

INFORMATION COMMERCE (i-COMMERCE) USAGE AND PURCHASE DECISIONS AMONG UNIVERSITY STUDENTS DURING COVID-19

KORIŠTENJE INFORMACIJSKE TRGOVINE (i-COMMERCE) I ODLUKA O KUPOVINI TIJEKOM PANDEMIJE COVID-19 MEĐU SVEUČILIŠNIM STUDENTIMA

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Preliminary communication

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Abstract

Purpose – The purpose of this paper is to examine the relationship between information commerce usage and purchase decisions made by university students during the COVID-19 pandemic.

Design/Methodology/Approach – Survey questionnaires were distributed to students at public and private universities through a variety of online platforms. Data was collected from 151 respondents within a two-week period and analyzed using IBM Statistical Package for the Social Sciences (SPSS) Version 26 for descriptive (i.e., mean, standard deviation, reliability test, model fit test) and inferential (i.e., correlation and regression for hypotheses testing) purposes.

Findings and implications – The findings indicate that, while students engage in information commerce for its convenience, their usage of it is unrelated to the degree of trust. Nonetheless, price comparison has a sizable

Sažetak

Svrha – Svrha je rada ispitati odnos između korištenja informacijske trgovine i odluka o kupovini koje su donosili sveučilišni studenti tijekom pandemije COVID-19.

Metodološki pristup – Korišten je online anketni upitnik koji je studentima javnih i privatnih sveučilišta distribuiran putem raznih internetskih platformi. Anketiranjem su prikupljeni podaci od 151 ispitanika. Odgovori su prikupljeni u roku od dva tjedna te su analizirani korištenjem IBM Statistical Package for the Social Sciences (SPSS) verzija 26 u deskriptivne (tj. srednje vrijednosti, standardna devijacija, test pouzdanosti, test prikladnosti modela) i inferencijalne (tj. korelacija i regresija za testiranje hipoteza) svrhe.

Rezultati i implikacije – Rezultati pokazuju da se studenti uključuju u informacijsku trgovinu zbog pogodnosti, ali ne i zbog stupnja povjerenja. Ipak, usporedba cijena ima znatan utjecaj na način na koji se koristi in-

influence on how information commerce is used. Additionally, information commerce usage has an effect on purchase intention, while purchase intention is found to be a significant predictor of purchase decisions.

Limitation – This study examined factors that influence the usage of information commerce among students in Malaysian universities, as well as their purchase intention, on a rather small sample size.

Originality – This may be the first study to define information commerce usage, with its results confirming students' purchase behavior and demonstrating that online shopping simplifies their lives. Surprisingly, the findings suggest that the degree of trust does not influence the usage of information commerce. This contradicts previous studies conducted by Anas et al. (2021) and Viktoria et al. (2021).

Keywords – information commerce usage, purchase intention, purchase decision, COVID-19, university students

formacijska trgovina. Dodatno, korištenje informacijske trgovine utječe na namjeru kupovine koja je konačno značajan prediktor odluke o kupovini.

Ograničenja – Rad istražuje čimbenike koji utječu na korištenje informacijske trgovine među studentima malezijskih sveučilišta i njihovu namjeru kupovine na relativno malom uzorku.

Doprinos – Ovo je možda prva studija koja definira korištenje informacijske trgovine, a istraživanje potvrđuje da kupovno ponašanje studenata pokazuje kako kupovina putem interneta pojednostavljuje život studenata. Iznenaduje da je istraživanje pokazalo da stupanj povjerenja nije utjecao na korištenje informacijske trgovine. Ovaj je rezultat u suprotnosti s prethodnim istraživanjima Anas i sur. (2021.) i Viktoria i sur. (2021.).

Ključne riječi – korištenje informacijske trgovine, namjera kupovine, odluka o kupovini, Covid-19, sveučilišni studenti

1. INTRODUCTION

The outbreak of COVID-19 has resulted in an upward trend in student online shopping behavior through the use of information commerce. With the advancement of electronic commerce that focuses on informing potential customers about products or services via social media, information commerce has emerged as a growing phenomenon. As businesses attempt to stay competitive during the pandemic, each website or advertisement in an information-rich social media battle allows for comments and feedback from customers. As a result, information commerce has become one of the most popular ways for students, who account for the majority of Malaysia's population, to spend their money, particularly during the country's ongoing COVID-19 epidemic (Omar et al., 2021). This activity is believed to have the potential to save both time and money thanks to discounts offered in relation to specific events, such as cyber sales or payday sales. It also allows customers to conduct online searches for the best products and services at the best prices, those offerings the widest selection, and the best deals (Wibowo, 2021).

Beyond Malaysia, altogether over 627 million people worldwide have engaged in information commerce, with Germany and the United Kingdom leading the way in terms of volume. Possibilities for online purchases range from books, airline tickets and reservations, clothing and footwear to videos and games, and other electronic products (Sultan & Uddin, 2011). Since the onset of the pandemic, e-commerce markets in Asian countries have seen explosive growth, with expectations that they could reach USD 13 billion in 2020 (Nguyen & Phan, 2021). During lockdown, information commerce experienced an unexpected increase in demand of around 15–45% as people self-isolated at home out of fear of contracting the coronavirus (Chaudhary, 2020). Meanwhile, online classes in Malaysia now require the use of smartphones, laptops, and tablets (Zainol, Hussin, Othman & Zahari, 2021). Interestingly, Utama et al. (2021) discovered that 96.10 percent of 51 Malaysian respondents indicated an immediate proclivity towards making a

purchase after viewing advertisements on social media platforms such as Telegram, Instagram, Facebook, YouTube, and TikTok. All of these examples demonstrate that information commerce has become a trend that enables people to make purchases even as the world is consumed by the COVID-19 pandemic, which is wreaking havoc on “brick and mortar” businesses.

However, after two years of suffering at the hands of COVID-19, purchasing online became a necessity. Students who have previously made an online or information commerce purchase are more likely to do so again (Koch, Frommeyer & Schewe, 2020). Due to a lack of alternatives, students will make purchases directly through social media to satisfy their needs and desires. Many believe that purchasing through information commerce channels will put them at ease due to the door-to-door service provided. In this way, students may save time, energy, and money, but they will miss out on the joy of going on an outing (Kiyici, 2012). Although beneficial to students, this new phenomenon may also have some drawbacks that could jeopardize their purchase intentions and decisions.

Among the potential factors that could influence one's decision to make a purchase is price comparison. This brings us to the point of information commerce, as electronic commerce limits the amount of research on products customers may conduct. Information commerce can be used by students to compare affordable prices and high-quality products. Due to their status student have no substantial income except scholarships, limiting their ability to make purchases on a regular basis and compelling them to carefully select the right product and quality. Occasionally, advertisements contain some perplexing pricing, for instance where the price of two identical products differs significantly. The students thus require clarifications, which can be obtained by referring to comments or feedback from existing customers. Such discussion may help students decide whether to pay a higher or lower price for the same product (Ali Taha, Pencarelli, Škerhakova, Fedorko & Košikova, 2021). In short, the price comparison is a fac-

tor considered by students when purchasing through information commerce.

In addition, students should consider the degree of trust when purchasing products online. Each product presented in an advertisement should be genuine and fully meet their expectations. For example, students may occasionally receive items that differ from those ordered, potentially making them feel duped and eroding their trust in the specific online platforms that fraudulently sell such products. In other instances, students may receive knockoff products rather than authentic ones, with packaging and branding virtually identical to those found on the original products. These cybercrimes may have an effect on students, particularly when they make purchases online, as they are completely reliant on scholarships or their parents' funding in making those purchases. According to reports, there were 3,514 instances of e-commerce fraud in 2019, up from 5,847 in 2018, a 66-percent increase (The Star, 2021). In short, trust is another critical factor that may influence students' online purchasing decisions.

The current study derives its importance from a focus on students' online or information commerce purchases, which no other study has done before. Additionally, the period concerned is the devastating COVID-19 lockdown, when the circumstances of online purchasing differed from those in the pre-lockdown period. Prior research on online shopping and purchase behavior among students was conducted on a small sample size due to its concentration on a single location, precluding generalizations to all existing higher education institutions (Omar et al., 2021). Also, the majority of prior research on COVID-19 purchase behavior is too broad in scope, having been conducted on the general population rather than the student population (Utama et al., 2021). It is also important to note that, due to the fact that the federal government's movement control orders (MCO) vary by country, each country's online purchasing behavior will differ (Verma & Naveen, 2021). Finally, consumers develop habits over time with regard to what they consume, and when and

where they consume it. According to previous research, all consumption is time- and location-dependent (Sheth, 2020). In this instance, time- and place-bound events occur as a result of restrictions placed on consumers' shopping options due to the lockdown and social isolation measures implemented, limiting the availability of physical retail locations for customers.

Therefore, it is necessary to address the following questions:

Is convenience a factor in the use of information commerce?

Is price comparison a reliable predictor of information commerce usage?

Is it the degree of trust that determines how information commerce is used?

Is it likely that information commerce will accurately predict purchase intent?

Is it true that purchase intention results in a purchase decision?

2. LITERATURE REVIEW

2.1. Convenience and Information Commerce Usage

Convenience is a factor that may influence students' use of information commerce and ultimately encourage them to purchase online. Azman and Abdullah (2021) defined convenience as a characteristic of a product/service that is available without one's having to leave their home. Several studies have looked into the convenience of online shopping. For example, Salehi, Abdollahbeigi, Langroudi, and Salehi (2012) assert that the convenience of online shopping entails a more efficient product search, an abundance of product choice, and the ability to purchase at any time. The issue of limited shopping time that some consumers face can be effectively addressed by e-commerce platforms as they are designed to expedite the traditional purchasing process (Salehi et al., 2012). This automatically reduces

the amount of time consumers spend taking part in the purchasing process. Another study concurred, stating that convenience refers to the streamlining of the consumers' purchasing processes. Moreover, simplifying that process for consumers is believed to increase their purchase intention (Salehi et al., 2012).

Students in Malaysia have also been affected by the restrictions placed on shopping. In the absence of other options, students may consider purchasing their supplies directly through e-commerce. The market is now dominated by social media, websites, and advertisements which promote a variety of products. Students can use their smartphones to order directly from popular platforms such as Lazada, Shoppe, and Grab, as well as Food Panda (Azman & Abdullah, 2021). Nowadays, the majority of these platforms have a large selection of products from which students can choose, and the availability of those items ensures that students can purchase them easily.

Furthermore, students may place orders and have them delivered directly to their front door, thus receiving door-to-door service. Another factor influencing students' use of information commerce is the sufficient amount of information and detail provided on social media, in advertisements, and on websites, enabling students to acquire a general understanding of the products and avoid any confusion (Omar et al., 2021). Another advantage is that orders are shipped promptly once they are placed. Even though students in lockdown rely on online purchases for supplies, such as food and beverages, as well as school supplies, it can be concluded that convenience is a critical factor in the students' decision to have their needs and desires met by purchasing through information commerce (Muller, 2021). As previously stated, efficiency and item availability are two convenience factors influencing students' decisions to shop online.

2.2. Comparable Cost and Information Commerce Usage

Another factor that may have an impact on the use of information commerce is comparable

cost. Ali Taha et al. (2021) suggested that comparable cost is employed as a consumer pricing activity to locate the best product deals. Thus, the wide variety of products and services offered by online merchants enables users to compare prices across multiple websites and discover items at a lower price than they would otherwise be able to in an offline store (Lim & Dubinsky, 2004). Certain websites, such as eBay, allow customers to bid on auctions or purchase products with the lowest price guarantee, enabling them to save money on their purchases (Katawetawaraks & Wang, 2011). Due to the fact that the majority of students are unemployed and do not have a fixed income, they are extremely concerned about the cost or price of products. It should also be noted that information commerce is currently available on a number of different platforms. Thanks to all of these advantages, students are able to make the best decision possible, especially when comparing different products in terms of reasonable prices and high quality. For instance, students may look up Lazada and Shoppe to make purchases. Since these popular platforms provide additional information about their products, as well as responses or comments from existing customers, students are able to make more informed judgments and purchases (Ali Taha et al., 2021). The cost of shipping is another consideration for students. If the prices are reasonable, but the shipping is prohibitively expensive, students may consider purchasing products (Pham, Do Thi & Ha Le, 2020). Therefore, students' purchasing decisions will be influenced by product prices and shipping costs. In comparing prices, students will use information commerce given the fact that it provides easy access to all such information.

2.3. Degree of Trust and Information Commerce Usage

When it comes to purchase decisions, the level of trust is crucial and should be examined in the context of online shopping. Pham et al. (2020) defined trust as an attitude of confident expectation in an online situation where the risk of one's vulnerabilities being exploited is present. It is unrealistic to expect that trust

can be gained automatically because it must be earned and maintained over time (Hidayat, Wijaya, Ishak & Catyanadika, 2021). In particular, when making online purchases, consumers must have a high level of trust and they also require certainty that their items will be delivered as promised as online shopping carries a number of risks, including online fraud, malware, and system failures. This may result in consumers avoiding and distrusting online shopping (Ali Taha et al., 2021; Wibowo, 2021). It is clear, therefore, that trust is critical in influencing purchase behavior. The accuracy of this statement is supported by numerous instances of online purchasing fraud by scam syndicates, of which students are well informed. Consequently, if online platforms can be trusted in terms of security and privacy, students will be more willing to purchase products, particularly those that are more expensive. Security systems have always been critical to all online systems, particularly with no other option available given the extent to which the COVID-19 outbreak changed students' purchasing behavior (Verma & Naveen, 2021). Specifically, the security level provided is crucial for ensuring the security of student transactions. Faced with an abundance of options, students should exercise caution and choose authorized platforms to ensure the security of their purchases and the timely delivery of their orders. Privacy is another issue that students may prioritize. To protect both their institution and their own personal information, all transactions must be secure. On account of a number of worrying cases in which buyers' information has been compromised, it is critical for platform administrators to guarantee a genuine and secure experience, as well as a high level of privacy, to ensure that students can rely on information commerce.

2.4. Information Commerce Usage and Intention to Purchase

Information commerce is a more sophisticated version of electronic commerce enabling customers to communicate, share information, engage with web administrators, and collect

feedback from existing customers. Students who become accustomed to this functionality will use it to purchase or continue purchasing the same products on the same platform if it is convenient, offers good prices, and ensures high-security transactions. As previously discussed, if platforms provide adequate privacy, a diverse selection of affordable products, and consistent product availability, students will use them with greater frequency and proclivity to make repeat purchases of the same or buy other products available. This process is referred to as purchase intent. Verma and Naveen (2021) defined intention to purchase as the degree to which a consumer is willing to buy a product through an online store. The nature of information commerce enables and promotes a higher level of engagement between customer and seller, which increases the desire to make additional purchases. New marketing strategies place a premium not only on product quality but also on after-sales service (Ali Taha et al., 2021). Students who are dissatisfied with the products or services received will be satisfied if they receive support from the administrator. Additionally, increased communication between seller and buyer will help to strengthen their relationship, thereby fostering trust and bonding. In short, students are more likely to make a purchase if they are satisfied with the service, information, or promotion provided by information commerce platforms. Additionally, the degree of engagement and communication between students and sellers may contribute to stronger purchase intention (Verma and Naveen, 2021).

2.5. Intention to Purchase and Decision to Purchase

Students will make a purchase, and be encouraged to buy online, if they believe that information commerce will provide them with good service, a fair price, and prompt delivery. The willingness of the students is crucial at this stage, as they are making a decision on whether to buy online or in person (Koch et al., 2020). Furthermore, if students have had a positive

experience prior to making a purchase, they are more likely to do so again. As a result, businesses will be able to thrive while also demonstrating their commitment to current customers. The term used to describe this process is “decision to purchase”. According to Sultan and Uddin (2011), it is the thought process that takes a consumer from recognizing a need to generating options and selecting a specific product and brand. In addition, students may develop a sense of loyalty with respect to products, platforms, and sellers if they believe that products such as food and beverages are appealing, of high quality, have effective delivery systems, and that online transactions offered on the information commerce platform are secure (Farah et al., 2018;

Nor Asshidin, Abidin & Bashira Borhan, 2016). This is also good news for businesses because it means that students will freely promote and recommend specific products, platforms, and sellers to their colleagues and families by word of mouth.

2.6. Synthesis of Previous Studies

Based on research conducted by Peña-García, Gil-Saura, Rodríguez-Orejuela and Ribamar Siqueira-Junior (2020), Prasad, Garg, and Prasad (2019), Sultan and Uddin (2011), and Pham et al. (2020), four models relevant to the current study have been selected for synthesis analysis. Table 1 summarizes each model’s findings, as their synthesis will lead to the creation of the research model.

TABLE 1: Synthesis of recent studies

Item	Purchase intention and purchase behavior online: A cross-cultural approach (MR)	Purchase decision of generation Y in an online environment – structural model (PDSM)	Model of consumers’ attitudes towards online shopping (COS)	Model of perceived benefit in shopping online during COVID-19 in Vietnam (PBV)
Authors	Peña-García et al. (2020)	Prasad et al. (2019) (applied research)	Sultan & Uddin (2011)	Pham et al. (2020)
Issue/Subject matter/Topic	<ul style="list-style-type: none"> • Purchase intention • Purchase behavior online 	<ul style="list-style-type: none"> • Purchase decision • Generation Y • Online environment 	<ul style="list-style-type: none"> • Online shopping behavior • Student population • Online shopping activities 	<ul style="list-style-type: none"> • Online shopping • Consumer behavior • COVID-19 • Benefits perception
Methodology	Online survey	<ul style="list-style-type: none"> • Qualitative study • E-mail survey 	Questionnaire-related personal demographic data	• Quantitative study
Variables/ Formula	<ul style="list-style-type: none"> • Self-efficacy • Attitude • Compatibility • Ease of use • Perceived usefulness • Online purchase intention • Purchase behavior 	<ul style="list-style-type: none"> • Purchase intention • Customer loyalty • Social media usage • Conviction • eWOM • Company brand reputation 	<ul style="list-style-type: none"> • Convenience • Time saving • Website design/ feature • Security 	<ul style="list-style-type: none"> • Awareness of Utility • Awareness Easy to Use • Awareness of Marketing Policy • Awareness of Price and Cost • Affection of Society
Findings	Regardless of the consumers’ intention to buy, their awareness of their spending habits prevents them from buying, which establishes a negative relationship.	Social media usage and eWOM have a direct significant impact on purchase intention among generation Y.	Age, income, and education provide online retailers with an insight into online shopping attitudes.	There is a significant change in the perceived benefits of online shopping for consumers during the COVID-19 epidemic.

3. DEVELOPMENT OF CONCEPTUAL FRAMEWORK

As shown in Figure 1, this study aims to determine the relationship between online shopping and purchase behavior among students during the COVID-19 pandemic. It also investigates the relationship between the respondents' information commerce usage (Prasad et al., 2019), convenience (Sultan & Uddin, 2011), price comparison (Pham et al., 2020), degree of trust (Silva, Pinho, Soares & Sampaio de Sa, 2019), purchase intention (Peña-García et al., 2020), and decision to purchase (Cao, Aijan & Hong, 2018). Dimensions of information commerce usage – frequency of usage, level of engagement (buyer-seller), and frequency of communication (buyer-seller) – were extracted from a study conducted by Prasad et al. (2019). Convenience dimensions, which include user friendliness (in design and features), efficiency, and item availability, are derived from Sultan and Uddin (2011). Price comparison dimensions, relating to various information commerce platforms, the cost of online shopping, and affordability, were extracted from Pham et al. (2020). Furthermore, dimensions of the degree of trust, consisting of reliability, security, and privacy, were taken from a study conducted by Joaquim et al. (2019).

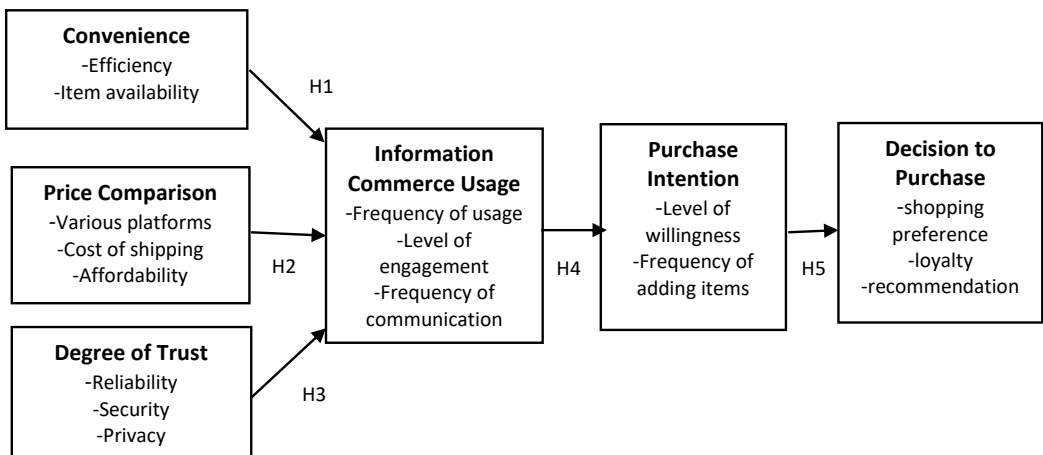
With regard to online purchase intention, the dimensions include the level of willingness and frequency, both of which have been extracted from Peña-García et al. (2020). Finally, the decision to purchase is based on shopping preferences, loyalty, and recommendations.

The conceptual model employed in the study is depicted in Figure 1. Convenience, price comparison, and a high degree of trust are all possible reasons for students to engage in information commerce. In using an online platform to gather information, students are more likely to purchase desired products on that platform or be influenced to purchase other products. In terms of information commerce, initiatives that promise high-quality products, prompt delivery, a secure line, and an abundance of promotions and discounts are likely to entice students to make a purchase. Simultaneously, students are transformed into marketing agents who enthusiastically promote the products, platform, and sellers to their colleagues and families. In light of this, the current study attempts to provide a response to the statements above.

H1: There is a positive relationship between convenience and information commerce usage.

H2: There is a positive relationship between comparable cost and information commerce usage.

FIGURE 1: Conceptual Framework and Hypotheses of the Study



H3: There is a positive relationship between the degree of trust and information commerce usage.

H4: There is a positive relationship between information commerce usage and intention to purchase.

H5: There is a positive relationship between intention to purchase and decision to purchase.

The following section will discuss the methodology, which includes defining the population, selecting the sample size, and implementing data collection procedures.

4. METHODOLOGY

Population

The statistical population of the study consists of Malaysian students currently attending tertiary education who have shopped online at least once since the start of the COVID-19 pandemic. According to the latest statistical data made available by the Malaysian Ministry of Higher Education (2020), the number of students enrolled in public universities was 584,576, with 537,434 students enrolled in private universities, 85,936 studying at polytechnics, and 16,152 attending community colleges.

Sample

The study sample consists of Malaysian students who are currently attending either public or private universities for their tertiary degrees and have shopped online at least once since the start of the COVID-19 pandemic.

Respondent characteristics

Importantly, in order for respondents to be eligible to take part in the study, they had to be

active tertiary-level Malaysian students attending public or private universities in Malaysia who have shopped online at least once since the start of the COVID-19 pandemic.

Data collection procedure and statistical techniques

An online questionnaire using Google Forms was shared on various information commerce platforms, such as Shopee, Lazada, Mudah, PrestoMall, Lelong, Hermo, Zalora, Carousell, Ezbuy, eBay, Shopify, Taobao, Qoo10, Harvey Norman, Signature Market, Sephora, Go Shop, PG Mall, YouBeli, Kravve, Foodpanda, Grab, Alibaba, Instagram, LinkedIn, WhatsApp, and Telegram. The responses were collected within a two-week period and analyzed using IBM's Statistical Package for the Social Sciences (SPSS) Version 26 for descriptive purposes (i.e., mean, standard deviation, reliability test, model fit test) and inferential purposes (i.e., correlation, and regression for hypothesis testing).

Questionnaires

The questionnaire comprised seven sections, including a demographic question and the main body consisting of 23 closed questions. A seven-point Likert scale was used to categorize the responses, with 1 denoting "strongly disagree" and 7 indicating "strongly agree". The majority of the questions was adapted from the study conducted by Prasad et al. (2019) on information commerce usage. Convenience was calculated according to Sultan and Uddin (2011), price comparison was determined according to Pham et al. (2020), the degree of trust was deduced in line with Silva et al. (2019), purchase intention was largely decided in line with Peña-García et al. (2020), and purchase decision ascertained according to Cao et al. (2018).

TABLE 2: Instrument of construct

Variables	Dimensions	Items	Sources
Information Commerce Usage	Frequency of usage	I spend at least 2 hours daily on social media.	Prasad et al. (2019)
	Level of engagement (buyer-seller)	I often engage with online sellers on social media (e.g., like/comment/share sellers' content).	
		I tend to purchase from online sellers that are up-to-date with current marketing trends (e.g., advertise through TikTok challenges).	
	Frequency of communication (buyer-seller)	I often use social media to communicate with online sellers.	
Convenience	User friendliness (design & features)	The design and features of my preferred online purchasing platform are easy to use.	Sultan & Uddin (2011)
	Efficiency	I get on-time shipping when I order online.	
		When purchasing online, I am able to obtain sufficient product information.	
Item availability	When shopping online, I can purchase products at any time of day or night.		
Price Comparison	Various e-commerce platform	I often compare product prices across different e-commerce platforms.	Pham et al. (2020)
	Cost of online shopping	I am particular about shipping fees.	
		My final decision in purchasing a product online depends on the price and cost of the product (e.g., shipping fee and service/tax fee).	
Affordability	Online shopping is cheaper than physical shopping.		
Degree of Trust	Reliability	I am confident in purchasing expensive items online.	Silva et al. (2019)
		I am confident that I will safely receive the items that I have purchased from online stores.	
	Security	I use online payment methods in online shops as they are secure.	
Purchase Intention	Level of willingness	I will likely make an online purchase soon.	Peña-García et al. (2020)
		If given the opportunity, I can predict what I should purchase from an online store in the future.	
		I intend to buy from online stores during monthly cyber sales (e.g., the 11.11 Sale).	
	Frequency	I often add items to my shopping cart.	
Decision to Purchase	Shopping preferences	I prefer to shop online rather than offline.	Cao et al. (2018)
	Loyalty	I intend to make a repeat purchase in the future from an online store that has given me satisfaction.	
	Recommendation	I would recommend to my peers and family to purchase from an online store that has made my purchase experience satisfactory.	

5. FINDINGS

Demographic profile of the respondents

Respondent characteristics are summarized in Table 3. The larger share of respondents (70.9%) was female, in the age range of 21–24 years old (74.8%). In terms of their level of education attained, the majority of the respondents had earned a bachelor’s degree (78.8%) and came from public universities (86.8%). Since the targeted respondents are students, most of the them did not have a stable monthly income (70.2%). Based on their characteristics, it can be said that female students are the dominant group attending tertiary education in Malaysia.

TABLE 3: Demographic profile (N=151)

Features	Levels	Frequency	Percentage (%)
Age	18–20 years old	22	14.6
	21–24 years old	113	74.8
	25–30 years old	11	7.3
	31 and above	5	3.3
	Gender	Male	44
	Female	107	70.9
Education	Diploma	17	11.3
	Bachelor’s degree	119	78.8
	Master’s degree	12	7.9
	Ph.D.	2	1.3
	Other	1	0.7
University	Public universities	131	86.8
	Private universities	20	13.2
Income	Yes	45	29.8
	No	106	70.2

Assessing validity and reliability

In determining the reliability of the instrument being used, the general rule is that the indicators should have a Cronbach’s alpha of 0.6 or more (Nunnally, 1978). Given that the Alpha scores obtained in this study range between 0.60 and 0.73, we can conclude that the questionnaire is reliable and the data can be applied in the analysis (see Table 4). According to the initial findings, the majority of the respondents perceived convenience, price comparison, and degree of trust to be related to information commerce usage. Following that, it is believed that information commerce usage is associated with purchase intention. Finally, purchase intention is associated with purchase decisions.

TABLE 4: Descriptive analysis and model fit test

Construct	Mean	Standard Deviation	Cronbach’s Alpha
Convenience	5.60	1.14	0.60
Price comparison	6.00	1.19	0.61
Degree of trust	5.02	1.29	0.70
Information commerce usage	5.10	1.64	0.73
Purchase intention	5.69	1.33	0.65
Decision to purchase	5.90	1.04	0.61

In order to validate the instrument at hand, apart from content validity, this study also considered construct validation, as suggested by Cronbach (1951). To achieve construct validity, the data was examined using principal component analysis as the extraction technique and Varimax as the method of rotation. With a cut-off loading of 0.40 and eigenvalues greater than 1.0, none of the attributes were dropped (see Table 5).

TABLE 5: Results of Confirmatory Factor Analysis (CFA)

Construct	Kaiser-Meyer-Olkin Measure of Sampling Adequacy	Eigenvalue	Percent of total variance explained
Convenience	0.62	1.24	46.75
Price comparison	0.65	1.60	47.18
Degree of trust	0.68	2.15	53.68
Information commerce usage	0.71	2.24	55.89
Purchase intention	0.62	1.96	49.05
Decision to purchase	0.56	1.82	60.68

Correlation

Table 6 depicts the correlation matrix between the constructs. A positive correlation is found between convenience and information commerce usage (r = 0.274). Similarly, price comparison is positively correlated to the use of information commerce (r = 0.272). Following that, there is a correlation between trust and the decision to purchase (r = 0.189). Finally, it is worth noting that a correlation was also found to exist between purchase intention and purchase decision-making (r = 0.523).

6. RESULTS

A summary of the findings concerning the five hypotheses constructed is presented in Table 7. Convenience is found to predict information commerce usage (p-value = 0.038). However, price comparison has a relationship with the use of information commerce (p-value less than 0.024). Additionally, there is no relationship between trust and information commerce usage (p-value = 0.133). The use of information commerce is a significant predictor of purchase intent (p-value = less than 0.000). Finally, and perhaps most intriguingly, purchase intention has a significant effect on the decision to purchase (p-value less than 0.000).

TABLE 6: Correlation among constructs

	Convenience	Usage	Price	Trust	Decision
Usage	0.274**				
Price		0.272**			
Trust			0.146		
Decision				0.189*	
Intention					0.523**

Note: **correlation is significant at the 0.01 level; *correlation is significant at the 0.05 level

TABLE 7: Hypothesis testing

H Hypothesis	Causal Relationship		Factor	β	Sig.	Result
H1	Convenience	→	Information commerce usage	0.177	0.038	Supported
H2	Price comparison	→	Information commerce usage	0.190	0.024	Supported
H3	Degree of trust	→	Information commerce usage	0.120	0.133	Rejected
H4	Information commerce usage	→	Purchase intention	0.444	<0.000	Supported
H5	Purchase intention	→	Decision to purchase	0.523	<0.000	Supported

7. CONCLUSION AND DISCUSSION

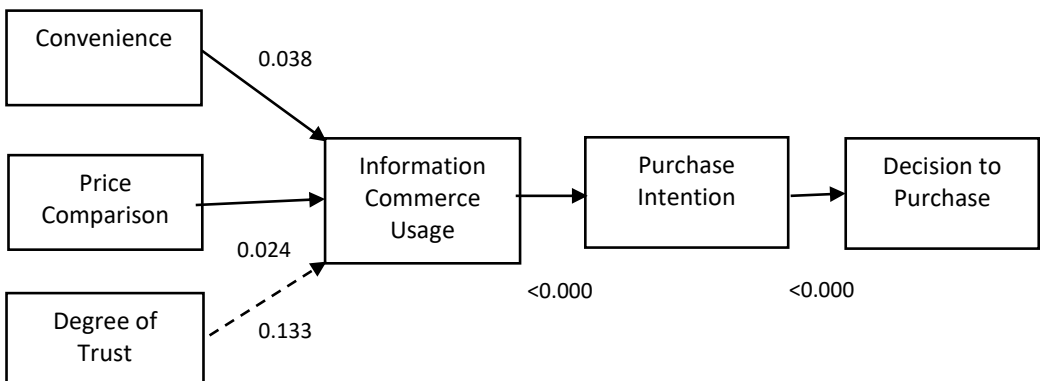
In summary, this study indicates that antecedents to information commerce usage, such as convenience and price comparison, are believed to be significant predictors of whether students will engage in information commerce or not. Surprisingly, the degree of trust, measured by reliability, security, and privacy, does not accurately reflect students' willingness to engage in information commerce. This study established that students who made online purchases during the COVID-19 pandemic or lockdown, as they were unable to meet their needs and wants by purchasing directly from physical stores, show a preference for convenience and price comparison. Those relying on scholarships and their families for financial support will be extremely cautious with their budgets, ensuring that they can afford to make such purchases.

With the COVID-19 pandemic altering the landscape of business and economic growth, many people have lost their jobs and a number of others have seen their salaries reduced. As a result, students are adamant about not burdening their families by making unexpected purchases from their families' limited budgets. Surprisingly, trust does not correlate with the use of information commerce. The reason for this lies in the fact that the majority of students had already experimented with several information commerce platforms prior to the pandemic,

so they were already aware that the platforms were secure and ensured a high level of privacy. Occasionally, during the COVID-19 pandemic, customers may have experienced deliveries of wrong items, containing incorrect features or being of low quality. Additionally, there are complaints that fraudulent platforms actively lure inexperienced customers with bogus sales. As the younger generation is largely made up of students, the majority of whom are well-equipped with IT knowledge, they are able to analyze and make the best purchase decisions based on forums, feedback, and comments found on information commerce channels. In short, students' use of information commerce for online purchases is unrelated to their level of trust.

However, students' use of information commerce influences their purchase decisions. As revealed by descriptive analysis, the students agreed that information commerce provided them with valuable information and that each search helped them gain knowledge about the products before making a final purchase decision. The information provided by the platforms undoubtedly aids students in their search for the products they desire and intend to purchase. Some information commerce sites also include short videos, testimonials from existing customers, and a price comparison tool for similar products. This is undoubtedly a great help for students in determining what to purchase on their limited budget.

FIGURE 2: Final research model



Finally, after calculating and analyzing data obtained through information commerce, the students make their purchase. This study established that students' perceptions of purchase intention have a significant impact on their decision to purchase necessary products. This finding is consistent with previous research conducted by Prasad et al. (2019) and Peña-García et al. (2020). The final research model is depicted in Figure 2.

7.1. Recommendations

The current study adds to the existing knowledge through data collected by helping stakeholders and relevant government agencies monitor online shopping activities that will ultimately assist students in making purchases to meet their academic needs. The study suggests that convenience is vital to students in the context of the ongoing COVID-19 pandemic, as it eliminates the need for them to go shopping in person. Moreover, even if the pandemic came to an end, the students believed that information commerce assisted them by saving time and money they might spend window shopping.

In addition, the study suggests that the comparison of prices has an influence on students' purchase decisions. This finding indicates to sellers that valid, timely, and up-to-date information on product prices will assist students in making a purchase. The study also reveals to the sellers that students who are unemployable but have some needs to fulfill will prefer to buy an affordable product of good quality that comes with good after-sales service. This could perhaps help the sellers segment their products based on price, quality, and purchasing power. For example, they could create a special, student-focused information commerce catalog, offering a variety of products at a reasonable price for students with limited purchasing power. To boost sales, sellers could also provide special offers or discount coupons to students who excel academically. In turn, the recipients of such offers could become brand ambassadors for the

products concerned, promoting them in this unique form of information commerce. It is recommended to sellers to establish an official relationship with universities as a means of bringing real-world business and technopreneurship closer to both the university and its students. This, in turn, would lead to an improvement in the sellers' return on investment and students' quality of life.

Furthermore, this study found that information commerce usage has a significant impact on purchase intent and, as a result, indirectly leads to purchase decisions. Based on the research conducted, it is suggested that information commerce is an important platform for students to make purchases. For many years, electronic commerce attracted students as a way of placing orders online and it has now taken the form of information commerce as a new trend in the young generation's online purchasing. During the COVID-19 pandemic, most students are likely to rely on information commerce for their academic and entertainment-related purchases, as such platforms provide detailed information and allow for customer feedback, comments, and reviews. Customers of the new generation are more assertive and inquisitive (Ali Taha et al., 2021), which makes information commerce the best platform for the students to meet their purchasing needs. Furthermore, since the findings revealed that trust is not a major factor in students' use of information commerce, such platforms represent the best purchasing option available.

Universities could benefit from improvements to IT infrastructure in the context of growing demand for information commerce. However, given that IT infrastructure is as important as it is costly, investments could be made gradually to meet student needs. In classrooms, libraries, and dorms, basic IT infrastructure, such as a wireless platform, could be installed. Based on the volume of traffic, improvements would also need to be made with respect to internet performance. To meet the needs of students, it is important to form a special IT infrastructure

team focused on their welfare. Student involvement might also be useful in the development of a campus IT strategy. Since the majority of students are heavy internet users, their input and suggestions are critical to the university's IT infrastructure.

7.2. Future Research Plan

Since the data for this study was collected from a small number of students, the results are only applicable to the community concerned and cannot be generalized. Therefore, it is recommended that a large number of potential customers be surveyed in the future so that findings can be generalized. Moreover, it is suggested that future studies characterize the stu-

dents based on purchasing power, which differs for every student depending on their monthly allowance or income. This may prove valuable for future research as the results and findings are expected to be more specific and reliable.

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