META-ANALYSIS: THE EFFECT OF TECHNOLOGY ACCEPTANCE MODEL ON GENERATION Z'S ONLINE SHOPPING INTENTION

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ABSTRACT

Generation Z dominates online purchases, this is because their daily lives are inseparable from gadgets. Mastery of technology is needed in order to be able to make online purchases. The purpose of this review is to draw conclusions about the online purchase intention behavior of Generation Z which is influenced by the Technology Acceptance Model (TAM). Generation Z is closely related to the digital world because they were born and grew up in the digital era. TAM has a role in the formation of online generation purchase intention behavior, therefore the author tries to review several studies both at home and abroad to draw generalizations about the online purchase intention behavior of generation Z. The method used in this review is a meta-analysis that summarizes There have been several studies over the last 15 years regarding the effect of TAM on Generation Z's online purchase intention. The review results show that the Technology Acceptance Model (TAM) has a significant effect on Generation Z's online purchase intention, although there are several studies showing insignificant results. This is because there are other factors that influence such as trust or comfort.

Keywords: *Generation Z, Intention to Buy Online, TAM*

INTRODUCTION

The world is increasingly developing marked by the era of digitalization where all life activities can be easier with the support of technology. Generation Z is the generation born in 1995 – 2010. Generation Z is closest to technology because they were born and grew up in the digital era. They are more adept at operating technology-based electronic devices. They spend more time in

cyberspace with gadgets. They can access info quickly through their gadgets, including info about trending products. Generation Z spends at least 4 hours per day using the IDN Research Institute (2019) gadget. Therefore they are very vulnerable to online shopping.

Technology Acceptance Model (TAM) is present as a tool to help analyze and understand internet usage Horton et al., (2001). The TAM model is very suitable to be used to measure the behavior of online shopping intentions of Generation Z. This right is because in TAM there are two certain beliefs, namely the perception of the ease of using technology and the perception of the benefits of technology to determine a person's behavioral intention in using technology (Venkatesh & Davis, 2000).

LITERATURE REVIEW
1. Online Shopping Behavioral Intention
   a. Definition of Online Shopping Behavior

Turban, Straus, & Lai (2016), Katawetawaraks & Wang (2011) explain that online shopping is the activity of purchasing products (either goods or services) through the internet. The online environment is very different from the offline environment due to the nature, size and impossibility of sensory representation. As a consequence, the theories and concepts of the two environments are not always general and relevant. Demangeot & Broderick (2007). The main difference between online and offline environment is given by the role of the consumer. Thus, while the offline environment gives consumers a passive role, on the Internet they become active explorers who decide which messages they receive, the order in which they receive them and for how long they receive them. Huizingh & Hoekstra (2003).

Furthermore, Kanchan et al., (2015) stated that online shopping is gaining popularity among people of the younger generation. Higher income groups and educated people buy more through e-retailing sites. People have hesitancy in doing online shopping because of security concerns. At the same time people are resistant to change due to the technological complexity of making online purchases.

According to Kothari et al., (2016) the majority of customers in India have used online shopping and have shown a willingness to continue but very few of them have done online shopping before and do not show a willingness to continue. Respondents prefer

online shopping because of various motives such as less price or discounted price, saving time, due to the availability of no ringing sites and various products available and customers experiencing options for purchasing, customers find this method of purchasing very easy because of the user-friendly and customer-friendly sites. want to avoid the hassles of shopping at the store. The majority of respondents are satisfied with online shopping. The research by Ganapathi (2015) states that convenience, website features, security and time saving are factors that influence consumer online shopping behavior.

b. Online Shopping Behavior Indicator

Moon & Kim's (2001) research uses online shopping behavior indicators: a) I will buy a product on the internet immediately; b) the Internet may become an intermediary for shopping transactions that I will use in the future; c) I intend to use the internet to purchase the product immediately. Further research by Fiore et al., (2005) uses indicators a) I intend to buy clothes from online retailers; b) I would be willing to buy clothes through an online retailer; c) I am willing to recommend an online retailer to my friends; d) I will visit the retailer again; e) in the future, I will probably shop at an online retailer.

2. Technology Acceptance Model

The theory most often used to study behavioral intentions in technology studies is the Technology Acceptance Model (TAM) adopted by Davis et al., (1989). This TAM consists of Perceived usefulness and perceived easy to use.

a.1. Perceived Usefulness (PU)

From the online shopping point of view, perceived usefulness is the customer's perception that when they buy products online, their shopping performance will increase. We can define perceived usefulness as "a scale on which a person's belief that using a particular system will improve or enhance his or her job performance. Perceived usefulness is considered a beneficial factor influencing online shopping (Davis et al., 1989). According to TAM Davis et al. , (1989) customers want to use websites that are more useful and affect their performance. Perceived Usefulness (PU) is considered a utilitarian factor that affects online shopping. According to TAM Davis et al., (1989) customers tend to use online websites which significantly affect their performance.

a.2. Dimensions of Perceived Usefulness (PU)

Indicators of Perceived Use (PU) according to Davis et al., (1989) include; (1) Computers are very easy to learn, (2) Computers work easily according to what the user wants (3) User skills will increase by using computers (4) Computers are very easy to operate. According to Chin and Todd (1995) Perceived Usefulness (PU) can be divided into two categories, namely: 1) Benefit with one factor estimation, dimensions of making work easier (make job easier), useful (usefull), increasing productivity (Increase productivity).). (2) benefit with two factor estimation (usefulness and effectiveness), including dimensions of enhancing my effectiveness, developing my job performance.

b.1 Definition of Perceived Easy of Use (PEoU)

Davis et al., (1989), define Perceived Easy of Use (PEoU) as the degree to which a person believes that using a particular system will be free of effort. Ease of use can also be defined as the perception that someone who uses a new technology will be free from the efforts of Davis 1993 in O'Cass & Fenech (2003).

b.2 Dimension of Perceived Easy of Use (PEoU)

The Perceived Ease of Use (PEoU) element is a system that is easy, process, elastic and easy to become skilled at. Easier technologies are always easier for consumers to accept than complex technologies for online shopping. Usually consumers don't want to use complex technology to buy any product or service online. While website characteristics play a major role in determining perceived ease of use in online shopping (Beldona et al., 2005; Zeithaml et al., 2002).

c.1 Perceived Enjoyment (PE)

Perceived Enjoyment is defined as, "the extent to which the activity of using a computer is considered enjoyable in itself, far from the side effects of performance that might be expected" Davis et al., (1992). Enjoyment reflects the hedonic or essential aspects of the use of information technology. According to Beatty & Elizabeth Ferrell (1998) perceived pleasure is the pleasure or charm that a person receives from the shopping procedure. Hsu & Lu, (2007) recommend that pleasure positively affects online customer loyalty.

c.2 Dimension of Perceived Enjoyment (PE)

Menon & Kahn (2002) say that if consumers enjoy their online shopping experience, they have a more positive attitude

towards online shopping, and tend to adopt the internet as a shopping medium. Within the research framework of Jain (2014), identified three latent dimensions of enjoyment construction, including "escapism", "pleasure", and "passion". Escapism is reflected in the pleasures that come from engaging in absorbing activities, to offering an escape from the demands of the everyday world. "pleasure" is the degree to which a person feels good, excited, happy, or satisfied in online shopping.

Research Shows the Effect of Technology Acceptance Model (TAM) on Online Shopping Intentions

Authors	Finding
Lee et al., (2006)	The results support the positive effects of IIT websites on attitudes and behavioral intentions towards online retailers and suggest aspects of TAM help explain the effects of IIT on consumer responses. The three aspects of TAM, perceived usefulness, perceived ease of use and perceived enjoyment, significantly increase consumer attitudes and behavioral intentions towards an online retailer.
Alcaniz, Mafe, Manzano, & Blas (2008)	Finding that dependence on online shopping information can increase Perceived Ease of Use, but only if perceived usefulness remains high. Innovative consumers positively affect internet exposure and perceived ease of use in shopping.
Wang, Edward Shih-Tse., 2014)	The results show that economic spending orientation, subjective norms, and information quality have a positive effect on Perceived Usefulness (PU), purchase frequency and system quality affect the Perceived Ease of Use (PEoU) of the Online Group Buying website. However, the relationship between visibility and PU was not significant. PEoU has a significant effect on PU, PU and PEoU has a significant effect on attitudes, PU and attitudes have a significant influence on search intentions, and search intentions have a significant effect on repurchase intentions.
Zaidi et al., (2015)	The results of the study found that the variables Perceived Usefulness, Perceived Enjoyment and Perceived Ease of Use had a significant positive relationship with online shopping attitudes.
Darpito & Wiendijarti (2015)	The results show that the variables in TAM affect consumer satisfaction but do not affect consumers' purchase intentions to shop online, but consumers' shopping intentions are more influenced by social factors, namely friends, family and the environment. The development of IT technology makes facilitating conditions also influence consumers to use the internet in online shopping.
Septiani, Rizky., Putu Wuri Handayani., (2017)	The results of this study found that factors of internal perception (perceived ease of use), external influences (subjective norms), characteristics of innovation (compatibility), perceived enjoyment (perceived

	enjoyment) and various services affect the behavioral intentions of users on online transportation services in Indonesia.
Dewi & Santika (2018)	The results of this study are that there is a positive and significant effect of perceived ease of use, perceived usefulness, perceived enjoyment, and prior online shopping experience on online shopping intention in Denpasar City and there is a negative and significant effect of perceived risk on online shopping intention in Denpasar City.
Wei et al., (2018)	The results of the study revealed that the quality and price of fruit dominantly affect the willingness of consumers to buy fruit. However, the results of the study also found that e-commerce platforms, information quality, and perceived risk were less significant. Finally, some specific suggestions are recommended for fruit e-commerce companies in designing effective marketing strategies.
Liew & Falahat, 2019)	The results showed that group purchases online were influenced by perceived usefulness (PU), perceived ease of use (PEOU), price, electronic word of mouth (e-WOM), perceived trust and risk (PR).
Suleman et al., (2019)	The results of the study stated that usability, ease of use, and trust had a significant and significant effect on attitudes, while the decision itself was strongly influenced by attitudes. But it turns out that the results of the study found that trust did not affect consumer attitudes in shopping online. In the case of online shopping, it is not only the trust factor that consumers need to decide, but it is greater than the attitude factor, while the attitude itself is built from various factors.
Rachbini et al., (2019)	The results show that trust and credibility play an important role in the acceptance of online transactions in the e-commerce industry. In addition, the results of this study consistently support several previous studies related to TAM where perceived ease of use and perceived usefulness play a direct or indirect role in repurchase intentions on e-commerce mobile platforms.
Ha et al., (2019)	The results of the study indicate that perceived usefulness, perceived ease of use, attitudes, subjective norms and beliefs have a positive effect on consumers' online shopping intentions.
Lefiani & Wibasuri (2021)	The results of this study indicate that the perceived ease of use (PEU) variable does not have a positive effect on attitude to use. The perceived usefulness (PU) variable has a positive effect on Attitude to use, and the Attitude to use variable has a positive effect on repurchase intention.
Leong & Chaichi (2021)	Analysis of the results shows that various factors including "convenience", "security", "perceived ease of use", "perceived usefulness", and "trust" significantly affect customers' online purchase intentions during the covid19 pandemic. The findings of this study can provide practical implications for deploying an effective online marketing strategy.
Sidanti et al.,	TAM 2, external variables are added directly, namely

(2021)	social influences the process which includes Subjective Norms and Image with the moderator variables Volunteering and Experience; and cognitive instrumental processes which include Job Relevance, Output Quality, and Ability Results to be demonstrated. TAM 3, by adding one of the variables Computer Self-Efficacy as an external variable that affects Perceived Ease of Use, Online Purchase Intentions are influenced by the existence of transactional online interests
Aisyah et al., (2021)	The results show that perceived ease of use has no effect on attitudes towards online shopping; perceived ease of use has a positive effect on perceived usefulness; perceived benefits have a positive effect on attitudes towards online shopping; and attitudes towards online shopping have a positive effect on intention online shopping.

RESEARCH METHODS

The research method uses meta-analysis. Meta-analysis is a statistical technique for combining the results of 2 or more similar studies to obtain a quantitative mix of data. Meta-analysis steps: (1) Determine and study the research topics to be summarized; (2) Find and collect a number of studies with predetermined topics and select them; (3) Calculation of measurements using the method of meta-analysis and hypothesis testing on the measurement; (4) Identify whether there is heterogeneity of effect sizes in the model at this stage; (5) Analysis of moderator variables; (6) Draw conclusions and interpret the results of the meta-analysis.

DISCUSSION

Most of the research results show that Perceived Usefulness (PU), Perceived Easy of Use (PEoU), and Perceived Enjoyment (PE) have a significant influence on online shopping intentions. However, in a review of some of these studies, which found Perceived Easy of Use (PEoU) on attitudes to use, but these attitudes affect online purchase intentions again. There are even a small number who find that there is no influence of the Techology Acceptance Model on online purchase intentions. The different results are due to differences in the culture of the country where the study is located which can affect differences in respondents' perceptions or there are other factors that influence such as safety, risk, delivery accuracy Veybitha et al., (2021). The unique thing found in the online shopping behavior of Generation Z is that they

are not deterred from making purchases online even though sometimes they experience disappointment. This is also triggered by their daily life which cannot be separated from gadgets, besides other incentives such as product discount promos and so on.

CONCLUSION

It can be generalized that the Technology Acceptance Model (TAM) has a positive and significant influence on the online purchase intention of Generation Z. The existence of a small difference in research results can be a reference for future research to explore more deeply what factors cause TAM to have an insignificant effect. significant effect on online purchase intention.

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