THE ADOPTION OF E-COMMERCE BY B2B AND B2C CUSTOMERS OF FASHION BUSINESSES IN BANDUNG: A PRELIMINARY STUDY

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Abstract - Technology has transformed people's lives into digital, from interacting with other users to having online transactions. Digital development encourages people to use e-commerce platforms when looking for products and shopping, especially on B2C and C2C platforms. Fashion is a commodity that dominates e-commerce. One of the creative cities in Indonesia that develops its fashion sector is Bandung. Fashion businesses in Bandung have expanded to e-commerce, allowing them to reach consumers from all regions in Indonesia. Fashion businesses in Bandung does not only sell their products to consumers, but also resellers from various regions. Hence, although the e-commerce competition is still focused on the consumer sector, there are potential opportunities for businesses to move in the B2B segment as well. Amid the fast-moving and competitive business environment, fashion businesses in Bandung need to understand the factors that significantly affect their customers to shop on e-commerce, both end consumers and resellers. This preliminary study aims to explore factors influencing the adoption of e-commerce in both B2B and B2C segment that can be applied to the main study. A questionnaire is used for testing the validity and reliability of variables in the proposed framework.

Keywords - B2B, B2C, E-commerce Adoption, Behavioral Intention

I. INTRODUCTION

Indonesia is currently experiencing rapid growth as a digital economy ecosystem. In using the Internet for economic purposes, a survey conducted by Indonesia Internet Service Provider Association (APJII) found that the activities were price seeking (45.14%), buying online (32.19%), and selling online (16.83%) [1]. These activities are done on e-commerce platforms. E-commerce is buying and selling goods or services using the Internet, while platform is a website, or an application that accommodate a business to have online transactions. In online retailing, fashion has consistently dominated as the best-selling vertical in Indonesia, with a market share of 3.05 billion USD [2]. The growth of fashion subsector motivates e-commerce players to focus on this field, including small and medium enterprises in Bandung, the capital of West Java Province. Bandung is an innovative center for creativity and entrepreneurship. Bandung's economic activities are related to design, and it is also known for its fashion industry. Many fashion businesses in Bandung has been using e-commerce platforms to sell their products.

Business-to-Consumer (B2C) and Consumer-to-Consumer (C2C) categories are popular business models applied on e-commerce. However, Business-to-Business (B2B) and Consumer-to-Business (C2B) can be potentially worked on with e-commerce platforms that at first target consumers. According to Frost & Sullivan, the global B2B e-commerce market share will reach 6.7 trillion USD by 2020 [3]. It supports the direction in developing a business to shift from the conventional way to the digital way. Indonesia's online commerce sector has benefits to consumers and businesses. Consumers are benefiting from savings in e-commerce. Consumers can save 11 to 25 percent compared to traditional retail [4]. Businesses are benefiting from supplier-reseller partnerships that have less cost and more efficient through online transactions. Thus, price competition can be a factor in people's decisions when shopping online. Despite that, prices are not the only factor as people become more selective in doing e-commerce transactions. There are other considerations in the B2C segments, such as product reviews and word of mouth. In the B2B segment, word of mouth is also considered as an important influence [5].

As there are many factors affecting a person or business in online shopping, e-commerce companies and online fashion businesses in Bandung need to understand significant factors influencing the e-commerce adoption of their customers. The lack of knowledge about significant factors may inhibit businesses to fulfill customer's needs and wants. Considering that e-commerce users are not only consumers, but also resellers, online businesses as suppliers need to understand how their resellers adopt e-commerce since resellers play an important role in expanding the supplier's market. Customer's adoption can be assessed by behavioral intention in using e-commerce. Behavioral intention is the extent to which someone has formulated a conscious plan to do or not to do some determined future behaviors. Thus, this preliminary study aims to explore factors that are relevant to understand B2B and B2C customer behavioral intention on using e-commerce to purchase fashion products from online businesses in Bandung before conducting the main study.

II. LITERATURE REVIEW

The researcher reviewed literatures that include three models measuring the customer intention in adopting a technology: DeLone and McLean IS Success Model, Unified Theory of Acceptance and Use of Technology (UTAUT), and UTAUT2.

A. DeLone and McLean IS Success Model

DeLone and McLean Information Systems (IS) Success Model is one of the most popular information system success assessment models. This model categorizes the measure of success in information systems under six dimensions. The six main variables of the IS success model are information quality, system quality, service quality, use to intention, user satisfaction, and net benefits [6].

Information quality measures the problem of e-commerce content. The dimensions are personalization, currency, relevance, reliability, completeness, easy to understand and secure to gain the user's trust when conducting transactions on the Internet. System quality refers to usability, availability, reliability, adaptability, and response time of e-commerce systems. Service quality is the overall support delivered by the service provider. Use to Intention measures everything from visits to websites and navigation on the site to information retrieval and transaction execution. User Satisfaction measures the customer's opinion about the e-commerce system. Net benefits balance the positive and negative effects of e-commerce on customers, suppliers, employees, organizations, markets, and even society as a whole.
After reviewing several previous studies that used the IS success model in the context of e-commerce or online shopping, it was revealed that information quality, system quality, and service quality had a positive relationship with the intention to use. Chen and Bahaddad have found that those three variables are significant factors influencing the intention to use m-commerce systems [7]–[8].

H1. Information quality significantly influences intention in using e-commerce platforms.
H2. System quality significantly influences intention in using e-commerce platforms.
H3. Service quality significantly influences intention in using e-commerce platforms.

B. Unified Theory of Acceptance and Use of Technology (UTAUT)

Venkatesh and Davis tested the extended version of TAM with the inclusion of social influences as predictors of technology adoption and formulated the Unified Theory of Acceptance and Use of Technology (UTAUT) [9]. There are four constructs that play an important role as a direct determinant of user acceptance and usage behavior: performance expectancy, effort expectancy, social influence and facilitating conditions.

Performance expectancy is defined as the degree to which a person believes that using a system will help him or her benefit from performing certain activities. Effort expectancy is defined as the degree of ease associated with using the system. This construct is taken from the ease of use variable of Technology Acceptance Model and the complexity variable of the Diffusion of Innovation Theory. Social influence is defined as the degree to which an individual perceives that important others believe that he or she must use a new system. Peers, family members and other groups have a strong influence on individual purchasing decisions [10]. Facilitating conditions are defined as the degree to which an individual believes that organizational and technical infrastructure exists to support the use of the system.

In the technology adoption context, effort and performance expectancy are the most important determinants for analyzing the technology usage behavior and the behavioral intention. Besides, previous studies have broadly explored the concept of social influence and proved the effects of social influence on users' behavior. However, facilitating conditions have not been found to directly and significantly affect behavioral intention in UTAUT. In the context of online shopping, Alsharif also found that performance expectancy, effort expectancy, and social influence are significant factors influencing behavioral intention [11].

H4. Performance expectancy significantly influences intention in using e-commerce platforms.
H5. Effort expectancy significantly influences intention in using e-commerce platforms.
H6. Social influence significantly influences intention in using e-commerce platforms.

C. Unified Theory of Acceptance and Use of Technology 2 (UTAUT2)

While UTAUT was originally developed to explain intention to adopt in an organizational context, UTAUT2 was primarily designed to investigate the continuance intention at the consumer level [12]. UTAUT2 adds three constructs that influence behavioral intentions, namely hedonic motivation, price values, and habits. This updated model shows that facilitating conditions are found to directly affect behavioral intention.

Hedonic motivation can be defined as an internal form of incentives, which can include pleasure, or enjoyment, obtained from the use of technology. This is considered a key concept for defining technology acceptance and use. Price value construct comes from perceived value, which is often considered an

important indicator in predicting buying behavior that can affect the company's competitive advantage. Habit is defined as the extent to which people tend to behave automatically because of learning.

H7. Facilitating conditions significantly influences intention in using e-commerce platforms.
H8. Hedonic Motivation significantly influences intention in using e-commerce platforms.
H9. Price Value significantly influences intention in using e-commerce platforms.
H10. Habit significantly influences intention in using e-commerce platforms.

Overall, previous studies on DeLone and McLean IS Success Model, UTAUT, and UTAUT 2 in the e-commerce context found that all constructs of those models have influences on behavioral intention. Based on the literature review of relationships between each construct, IS success model and UTAUT variables can be integrated to identify significant factors influencing behavioral intention on e-commerce platforms. Accordingly, a conceptual framework is proposed as shown in the figure below.

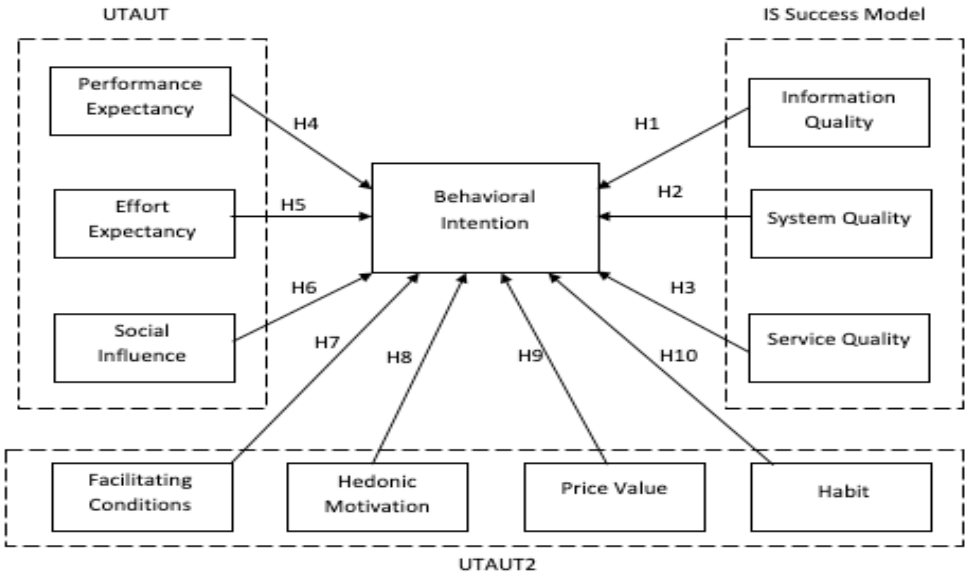


Figure 1. Conceptual Framework

III. METHODOLOGY

The researcher uses quantitative method and targets people from any regions in Indonesia who have purchased goods or services from fashion businesses in Bandung on B2C or C2C e-commerce platforms. As this study is a preliminary study, or a small study preceding the main study, the researcher distributes the questionnaire to 30 respondents only. The questionnaire is composed of 41 questions that represent all constructs in the conceptual framework.

Variable	Sub-Variable	Instrument	Scale
Information Quality	- Accuracy - Relevance - Completeness	Structured Questionnaire	Likert 7 Scale
System Quality	- Reliability - Accessibility - Responsiveness - Ease of use	Structured Questionnaire	Likert 7 Scale
Service Quality	- Visual materials - User interface - Quality of solution - Attention - Promptness	Structured Questionnaire	Likert 7 Scale

Performance Expectancy	- Usefulness - Impact on achievement - Impact on productivity	Structured Questionnaire	Likert 7 Scale
Effort Expectancy	- Ease of learning - Interaction	Structured Questionnaire	Likert 7 Scale
Social Influence	- Influence from significant others	Structured Questionnaire	Likert 7 Scale
Facilitating Conditions	- Resources - Knowledge - Compatibility - Conformity with lifestyle	Structured Questionnaire	Likert 7 Scale
Hedonistic Motivation	- Fun - Enjoyment - Entertaining	Structured Questionnaire	Likert 7 Scale
Price Value	- Reasonability of price - Value for the money - Value at current price	Structured Questionnaire	Likert 7 Scale
Habit	- Addiction - Must - Naturalness	Structured Questionnaire	Likert 7 Scale
Behavioral Intention	- Intention in the future - Intention in daily life - Intention to frequent	Structured Questionnaire	Likert 7 Scale

Table 1. Questionnaire Design

The researcher conducts the reliability and validity test on the result of the questionnaire to test whether the variables in the conceptual framework are relevant for a further study.

Reliability refers to measurements that show consistent results [13]. In quantitative research, it refers to consistency, stability, and repetition of results, that is, when consistent results have been obtained at identical situation but the circumstances are different [14]. The most common measure of internal consistency is Cronbach's alpha (α). The alpha value usually varies between 0 and 1, where 0 indicates no relationship between items at a certain scale and 1 indicates absolute internal consistency [15]. The alpha value is considered acceptable and satisfactory when it is above 0.7 [16]. Validity refers to how well the test assesses the characteristics intended to be studied as assessed by external criteria, which Is sometimes referred to as external consistency. As the data of this research is ordinal, Spearman's rank correlation coefficient is used to test the validity. This correlation coefficient ranges from -1 to +1, where 0 indicates that there is no linear or monotonic relationship, and that the curve continues to increase or decrease when the coefficient approaches the absolute value of 1 [17].

IV. DISCUSSIONS

Of the 30 respondents, 23 respondents were women and 7 respondents were men. Age of respondents is very diverse, ranging from 16 years to more than 45 years. The majority of respondents live in big cities in Indonesia, such as Jakarta, Bandung, Semarang, and Surabaya. In terms of the platforms used for shopping, 20 respondents shopped at Shopee, 16 respondents shopped on the online shop's website, and 15 respondents shopped on Instagram. As many as 17 respondents have bought fashion products from online sellers located in Bandung more than 5 times, meaning that more than half of the total respondents are used to having e-commerce transactions.

Variable	Cronbach's Alpha (α)	Critical Point	Reliability
Information Quality	0.942	0.7	Reliable
System Quality	0.956	0.7	Reliable
Service Quality	0.943	0.7	Reliable
Performance Expectancy	0.891	0.7	Reliable
Effort Expectancy	0.924	0.7	Reliable
Social Influence	0.926	0.7	Reliable
Facilitating Conditions	0.876	0.7	Reliable
Hedonistic Motivation	0.911	0.7	Reliable
Price Value	0.934	0.7	Reliable
Habit	0.873	0.7	Reliable
Behavioral Intention	0.905	0.7	Reliable

Table 2. Reliability Test

Based on the reliability test result, the Cronbach's Alpha values for all variables are above 0.7. Thus, all constructs included in the conceptual framework are reliable.

Variable	Spearman's Rho	Critical Point	Validity
Information Quality	0.727	0.362	Valid
System Quality	0.809	0.362	Valid
Service Quality	0.894	0.362	Valid
Performance Expectancy	0.823	0.362	Valid
Effort Expectancy	0.721	0.362	Valid
Social Influence	0.818	0.362	Valid
Facilitating Conditions	0.838	0.362	Valid
Hedonistic Motivation	0.836	0.362	Valid
Price Value	0.817	0.362	Valid
Habit	0.821	0.362	Valid
Behavioral Intention	0.760	0.362	Valid

Table 3. Validity Test

The critical value of the Spearman's Ranked Correlation Coefficient for 30 respondents with 0.05 level of significance is 0.362 [18]. The questionnaire item is declared valid if the Spearman's rho exceeds 0.362. Based on the validity test result, all constructs included in the conceptual framework are valid since the Spearman's rho values for all variables are above the critical value.

V. CONCLUSION

Since the variables in the conceptual framework passed the reliability and validity test, it can be concluded that the conceptual framework of this research has been relevant to be tested for the main study. While this preliminary study only captures perspectives of consumers, the main study will be more comprehensive by involving a larger size of consumers, fashion businesses in Bandung as suppliers, and resellers. The main study is expected to provide insights for e-commerce platform companies and online fashion businesses in Bandung to increase customer purchase intention.

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