

**Analyzing Mongolian consumers' attitude toward e-commerce platform and
domestic product**

By

BATSUURI, Narangarav

THESIS

Submitted to

KDI School of Public Policy and Management

In Partial Fulfillment of the Requirements

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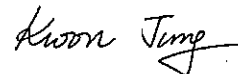
MASTER OF PUBLIC POLICY

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ABSTRACT

The objective of this study is to examine Mongolian consumers' attitude toward e-commerce platforms and domestic products by applying Technology acceptance model, ABC model of attitude, and Theory of planned behavior. As for attitude toward domestic product, researcher uses ABC model of attitude with extended variables called Perceived Price and Ethnocentrism. As a result, Ethnocentrism, Cognition and Affect have impact on the attitude towards domestic product. However, the attitude toward domestic product was not positively influenced by Perceived price. The next part of the study measures the attitude toward e-commerce platform applying Technology Acceptance Model with extended variable Perceived enjoyment. All 3 variables, Perceived ease of use, Perceived enjoyment and Perceived usefulness affect the attitude toward e-commerce platform. On top of that, the behavior to purchase through e-commerce platform and the intention to use e-commerce platform were analyzed using Theory of planned behavior. Therefore, the attitude toward e-commerce platform and the Subjective norm positively influence intention to use e-commerce platform, but Perceived behavioral control hasn't impact on the intention. Therefore, the test resulted that the intention positively influences actual behavior. Additionally, the study investigates the impact of attitude toward domestic product on the attitude toward e-commerce platform. The hypothesis was supported at significance level of $p\text{-value} < .001$. It means that the Attitude toward domestic product positively influences attitude toward e-commerce platform. A total of 12 hypotheses were proposed, and the 10 hypotheses were accepted, and 2 hypotheses, namely, Perceived price to attitude towards domestic product and Perceived behavioral control to the intention to purchase through e-commerce platform, were rejected.

Key words: Attitude, Domestic products, e-commerce, ABC model, Theory of planned behavior

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1. Introduction

1.1. Motivation

The world is experiencing digital transition at the speed that we have never faced before, but only few countries are winning from this digitalization while the least developed and developing countries left behind. Globally, the United States and China control more than 75% of the cloud computing market, 50% of the internet of things market, and 75% of the blockchain patents (UNCTAD, 2020). The several international institutions, namely UNCTAD and OECD, are suggesting that e-commerce could be the best solution for least developed and developing countries to introduce their products to the world with low cost (OECD, 2017). Consequently, to benefit from the digital revolution, developing and least developed countries need to develop e-commerce.

For this to work, we must consider the public attitude toward e-commerce because it is important factor that determines the success of e-commerce platform itself (Mohamed & Gawady, 2005). Thus, researcher decided to analyze Mongolian consumers' attitude toward e-commerce platform and domestic products, simultaneously.

1.2. Objective of the study

The purpose of this study is to analyze Mongolian consumers' attitude toward e-commerce platforms and domestic products by applying Technology acceptance model (TAM), ABC model of attitude, and Theory of planned behavior. As for attitude toward domestic product, researcher uses ABC model of attitude with extended variables, namely, Perceived Price and Ethnocentrism. The first part of the framework of the study is aimed to find out how the perceived price, ethnocentrism, cognition and affect influence the attitude toward domestic

product. The next part of the study measures the attitude toward e-commerce platform applying Technology Acceptance Model with extended variable Perceived Enjoyment. On top of that, the intention to use e-commerce platform and the behavior to purchase through e-commerce platform were analyzed using the model of Theory of planned behavior. A total of 12 hypotheses were developed under the research framework. As a result, 10 hypotheses were supported and 2 of them were rejected.

2. Literature review

2.1. Development of Platform Business

2.1.1. Platform business in Developed countries and Developing countries

Platform businesses are developed under the needs of matching the customers' wants and the provider's suggestions (Taipale-Eräväla, Salmela & Lampela, 2020). The role of platform businesses is to facilitate payments, advertising, and most importantly to reduce transaction costs by bringing together two or more economic agents (Evans & Schmalensee, 2013). Ada (2013) considered Amazon, Airbnb, Uber as a two-sided platform because they are facilitating transactions between 2 groups of customers. Meanwhile YouTube considered as multisided platform since it includes more than 2 customers group such as content contributors, advertisers, and consumers (Song & Wildman, 2013). In general, the platforms create connections rather than creating product or service itself that are consumed by users (Gerl, 2020).

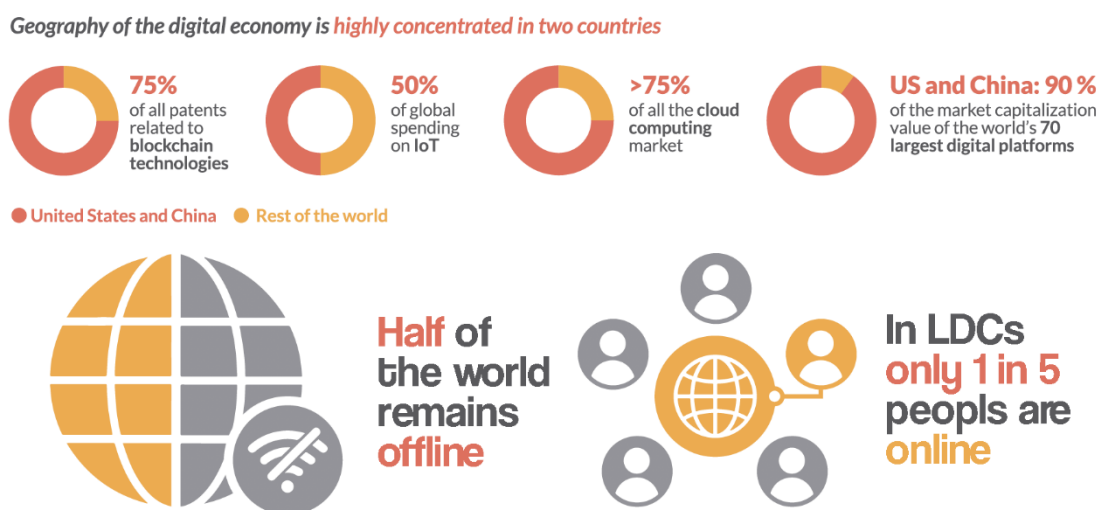
Our way of life and the ways that organizations are structured have altered because of the advent of the internet and wireless technology (Eckhardt, Ciuchta and Carpenter, 2018). According to market capitalization, five of the top ten corporations in the world as of 2022 are platform and technology firms, including Meta platforms, Amazon, Apple, Microsoft, and Alphabet (Google) (Global ranking, 2022). People's daily lives are increasingly reliant on digital items and technologies, including music, movies, news, smartphones, computers, and other devices (Birkinshaw, 2018).

Unfortunately, just a few nations—namely the United States and China—are benefiting from this digital change, while emerging and least developed nations lag far behind (UNCTAD, 2020). Even though the world is shifting digitalization rapidly, around 3 billion people are living with lack of internet access in the worldwide, and the digital divide in developing or least developed

countries is much worse than in developed countries (Internet Society, 2021). Additionally, among the top 70 largest digital platforms, the United States and China account for 90% of market capitalization, while 4% is accounted for by Europe, and 1% by Africa and Latin America combined (UNCTAD, 2020).

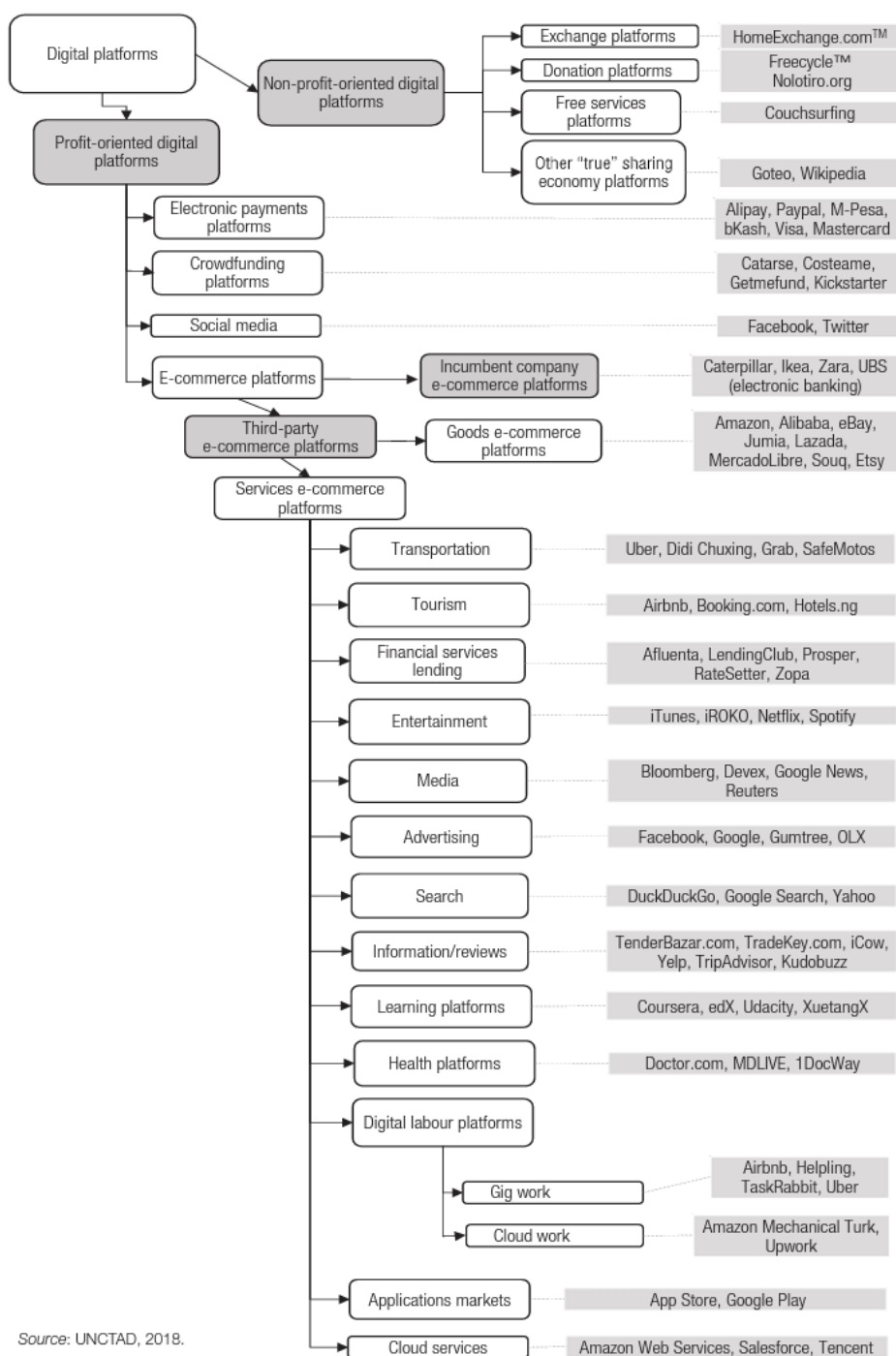
Figure 1

Digital economy concentration



Note. Adopted from “Digital Economy Report: Value Creation and Capture; Implications for Developing Countries 2019” by UNCTAD, 2019, United Nations Conference on Trade and Development, New York.

E-commerce allows Small and Medium-sized Enterprises (SMEs) to sell their products and services on both domestic and international markets, so it is the most effective way for developing countries to gain from digitalization, but the adequate connectivity is needed (UNCTAD, 2019). The platform business in general and how e-commerce fits into the picture are explained by the model below (UNCTAD, 2019).

Figure 2*Big picture of digital platforms*

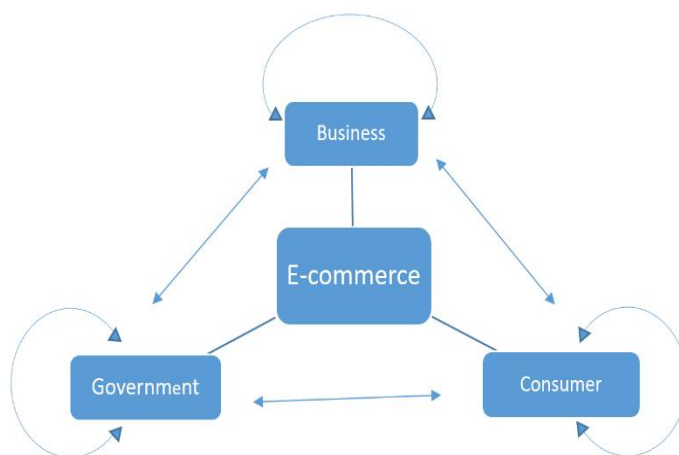
Note. Adopted from "Making Digital Platforms Work for Development" by UNCTAD, 2019, United Nations Conference on Trade and Development.

2.1.2. E-commerce for development

E-commerce is the term for the exchange of goods and services, the sending of funds or data, or both, over a digital network, most often the Internet (Lutkevich et al., 2022). A major component of e-commerce is the participation of businesses, governments, and consumers (Mohamed & Gawady, 2005).

Figure 3.

E-commerce market model



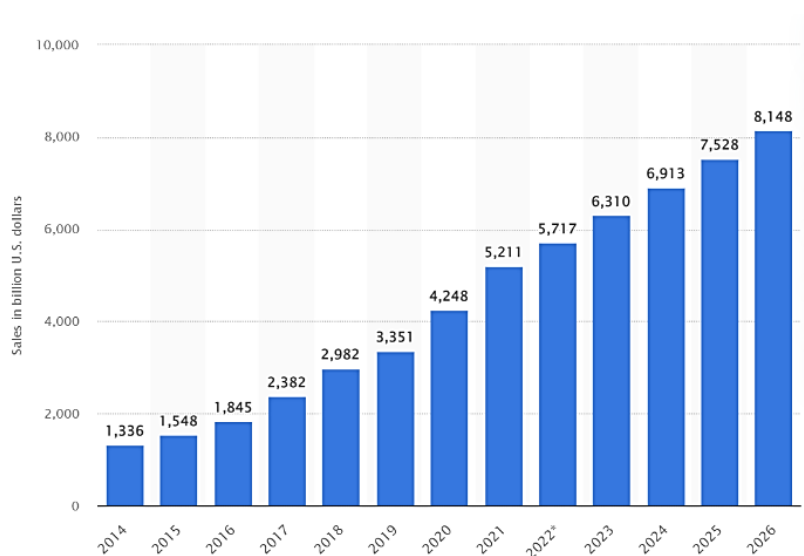
Note. Adapted from “The Impact of E-commerce on Developed and Developing Countries Case Study of Egypt and United States”, by Z. Mohamed and E. Gawady, 2005.

Other forms of e-commerce, such as Business-to-employee (B2E), Government-to-employees (abbreviated G2E), and Peer to Peer (P2P), have also been gathered and explained by other researchers (Nemat, 2011). In this paper, researcher focuses on Business to consumer (abbreviated B2C) e-commerce.

The sales of retail (B2C) e-commerce are predicted to grow rapidly (Coppola, 2022). Almost \$4820 billion will be spent in 2026 on cross-border e-commerce, which was over \$780 billion in 2019 (Ballestar et al., 2021).

Figure 4

World retail e-commerce sales forecast, 2014- 2026



Note. Adapted from <https://www.statista.com/statistics/379046/worldwide-retail-e-commerce-sales/> , by Stephanie Chevalier, 2022.

E-commerce is increasingly serving as the engine for economic growth in developing nations. (Humphrey et al., 2004). Mohamed and Gawady (2005) states that e-commerce will play in key role to increase the national productivity and prosperity in the near future. In the study of SMEs, Bravo, Segura, Temowo and Samaddar (2022) discovered that 44% of the SMEs gained from adopting e-commerce in crucial business areas like operation, sales, marketing, and finance. Zhukov (2019) made the assumption that the contribution of Alibaba’s group to the growth of the Chinese economy was roughly 1.1% of growth of GDP yearly throughout the period of 2014–2019. Moreover, OECD analysis (2017) noted that encouraging SME participation in active e-commerce is a key component of advancing inclusive economic growth.

With the usage of e-commerce, businesses and institutions can profit from a variety of advantages, starting with lower transaction costs (Paré, 2003). Most importantly, the e-commerce helps firms to increase their consumers by providing them with extended market opportunity (Moodley, 2003). However, e-commerce is bringing so many benefits to firms and economy, we

must consider that the success of the e-commerce platform itself is significantly influenced by public attitude of e-commerce (Mohamed & Gawady, 2005).

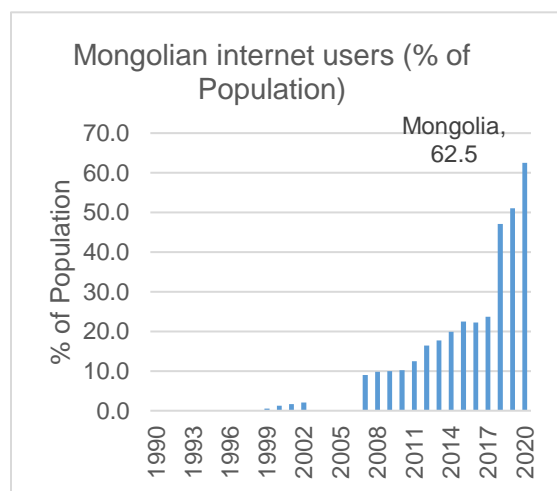
2.1.3. E-commerce in Mongolia (Current stage of e-commerce)

In 2021, Total population of Mongolia was 3,409,939, around 45% of population is considered as young, aged from 15 to 45 (National Statistics Office of Mongolia, 2021).

Therefore, Mongolian internet users are increasing rapidly, and around 62.5% of total population of Mongolia is using internet (World Bank, 2021).

Figure 6

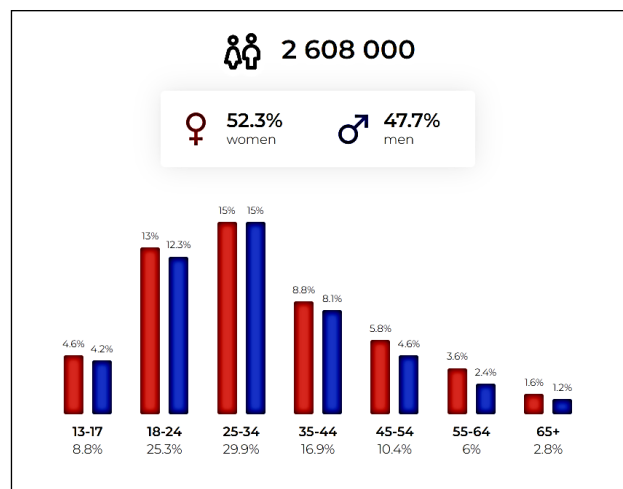
Mongolian internet users, 1990-2020



Note. Adapted from Dataportal of World bank, 2022.

Figure 5

Facebook users, by age group



Note. Adapted from www.napelioncat.com, 2022.

As of 2021, 2 608 000 Facebook users registered in Mongolia, which is 78.8% of Mongolian total population, and majority of users aged between 25 to 34 (Napelioncat, 2021) . Following this high Facebook usage, the majority of companies are using Facebook and Instagram as their main marketing channels. According to the Information, Communication and Technology Use and Access Survey of Household and Individuals -2022, 29,9% of Mongolians are buying products through online, and 75,3% of them are using direct delivery from the

supplier (Ministry of Digital Development and Communication & National Statistics Office of Mongolia, 2022). It implies that majority of online shoppers are ordering products from supplier directly through social media or their websites. Following is the general way that how consumers are buying products online in Mongolia.

Table 1

B2C e-commerce situation in Mongolia

Producers	Intermediaries		Owner	Consumer
Foreign products	Importing companies	SNSs (e.g. Facebook and Instagram)	Company itself	Domestic consumers
		Company's own website	Company itself	
		E-commerce platforms in Mongolia (Shopyy.mn, ardshop.mn)	Third party	
	Foreign E-commerce platforms (Amazon, Alibaba)	Using Mongolian e-commerce platforms to order from foreign e-commerce platforms (Hibox.mn, tao-bao.mn, USA.mn)	Third party	
		Using SNSs as intermediaries like Facebook groups to order from foreign e-commerce platforms	Individuals	
		Directly ordering from foreign website	Consumer	
Domestic products	SNSs (e.g. Facebook and Instagram)	Company itself		
	Company's own website	Company itself		
	E-commerce platforms in Mongolia (Shopyy.mn, ardshop.mn)	Third party		

Note. Developed by researcher, 2022.

As for foreign products, importing companies are using same online channels that domestic producers do, but E-commerce platforms are mainly used by importing companies. Therefore, e-commerce market in Mongolia tends to grow rapidly. For example, the number of Consumers of Shopyy.mn which is Mongolian biggest e-commerce platform, has reached 400,000 in 2021, and their sale increased by 400% compared to that of 2020 (Oyunlkham, 2021).

According to the e-commerce survey conducted among Mongolian consumers who have purchased goods online from abroad in 2019, 95% of total participants buy products for their personal use, and most of them are ordering products from Chinese e-commerce platforms reflected in following figure (Tserendavaa, 2020).

Figure 7

Foreign platforms for purchasing goods for personal use



Note. Adapted from “E-Commerce Statistical Registration Analysis”, by Ts.Tserendavaa, 2020.

Interestingly, 45% of the above citizens ordered through intermediaries and traders in Mongolia, 23% made direct purchases from foreign websites, and the remaining 32% made online purchases through a combination of both (Tserendavaa, 2020).

As for the domestic products, they are sold through Facebook Page, Website, and E-commerce platforms, but most of the domestic products are sold through Facebook and Instagram. As of 2022, More than 1000 brands allocated in Shopyy.mn, only 36 of them are domestic brands which are mainly luxury brands (Shopyy.mn, 2022). Despite the fact that many worldwide studies agree that e-commerce is the most effective way for SMEs to make the most of digitalization (UNCTAD, 2020), most of SMEs in Mongolia are not using e-commerce

platforms, instead, they are just paying dollars to Facebook and Instagram to deliver their products' information to consumers. Thus, there is a lack of e-commerce space for average brands in Mongolia. Thus, researcher wants to analyze public attitude toward domestic products as well as e-commerce platforms. To do so, some attitude models and consumer behavior theories that will be introduced in the next part were used.

2.2. Theories

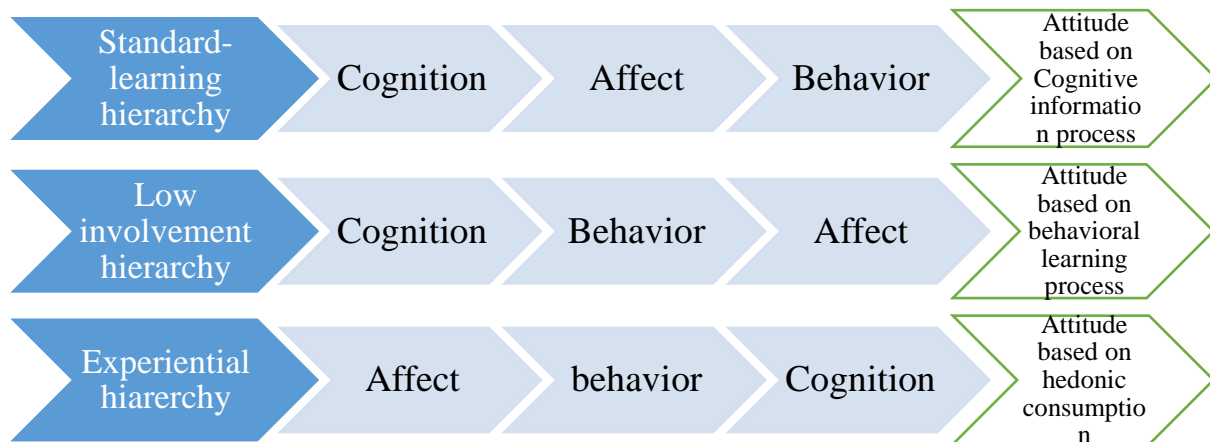
2.2.1. ABC model of attitude

One of the most often used models in psychological literature is the ABC model of attitude, (Eagly & Chaiken, 1993) developed around 1950s and 60s, by Communication and Attitude Program of the Yale University (Drew, 2022). The model consists of 3 components called behavior (doing), affect (feelings), and cognition (knowing) (Bagozzi & Burnkrant, 1979). Affect representing the feelings of consumer to object of attitude meanwhile the cognition (knowing) refers the belief about the object, and the behavior (doing) refers the intention to take action (Jain, 2014).

For the purpose of clarifying the relative effects of the Cognition, Affect, and Behavior, attitude researchers established the hierarchy of effects (Solomon, 2009).

Figure 8

The 3 hierarchy of effects



Note. Retrieved from Consumer behavior: Buying, having, and being (8th ed., p150) by Solomon, M., 2009, Copyright 2009 by the Pearson Prentice Hall Inc.

The sequence of Cognition, Affect and Behavior explains the very different purchasing behavior (Williams, 2020). Standard learning hierarchy represents the consumer who research a lot, and then build feelings about the attitude object before purchasing /behaving/ (Martínez-López et al., 2005). Low-involvement hierarchy represents the consumers who are driven by their behavior, and they build feelings (like or dislike) about the object after purchasing (Beatty & Kahle, 1988). Experiential hierarchy is about the consumer who purchase based on their feelings, and they obtain some knowledge about the object after purchasing (Solomon, 2009).

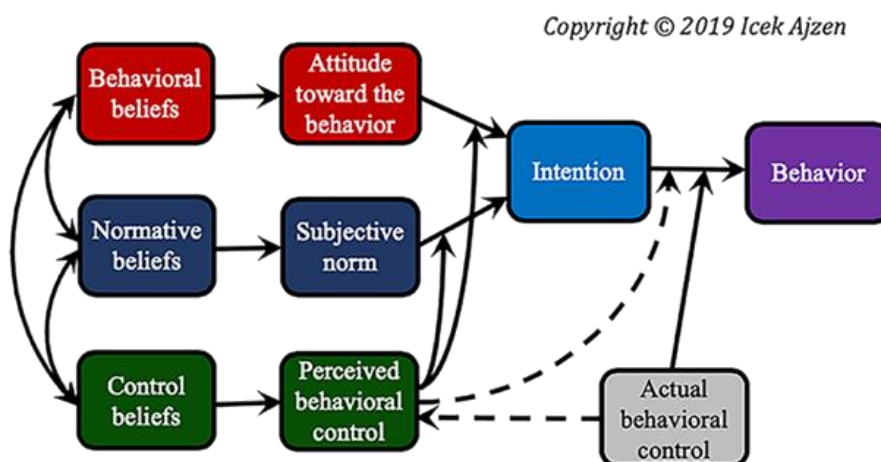
2.2.2. Theory of planned behavior

One of the most popular theories in the social and behavioral sciences, the theory of planned behavior (TPB) was created by Icek Azjen to more accurately predict behavior. (Norisnita & Indriati, 2022). TPB is considered as the Theory of Reasoned Action's (TRA) Extension (Bharathy, 2021). Firstly, TRA is functioned to explain the 3 constructs namely attitude, subjective norm, and intention in relation with the behavior (Fishbein & Ajzen, 1975).

Then, Icek Ajzen added the fourth construct, perceived behavioral control (PBC), often known as self-efficacy, which measures a person's perception of assessed ease or difficulty of carrying out an activity. (Bosnjak, Azjen & Schmidt, 2020).

Figure 9

Model of Theory of planned behavior



Note. Adapted from “The Theory of Planned Behavior: Selected Recent Advances and Applications”, by Michael Bosnjak, Icek Ajzen, and Peter Schmidt, 2020, Copyright 2019 by Icek Ajzen.

Attitude is personal evaluation of the performing certain behavior, which is commonly expressed as liking or disliking (Kotler, 2000). In other words, an attitude is a mental biases that is demonstrated by how favorably or negatively one views a particular behavior, and it can be held shorter or longer period of time (Eagly & Chaiken, 1993).

Subjective norm measures social pressures on the individuals (Ham et al., 2015). It is represented through the opinions of other individuals who are significant to him, such as his family, friends, and spouse, who believe that he should or shouldn't perform the conduct (Fishbein & Ajzen, 1975). Many researchers agree that subjective norm had a great impact on intention as well as attitude (Schepers & Wetzels, 2007).

The impression of a particular activity by the individual as being simple or difficult to carry out is known as perceived behavioral control (Ajzen, 1991). It is a close interpretation of self-efficacy, a term Bandura(1997) coined to describe a person's belief in their own capacity to control and perform behaviors.

In general, if one's perceived behavioral control, attitude and subjective norm are all favorable, one is more likely to have greater intention and engage in the behavior (Ajzen, 1991). Intention is the greatest predictor of behavior (Fishbein & Ajzen, 1975), although perceived behavioral control predicts a specific activity without any mediation (Ajzen, 1991). Interestingly, Theory of Planned Behavior forecasts both intentions and behavior, with success rates of 40-49% and 26-36%, respectively (McEachan et al., 2011).

A wide range of science areas have applied the theory of planned behavior from health (McEachan et al., 2011) to investment (Norisnita & Indriati, 2022), in order to predict human's intention and behavior. In this study, researcher uses TPB to predict Mongolian costumers' intention and behavior to purchase through e-commerce platforms.

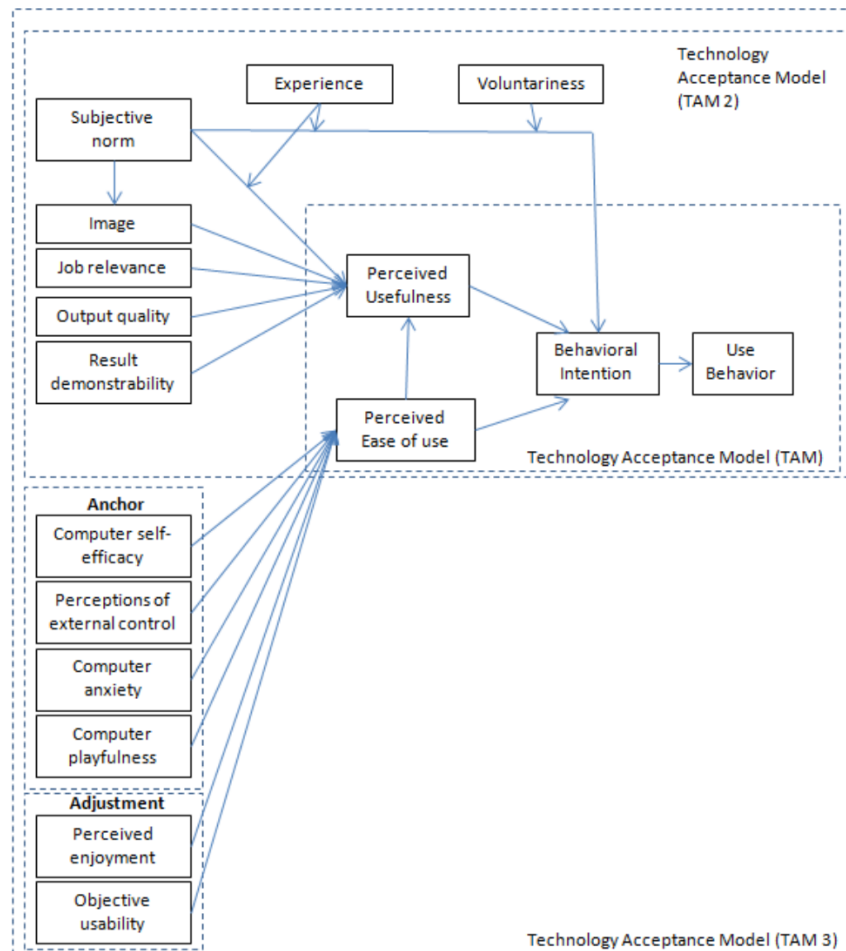
2.2.3. Technology Acceptance Model

Fred Davis (1989) developed the conceptual model of Technology Acceptance Model based on the theory of reasoned action by Frishbein and Azjen (1975) because of needs of predicting system adoption (Bayne, 2006). According to the TAM, the Perceived Usefulness, the Attitude toward the system or application, and the Perceived Ease of Use are the factors that determine whether or not a customer would utilize the system (Chuttur, 2009). Even though TAM is not the perfect model to predict the actual system use, it is the one of the most widely used models due to its simplicity (King & He, 2006).

Later, the main TAM model was sophisticated and named TAM 2 and TAM 3 by adding external variables that connected to Perceived Usefulness and Perceived ease of use such as job relevance, experience, subjective norm, computer playfulness, and perceived enjoyment etc (Boughzala, 2014).

Figure 10

Technology Acceptance Models (TAM, TAM2 and TAM3)



Note. Retrieved from “How Generation Y Perceives Social Networking Applications in Corporate Environments”, by Imed Boughzala, 2014.

Among those determinants, fun of using IT system is one of the most powerful determinants to attitude of actual use of the system (Bruner & Kumar, 2005). Fun of using system,

sometimes referred as enjoyment and playfulness, is one of intrinsic motivation which has significant impact on the system usage (Bayne, 2006). Thus, the researcher used perceived enjoyment as extension of TAM in this research.

2.3. Factors that affect attitudes towards e-commerce platform

2.3.1. Perceived usefulness

According to Davis (1989), perceived usefulness is the degree to which a person believes that using a given system will increase their capacity to do a specific task. Another words, perceived usefulness is referred as people's perception about the system, expressing whether it could contribute to increase their work performance or not (Wilson et al., 2021).

Based on its main idea, researchers used the perceived usefulness in many IT system research area, not only relating it to job performance but also relating it to their system role (Bayne, 2006). For example, the values, benefits, and effectiveness that added by online shopping experience, compared to traditional shopping method are the factors that support perceived usefulness in the e-commerce context (Uyanik & Gurler, 2022). Thus, in this study, researcher uses perceived usefulness in the situation of e-commerce experience, not relating to job performance.

2.3.2. Perceived enjoyment

Perceived enjoyment, the extension of the TAM model, is the personal perspective considering that using a particular system is enjoyable, aside from the main purpose of the technology (Davis et al., 1992). Even though early studies shows that the most powerful predictor of the intention among TAM variables is perceived usefulness (Taylor & Todd, 1995), perceived enjoyment has twice as much predictive value than perceived usefulness to intention to

use hedonic systems (Heijden, 2004). For this reason, Heijden (2004) suggests that the intrinsic motivation variables should be included in further system adoption research.

2.3.3. Perceived ease of use

Following the meaning of word “easy”, perceived ease of use has been expressed by people’s beliefs that using the particular system is simple (Davis, 1989). Web interface, in context of online shopping, that is easy to use and facilitated online transactions could express the perceived ease of use (Uyanik & Gurler, 2022). In essence, a system's perceived ease of use is determined by how simple it is to use, indicating that it is becoming simpler to use and more likely to be effectively adopted. (Martin & Quan-Haase, 2013). On top of that, numerous studies agreed on that perceived ease of use influences perceived usefulness due to its simplicity (Müller et al., 2020).

2.4. Factors that affect attitudes towards domestic products

2.4.1. Perceived price

Perceived price could be understood as each consumers’ subjective judgment of a price for certain product compared to price of similar products (Han & Hyun, 2015). So, the price is perceived differently for each consumer (Büyükdağ et al., 2020). Many studies confirmed that price is an indicator of quality (Zeithaml, 1988), but some researchers observed the relationship that the lower the price, the greater the intention to use (Dorce et al., 2021). Additionally, price has a notable positive impact on e-commerce attitude and intention among women in India (Arora & Aggarwal, 2018). According to the Brynjolfsson and Smith (2000), the price on the internet is 9-16% lower than the traditional store, even though it contains taxes, shipping cost as well as shopping costs. In this study, perceived price was added as an independent variable associated with attitude toward domestic product.

2.4.2. Consumer ethnocentrism

Consumer ethnocentrism is the belief of consumer that he or she holds toward the morality and propriety of buying goods created abroad (Shimp & Sharma, 1987). Ethnocentric consumers state that buying imported products is bad and not moral because it hurts domestic economy and could lead to unemployment (Shimp & Sharma, 1987). On the one hand, it is reasonable to consider consumer ethnocentrism when the international manufacturers enter new market because consumer ethnocentrism hurts the intention towards importing products (Gantulga & Ganbold, 2022). On the other hand, Rakic M, Rakic B and Stanojevic (2019) suggest that the domestic products' consumption can be increased by encouraging consumer ethnocentrism through marketing activities of actors, who are consumers, state and local government, schools, media, producers and retailers.

Many studies focused on the factors influencing consumer ethnocentrism, and they found that consumer ethnocentrism is stronger in women, positively related with age, but negatively related with education and income (Rakic et al., 2019). To measure ethnocentric tendencies, CETSCALE, Consumer Ethnocentrism Tendencies Scale, consists of 17 questions related to ethnocentrism was developed (Shimp & Sharma, 1987) and some of the questions used in this study as well.

2.4.3. Cognition/ Knowledge

Cognition refers to all conscious and unconscious knowledge-acquiring processes, including perception, recognition, conception, and reasoning (The Editors of Encyclopedia Britannica, 2022). As for the attitude concept, cognition used as one of the main three components of attitude, which is expressed as knowing (Breckler, 1984). Processing the information about attitude object is counted as cognitive component, which forms beliefs later

(Eagly & Chaiken, 1993). At any given moment, only beliefs in the memory can influence attitude toward an object (Fishbein & Ajzen, 1975).

2.4.4. Affect

Affect is one the main component of attitude formation, which shows the one's emotional response towards an attitude object (Jain, 2014). Emotions could be expressed as word choices and body language when individual talk about the attitude object, and the emotions are closely related to attitude.

Affect could be measured in many different dimensions, and Mano (1993) proposed convergence circumplex of multiple dimensions of affect, including arousal, boredom, elation, quietness, pleasantness, unpleasantness, distress and calmness (Mano & Oliver, 1993). In general, researchers try to evaluate the individuals' emotions towards attitude object in order to assess affect. (Haddock & Zanna, 1993).

3. Hypothesis

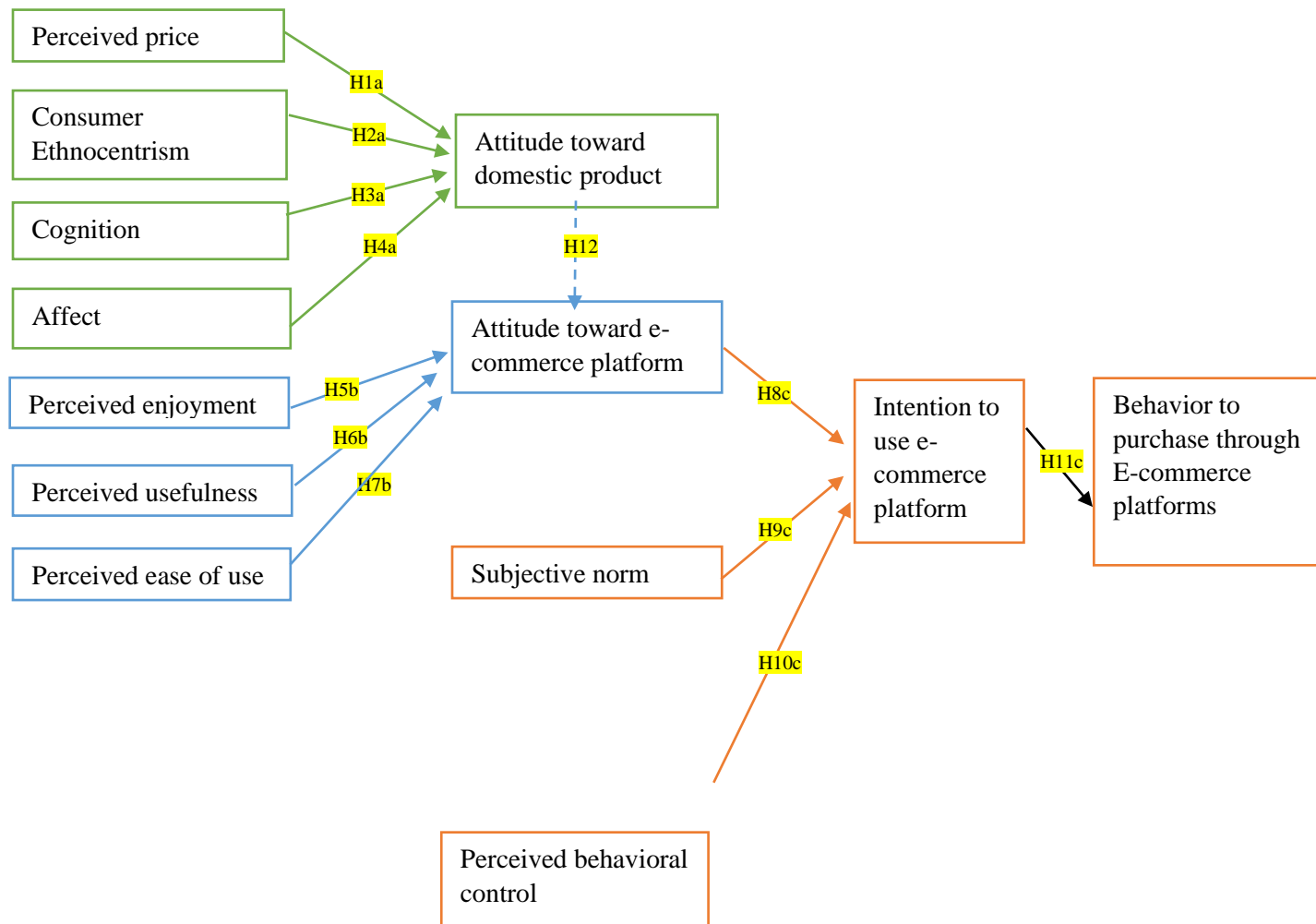
3.1. Framework of the study

To analyze the attitudes toward domestic products and e-commerce platforms, the 3 main models, called Technology Acceptance Model (TAM), ABC model of attitude and Theory of Planned Behavior (TPB) were used. ABC model of attitude was used to reveal how the cognition and the affect variables effect attitude toward domestic product with the 2 additional variables, named perceived price and ethnocentrism, to better explain consumers' attitude toward domestic product. To predict the successful adoption of e-commerce platform, researcher used the Technology Acceptance Model with the extension of perceived enjoyment. Lastly, researcher try to find the influences of subjective norm, attitudes, and perceived behavioral control on intention

and behavior to purchase through e-commerce platform based on Theory of Planned Behavior. =
 Research model of this study was derived from aforementioned models and theory.

Figure 11

Framework of Research Model /based on ABC, TAM and TPB/



3.2. Hypothesis Development

3.2.1. Influences of Perceived price on Attitude toward domestic product

One of the most crucial external variables for buyers to consider when evaluating a product is price (Hansen, 2005). The price of an object affects the attitude of customers (Ayandis, 2014). Knight(1999) finds out that consumers like to pay higher price for fully

domestic products but want to pay extra price for foreign products only if those products have superior quality compared to domestic products. Consequently, the researcher proposed the hypothesis below.

H1a: Affordable perceived price affects attitude toward domestic product.

3.2.2. Influences of Ethnocentrism on Attitude toward domestic product

As we discussed before, the attitude toward domestic product is influenced by ethnocentrism, which means that consumers who have strong ethnocentric sentiments may have more positive attitudes towards domestic products as they see them as contributing to their country's economy and supporting local businesses. WU and others (2010) proves that ethnocentrism and attitudes toward national goods are positively correlated, and the consumer ethnocentrism has the most significant effect on purchase intention. Additionally, customers develop a favorable attitude toward domestic items when they have greater understanding about how to consume domestic goods (Cherian & Jacob, 2012). Thus, the researcher wants to test the following hypothesis.

H2a: Higher ethnocentrism positively influences attitude toward domestic product.

3.2.3. Influences of Cognition and Affect on Attitude toward domestic product

As we discussed in the literature review part, we know that cognition can be understood as consumer knowledge about the object. Ok Park & Sohn (2018) found out that attitudes toward an object tend to improve as they get more knowledge about the object. Therefore, consumers who are more aware of how to consume domestic goods are likely to become ethnocentric and to have a positive attitude toward domestic goods (Cherian & Jacob, 2012). In their conceptual

paper, Kibret and Shukla (2019) state that higher consumer knowledge leads to a more favorable attitude toward domestic products among consumers.

Moreover, affective and cognitive determinants are strongly interrelated because cognitive responses are reflected in affect formation (Sofi et al., 2020). But affect can influence attitude without beliefs of product, and it plays more important role than cognition in attitude formation (Kim et al., 1998). Based on those findings, two hypotheses were developed.

H3a: Cognition positively influences attitude toward domestic product.

H4a: Affect has impact on attitude toward domestic product.

3.2.4. Influences of Perceived ease of use, Perceived enjoyment and Perceived usefulness on the Attitude toward e-commerce platform

Perceived enjoyment is becoming a strong determinant of e-commerce users' attitude and intention (Qiu & Li, 2008). According to Childers et al (2001), the hedonic and immersive elements of e-commerce are just as essential as the instrumental elements in predicting a customer's attitude. Shopping enjoyment can therefore play a significant role in determining online consumer loyalty (Koufaris, 2002). Moreover, online shoppers likely to become more satisfied when they feel positive emotions and tend to complete the purchase (Reynolds & Beatty, 1999).

The key TAM constructs are perceived usefulness and perceived ease of use (Davis, 1989), and Kasuma et al., (2020) demonstrate that both of those variables have a strong influence on attitude of accepting mobile commerce. Moreover, perceived ease of use and perceived usefulness are found to be substantially connected with attitudes toward e-commerce by

Yulianita (2018) , who also demonstrated that perceived usefulness is the most influential variable for Gen-Y while perceived ease of use has strongest variable for Gen-X.

To conclude, we will see how strongly those variables influence the attitude toward e-commerce on our study result in the coming part. Accordingly, the following three hypotheses were proposed.

H5b: Perceived enjoyment influences attitude toward e-commerce platform.

H6b: Perceived usefulness affects attitude toward e-commerce platform.

H7b: Perceived ease of use influences the attitude toward e-commerce platform.

3.2.5. Influences of Subjective norm, Attitude toward e-commerce platform and Perceived behavioral control on Intention to use e-commerce platform.

According to TPB, subjective norm, attitude, and perceived behavioral control all affect intention (Ajzen, 1991). As for e-commerce, among 3 constructs of intention, the biggest factor influencing one's intention to use e-commerce is attitude (Rameez & Kulathunga, 2019). Result of some studies shows that intention to shop online was affected by attitude and subjective norm, although perceived behavioral control was insignificant (Hamid et al., 2023). On the contrary, some findings resulted that both the subjective norm and perceived behavioral control affects the online purchasing intention while the attitude component had no impact (Noor et al., 2020).

Thus, the following hypotheses were developed.

H8c: Attitude toward e-commerce platform has impact on the Intention to use e-commerce platform.

H9c: Subjective norm positively affects the Intention to use e-commerce platform.

H10c: Perceived behavioral control affects the Intention positively.

3.2.6. Influences of Intention to use e-commerce platform on behavior to purchase through E-commerce platforms

As we know previously, the strongest factor in determining actual behavior is intention. (Fishbein & Ajzen, 1975). Accordingly, live e-commerce shopping study conducted in China was resulted that the intention influences actual behavior to use live e-commerce shopping positively (Zhou et al., 2021). Additionally, the frequency and size of online purchases are affected by the intention behind the purchase. (Silva et al., 2019). Therefore, researcher creates following hypothesis.

H11c: Intention to use e-commerce platform has positive impact on Behavior to purchase through E-commerce platforms.

3.2.7. Influence of Attitude toward domestic product on Attitude toward e-commerce platforms

Here, we will check how one attitude, in this case, attitude towards domestic product influences other attitude, which is attitude toward e-commerce platform. There is not many studies which concerned 2 different attitudes' connection. However, Attitudes can be connected when they align with the same underlying values or belief systems (Ionescu, 2022). For example, someone has positive attitudes toward environmental conservation and recycling, and those attitudes can be connected because they both align with the value of protecting the environment. Therefore, people who have a strong preference for domestic products may also show a preference for e-commerce platforms that offer domestic products. Thus, the following hypotheses were developed.

H12: *Attitude toward domestic product positively influences attitude toward e-commerce platform.*

4. Methodology

As the end of 2021, Total population of Mongolia was 3,409,939 and 1,869,667 individuals, which is around 54% of the total population, are over 18 years old (National Statistics Office of Mongolia, 2021). This is the population size of this survey. Researcher found the appropriate sample size based on following formula of random sample.

Figure 12

Sample size formula

$$\text{Sample size} = \frac{\frac{z^2 \times p(1-p)}{e^2}}{1 + \left(\frac{z^2 \times p(1-p)}{e^2 N} \right)}$$

Here, the “z” is confidence level expressed by Z-score, “e” is the margin of error, which is acceptable error rate, “p”, the population proportion, equals to 0.5 when the standard deviation is uncertain, and N is population size (calculator.net, 2022). It is calculated that the sample of our survey should be more than 385.

In this survey, 5-point Likert scale was applied for each construct, which was developed by Rensis Likert in order to measure attitudes in 1932 (Edwards & Edmondson, 2011). Total of 42 questions were developed in the framework of the study, and “Google form” were used to collect data from individuals because of its easiness and trustfulness. After being created in English, the

questions were translated into Mongolian and then back into English. The survey questions were asked in Mongolian and total 408 valid responses were collected.

5. Data analysis

5.1. Information of demographics

Among total 408 respondents, 73% of them were female and remaining 27% of them were male. Approximately 83.5% of participants are between the ages of 18 and 30. Most of them, around 64%, are students. The percentage of the highest degree of respondents was high school and bachelor respectively 42.9% and 48.3%. Approximately, 74.8 % of respondents' monthly household income was under \$1000. The table below provides comprehensive demographic data.

Table 2

Demographic information

Characteristics	Respondents (408)	
	%	<i>n</i>
Sex		
Male	27%	(110)
Female	73%	(298)
Age		
Above 61	2%	(8)
51-60 years old	1.5%	(6)
41-50 years old	2.2%	(9)
31-40 years old	9.1%	(37)
21-30 years old	45.6%	(186)
18-20 years old	37.9%	(162)
Job area		
Government organization	8.6%	(35)
Private company	16.2%	(66)
Entrepreneur	3.9%	(16)
Student	64%	(261)
Unemployed	3.2%	(13)
other	4.1%	(17)

Education		
Ph.D. or higher	2.2%	(9)
Master	6.6%	(27)
Bachelor	48.3%	(197)
High School	42.9%	(175)
Monthly household income		
Less than \$300	29.9%	(122)
\$301 - \$500	22.8%	(93)
\$501- \$1000	22.1%	(90)
\$1001 - \$1500	11.8%	(48)
\$1501-\$2500	5.1%	(21)
More than \$2501	8.3%	(34)

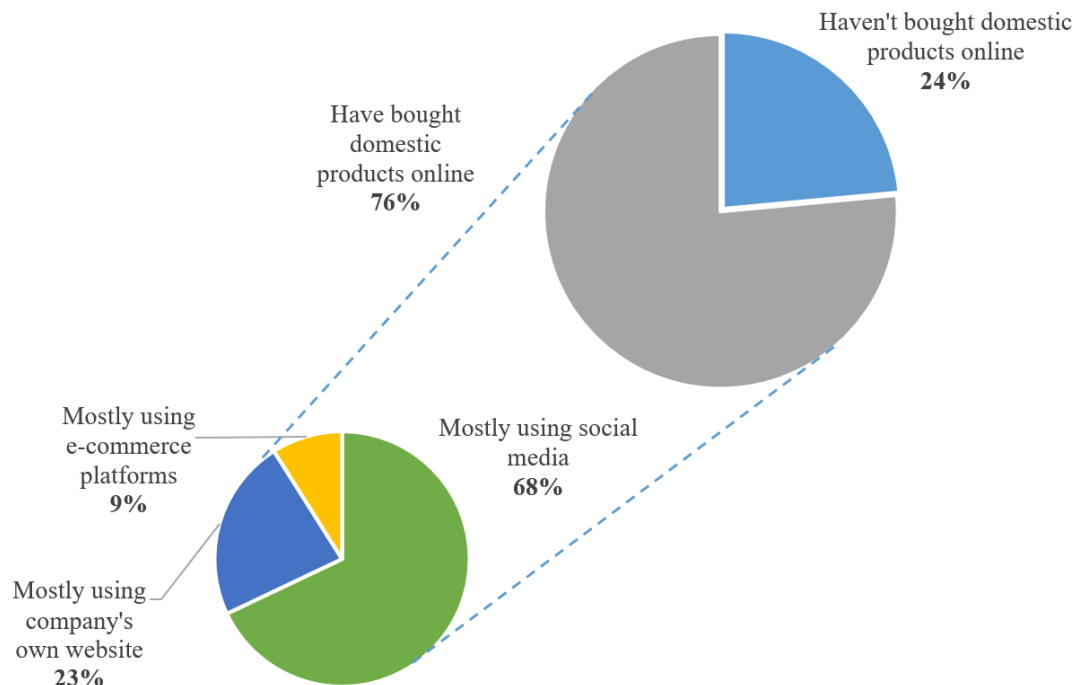
Additionally, a total of 6 warm up questions, related to e-commerce experience were asked. Around 69.1% of them have used e-commerce platforms and 30.9% of them haven't used it yet. Approximately, 66.3% of 282 respondents who have experienced e-commerce platforms were purchasing products 1-2 times in 6 month using e-commerce platforms, while 28% of them were purchasing 1-3 times in a month using e-commerce platform. On top of that, the online shopping satisfaction was asked with 5-point Likert scale (i.e. "1" refers to dislike extremely and "5" is like extremely) and the mean was around 3.32 point which is slightly higher than average.

Moreover, questions that related to online purchase of domestic products were asked. Here online purchase means all type of online purchases including not only e-commerce purchases but also social media and company's own website purchases. Among 408 participants, 76.5% of them have purchased domestic products online. Around 68% of respondents who have purchased domestic products online were most frequently using social media, especially Facebook and Instagram, and 23% of them were using company's own website, while only 9% of them using e-commerce platforms. Also, the satisfaction of online purchase of domestic

products was asked with 5-point Likert scale and the mean was around 3.41 point which is slightly higher than average.

Figure 13

Channels of online purchase of domestic products



5.2. Factor analysis

In order to measure the attitude toward domestic product, the attitude toward e-commerce platform, the intention to use e-commerce platform, and the actual behavior to purchase through e-commerce platform, 31 questions were asked, and 13 factors were extracted applying extraction method of Principal Component Analysis. Factor loading are shown in table below with eigenvalue and percentage of variance explained.

Table 3

Factor loadings

Items	Factor loadings
Factor for Price	
The price of domestic products is affordable.	.839
The price of domestic products is reasonable.	.859
The price of domestic products is compatible with the product quality.	.869
Eigenvalue	2.196
Variance explained (%)	73.2
Factor for Ethnocentrism	
Instead of importing, I believe we should purchase goods created in Mongolia.	.833
We should not buy foreign products because it is harmful to domestic business.	.802
In order to help Mongolia's economy grow, I favor promoting domestic products.	.861
Eigenvalue	2.079
Variance explained (%)	69.3
Factor for Cognition	
I know that the quality of domestic products is reliable.	.743
I have knowledge about domestic products.	.817
I have information to find domestic products what I want.	.756
Eigenvalue	1.791
Variance explained (%)	59.7
Factor for Affect	
I feel good when I purchase domestic products.	.857
It is pleasant to consume domestic products.	.887
I feel something enthusiastic when I use domestic products	.866
Eigenvalue	2.267
Variance explained (%)	75.6
Factor for Attitude towards domestic product	
I believe that domestic products are good.	.859
I have a positive attitude toward domestic product.	.839
Overall, I think that domestic products are valuable.	.860
Eigenvalue	2.182
Variance explained (%)	72.7
Factor for Perceived enjoyment	
Using e-commerce platforms is enjoyable.	.896
It is fun to use e-commerce platforms.	.896
Eigenvalue	1.604
Variance explained (%)	80.2
Factor for Perceived usefulness	
E-commerce platform improves my performance to find the product.	.913
E-commerce helps me to find out useful information about the products.	.913
	1.666

Eigenvalue	83.3
Variance explained (%)	
Factor for Perceived ease of use	
To use e-commerce platforms is simple.	.921
I can use e-commerce platforms without additional efforts.	.921
Eigenvalue	1.695
Variance explained (%)	84.7
Factor for Attitude toward e-commerce platform	
I believe that e-commerce platforms are good.	.912
I have a positive attitude toward e-commerce platform	.912
Eigenvalue	1.664
Variance explained (%)	83.2
Factor for Subjective norm	
I tend to use e-commerce platforms as my friends and colleagues suggested.	.886
People who close to me think that using e-commerce platform is needful.	.886
Eigenvalue	1.571
Variance explained (%)	78.6
Factor for Perceived behavioral control	
I think I can use e-commerce sites to place orders for goods.	.928
I believe I will have no trouble using e-commerce platforms.	.928
Eigenvalue	1.724
Variance explained (%)	86.2
Factor for Intention	
I'll regularly use online shopping platforms in the future.	.902
I intend to use e-commerce platform.	.902
Eigenvalue	1.628
Variance explained (%)	81.4
Factor for Actual behavior	
I have bought products using e-commerce platform within 6 months.	.871
I have plans to buy products through e-commerce platform soon.	.871
Eigenvalue	1.517
Variance explained (%)	75.8

Extraction Method: Principal Component Analysis.

5.3. Reliability

In order to measure reliability, Cronbach alpha was employed as reliability coefficient. In general, items are considered as reliable or acceptable if the Cronbach alpha is between 0.6-0.8 (EL Hajjar, 2018). In this study, Cronbach alpha coefficients of total 13 factors are more than 0.6

and we could say that each item has a good internal consistency and considered as acceptable. Thus, we can use the data in statistical analysis. The following table displays more details.

Table 4

Reliability coefficients

Items	Reliability Coefficients
1. Factor for Price (3 questions)	.816
2. Factor for Ethnocentrism (3 questions)	.773
3. Factor for Cognition (3 questions)	.658
4. Factor for Affect (3 questions)	.838
5. Factor for Attitude toward domestic product (3 questions)	.812
6. Factor for Perceived enjoyment (2 questions)	.753
7. Factor for Perceived usefulness (2 questions)	.799
8. Factor for Perceived ease of use (2 questions)	.820
9. Factor for Attitude toward e-commerce platform (2 questions)	.798
10. Factor for Subjective norm (2 questions)	.724
11. Factor for Perceived behavioral control (2 questions)	.839
12. Factor for Intention	.772
13. Factor for Actual behavior	.665

5.4. Hypothesis testing

Factor scores were used in this study's regression analysis. According to the proposed model, the first regression analysis will show you how much those 4 factors representing price, ethnocentrism, cognition, and affect are influencing the factor of attitude toward domestic product. As a result, the model denotes R-square= .776, F= 349.909 and p-value< 0.01 in accordance with ANOVA. Among the 4 hypotheses, hypothesis 1 (H1a) was rejected even though the overall model was evaluated as good.

Table 5

Influences of factors on Attitude toward domestic product

Variable (Independent → dependent)	Beta	t	Significance (p-value)	Hypotheses supported
Price → The attitude (H1a)	.045	1.382	0.168	No
Ethnocentrism → The attitude (H2a)	.264	7.204	.000	Yes
Cognition → The attitude (H3a)	.126	3.510	.000	Yes
Affect → The attitude (H4a)	.541	12.597	.000	Yes

The second regression analysis was conducted among 4 variables, shown in table 6. Here, perceived usefulness, perceived enjoyment and perceived ease of use are independent variables, and the attitude toward e-commerce platform is dependent variable. According to ANOVA, the model was resulted R-square= .617, F= 216.670 and p-value< 0.01 (See table 6). Shortly, all 3 hypotheses were supported.

Table 6

Influences of factors on Attitude toward e-commerce platform

Variable (Independent → dependent)	Beta	t	Significance (p-value)	Hypotheses supported
Perceived enjoyment → The attitude (H5b)	.142	2.807	.005	Yes
Perceived usefulness → The attitude (H6b)	.311	5.376	.000	Yes
Perceived ease of use → The attitude (H7b)	.393	7.321	.000	Yes

The third regression analysis was conducted among 4 variables. The perceived behavioral control, attitude toward e-commerce platform and subjective norm are employed as independent variables, and the intention to use e-commerce platform is dependent variable. Model was estimated as R-square= .715, F= 337.903 and p-value< 0.01 in accordance with ANOVA. As a result, 2 hypotheses, H8c and H9c, were supported and H10c was rejected.

Table 7

Influences of factors on Intention to use e-commerce platform.

Variable (Independent → dependent)	Beta	t	Significance (p-value)	Hypotheses supported
---	-------------	----------	-------------------------------	-----------------------------

The attitude → The intention (H8c)	.414	9.160	.000	Yes
Subjective norm → The intention (H9c)	.488	13.912	.000	Yes
Perceived behavioral control → The intention (H10c)	.036	.881	.379	No

The fourth regression analysis was conducted between factors of intention to use e-commerce platform and the behavior to purchase through e-commerce platform. According to ANOVA, model was resulted as R-square= .559, F= 515.034 and p-value< 0.01. You can see more information from the table below.

Table 8

Influence of intention to use e-commerce platform on actual behavior to purchase through e-commerce platform.

Variable (Independent → dependent)	Beta	t	Significance (p-value)	Hypotheses supported
The intention→ The actual behavior (H11c)	.748	22.694	.000	Yes

The last regression was applied between 2 attitude variables. The model was estimated as R-square= .244, F= 130.990 and p-value< 0.01 in accordance with ANOVA (See table 9).

Table 9

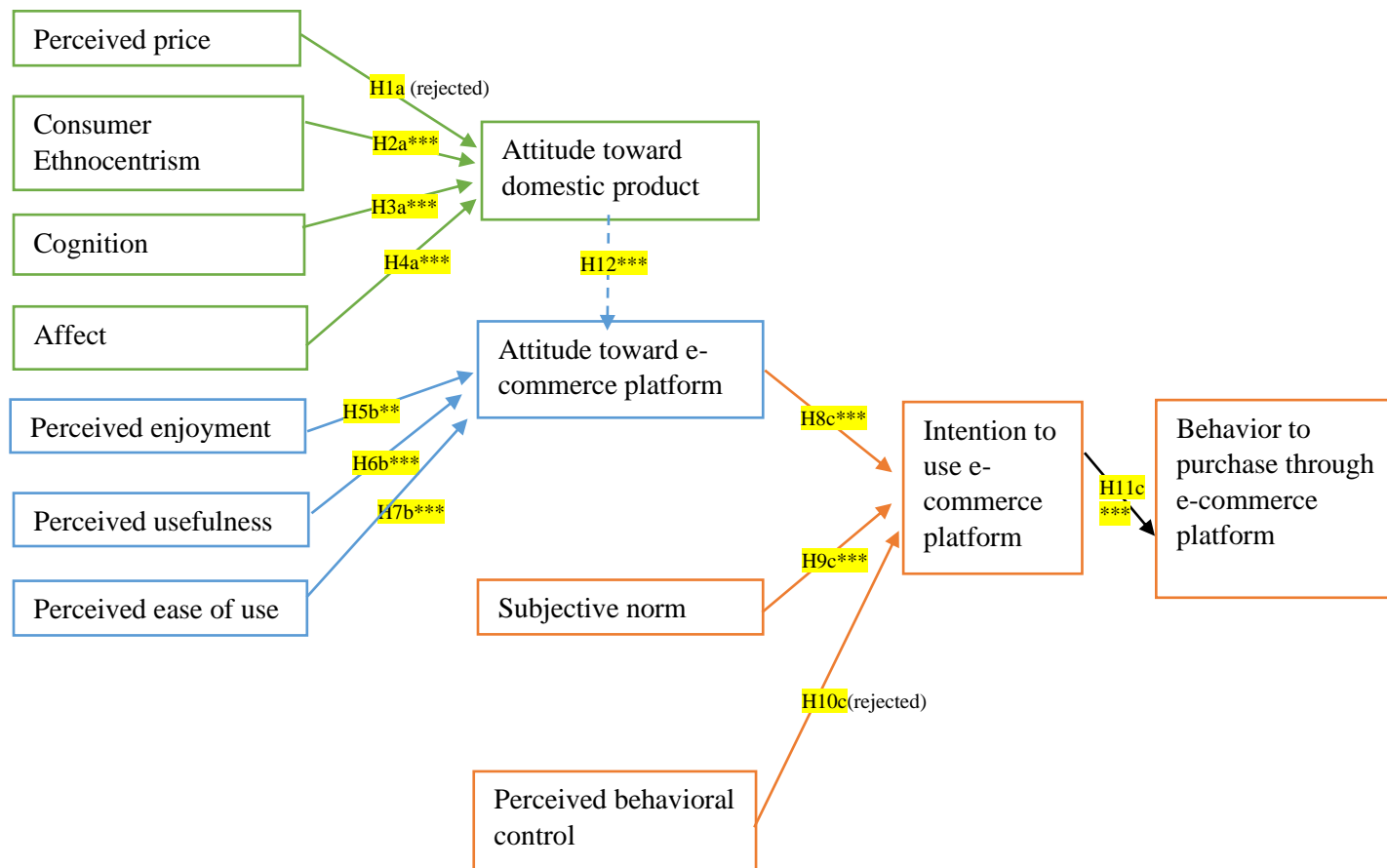
Influence of attitude toward domestic product on attitude toward e-commerce platform

Variable (Independent → dependent)	Beta	t	Significance (p-value)	Hypotheses supported
The attitude toward domestic product→ The attitude toward e-commerce platform (H12)	.494	11.445	.000	Yes

To conclude, a total of 12 hypotheses were proposed, and 10 hypotheses were supported, while 2 hypotheses were rejected. The following figure will show you hypotheses flow and acceptance level.

Figure 14

Hypotheses explanation on framework of research model



Statistical significance is indicated by the symbols *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.1$.

6. Conclusion

6.1. Summary

This study measures Mongolian consumers' attitude toward domestic product and attitude toward e-commerce platform applying Theory of planned behavior, ABC model of attitude and Technology Acceptance Model. Totally, 12 hypotheses were proposed and 2 of them were rejected. Analysis of Variance (ANOVA), Regression and factor analyses were used in SPSS to test the hypotheses.

As for attitude towards domestic product, ABC model of attitude was employed with additional 2 variables, called Perceived price and Ethnocentrism. Among 4 variables, namely, Perceived price, Ethnocentrism, Cognition and Affect, the Affect had the strongest impact on the attitude toward domestic product, while Perceived price (affordable price) was rejected. Remaining 3 hypotheses were accepted at significance level of $p\text{-value} < .001$.

In order to measure the attitude toward e-commerce platform, Technology Acceptance Model was applied with extended variable Perceived Enjoyment. All of the hypotheses were confirmed, and the Perceived ease of use had the strongest impact on the e-commerce attitude.

Moreover, Theory of planned behavior was used to investigate the intention and the behavior to purchase through e-commerce platform. Here, the Subject norm, the attitude toward e-commerce platform, and the Perceived behavioral control were used as determinants of the intention. As a result, attitude towards e-commerce platform and Subjective norm have impact on intention to use e-commerce platform, but Perceived behavioral control hasn't impact on the intention. In other words, Hypotheses H8c and H9c were supported, and H10c was not accepted. Also, the test resulted that the intention positively influences actual behavior.

Additionally, the study investigates the influence of attitude toward domestic product on the attitude toward e-commerce platform. Interestingly, the hypothesis was supported at significance level of $p\text{-value} < .001$. It means that the Attitude toward domestic product positively influences attitude toward e-commerce platform.

In conclusion, a total of 12 hypotheses were proposed to measure attitude toward domestic product and e-commerce platform. The 10 hypotheses were accepted, and 2

hypotheses, namely, Perceived price to attitude toward domestic product and Perceived behavioral control to the intention to purchase through e-commerce platforms, were rejected.

6.2. Policy and Managerial implications

After Covid-19 pandemic, world is experiencing digital transition at the speed that we have never faced before, but only few countries, namely USA and China are winning from this digitalization while the least developed and developing countries left behind (UNCTAD, 2020). Meanwhile, some international organizations are suggesting that e-commerce could be the best solution for least developed and developing countries to introduce their products to the world with low cost (OECD, 2017). Thus, it is crucial to develop e-commerce in the least developed countries and developing countries. On the one hand, the government should create favorable conditions for the progress of e-commerce and organize activities to accustom domestic producers to e-commerce platforms. The development of e-commerce, on the other hand, is greatly influenced by customer attitudes, so this study simultaneously analyzed such views toward domestic product and e-commerce platform.

The survey showed that around 68% of respondents who have purchased domestic products online were most frequently using social media, especially Facebook and Instagram, and 23% of them were using company's own website, while only 9% of them using e-commerce platforms. This indicates that there is room for increasing the use of e-commerce platforms and the need to develop online commerce based on the platform, not social media commerce since we cannot export domestic products through social media.

Among the determinants of attitude toward e-commerce platform, Perceived ease of use and Perceived usefulness have strong effect on the attitude. Thus, the creators or the owners of e-

commerce platforms should try to make the e-commerce platform easy to use and attend to increase and advertise the usefulness of e-commerce platforms.

As for managerial implication, domestic producers pursue the quality instead of affordable price because the consumers' attitude is not influenced by Perceived price. The study also shows that cognition and affect are strong determinants of the attitude. So, managers who work in domestic manufacture should provide consumers with knowledge about your products and use advertisements that show them how the consumer feels about products when they use your products.

6.3. Future research and Limitations

This study contained several limitations in terms of gender, age, and work sector. Most the respondents, around 73% of them are women, while the gender proportion of population is around 1:1 in Mongolia. Also, the survey conducted among students mostly, and 64% of respondents are students. So, the result shows young people's attitudes and around 83.5% of respondents are aged under 30. Generally, the limitation of this study is that the result is showing young people's attitudes, instead representing all the population proportionally.

As for future research, additional studies should be conducted with extended variables that can predict attitudes. Moreover, there is room for study that analyses domestic producers' attitude toward e-commerce platform and questioned why they are preferring social media rather than e-commerce platforms. Maybe, the e-commerce platforms are more costly or haven't attracted consumers yet. Also, the Further research can be conducted to clarify the domestic producers' barriers to using e-commerce platforms.

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