from an online store. The more customers purchase online, the more favorable their perceptions of online shopping will be. When purchasing online, customer-focused marketing and communication could be offered, giving customers access to specialized goods and services. Additionally, it might offer interactive and diversified information to provide customers freedom of choice and control over the process, which would increase their behavior intention. As for the recommendation, future studies should select a sample of working adults outside of the university and

additional variables are connected to internet buying since the sample of the current study only concentrated on university students and staff. The researchers should also employ qualitative and quantitative methods to effectively gather data from Malaysia's general population throughout the age spectrum to thoroughly assess respondents' perceptions of and intentions for online shopping.

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