Online purchasing intention using the technology acceptance model (TAM) approach

Abstract
The purpose of this research is to exposure review about several factors of online Purchasing Intention as a form of how consumers behave in accepting digital technology and have an interest in doing behavior. In fact, that the individuals tend to do this behavior, this study uses the Technology Acceptance Model (TAM) approach. The importance of understanding one’s behavior in acceptance technology, the technology acceptance model known as the TAM is growing along with the advancement of information technology itself and changes in user behavior, TAM Model 1, the actual technology use variable is influenced by the perceived usefulness variable, perceived ease of use, attitude towards using technology, and behavioral intention to use.

Due to the actual technology use cannot be observed by researchers using a list of questions, it is replaced by the name of perceived usage, TAM 2, external variables are added directly, namely social influence processes which include Subjective Norm and Image with moderator variables Voluntariness and Experience; and cognitive instrumental processes which include Job Relevance, Output Quality, and Result Demonstrability. TAM 3, by adding one of them the Computer Self-Efficacy variable as an external variable that affects Perceived Ease of Use, Online Purchasing Intention influenced by the existence of transactional interest in online.

Keywords: E-commerce; Online Purchasing Intention; Technology Acceptance Model (TAM); Micro, Small and Medium-Sized Enterprises

JEL Classifications: C63; L24; L32

Acknowledgments and Funding: The authors received no direct funding for this research.

Contribution: The authors contributed equally to this work.

Data Availability Statement: The dataset is available from the authors upon request.

DOI: https://doi.org/10.21003/ea.V193-10


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Намір купувати в Інтернеті з використанням підходу моделі прийняття технології

Анотація
Мета цього дослідження– аналіз кількох факторів наміру здійснювати покупки в Інтернеті як форми того, як споживачі поводяться при прийнятті цифрових технологій і виявляють інтерес до такої поведінки. Важливість розуміння своєї поведінки в технології прийняття та модель прийняття технології зростає разом з розвитком самої інформаційної технології та змінами у поведінці користувачів. У статті ми розглянули три варіанти моделі ухвалення технології.
Модель 1: змінна фактичного використання технології залежить від змінної передбачуваної корисності.
Модель 2: зовнішні змінні додаються безпосередньо, а саме, процеси соціального впливу, які включають суб’єктивну норму та образ із модераторськими змінними, добровільність і досвід, а також когнітивні інструментальні процеси, які включають релевантність роботи, якість виведення та наочність результату.
Модель 3 включає «самоефективність комп’ютера» як зовнішню змінну, яка впливає на сприйману простоту використання, а також намір здійснювати покупки в Інтернеті, на яке впливає наявність транзакційного інтересу в Інтернеті.

Ключові слова: намір; покупка в Інтернеті; модель прийняття технології (TAM).
В статье мы рассмотрели три варианта модели принятия технологии. Модель 1: переменная фактического использования технологии зависит от переменной предполагаемой полезности. Модель 2: внешние переменные добавляются напрямую, а именно, процессы социального влияния, которые включают субъективную норму и образ с модераторскими переменными, добровольность и опыт; а также когнитивные инструментальные процессы, которые включают релевантность работы, качество вывода и наглядность результата. Модель 3 включает «самоэффективность компьютера» в качестве внешней переменной, которая влияет на воспринимаемую простоту использования, а также намерение совершать покупки в Интернете, на которое влияет наличие транзакционного интереса в Интернете.

Ключевые слова: намерение; покупка в Интернете; модель принятия технологии.

1. Introduction

The economy due to the COVID-19 pandemic has had an impact on the sustainability of micro small and medium enterprises (MSMEs). According to data from the Ministry of Cooperatives and SMEs, there were at least 37,000 MSME players who were hit during the pandemic. Whereas MSMEs are the main drivers of the Indonesian economy. In 2018, this sector contributed 60.34% to gross domestic product (GDP). Not only that, there are 116 million people or 97.02% of the total workers in the country absorbed in the MSME sector. The survey results show that only 5.9% of MSMEs are able to reap profits amid the pandemic. But on the other hand, there are 82.9% of business actors who have been negatively affected by the pandemic. Even 63.9% experienced a decrease in turnover of more than 30%. The US Statistics Authority has found that all web-based business transactions for 2004 were USD 71 billion dollars with internet business deals increasing every quarter during 2004. Correspondingly, Jupiter Research recommends that the market will move to USD 132.2 billion by 2005. Jupiter further suggested that there was a flood in on-line transactions during the 2004 occasion. Chau and Hu (2001) improved the TAM model by an additional factor and stated that the similarity of the progress variables was «mostly compatible with saw dexterity with respect to TAM».

Several investigations have used similarity variables to extend the TAM model to web-based businesses. Vijaysarathy (2004) recommends his findings to support the notion that when TAM is applied to an on-line shopping framework, different beliefs beyond those recommended by the TAM model (convenience and usability) should be investigated. TAM is rooted in the behavioral theory of Theory of Reasoned Action (TRA) which was first developed by Fishbein in 1967. In 1975, TRA was tested and refined by Fishbein and Ajzen. In 1989, Davis developed TRA and TPB into TAM. TAM replaces subjective norm and perceived behavior control into two main constructs, namely perceived ease of use (PEOU) and perceived usefulness (PU) which affect attitudes and behavioral intentions in the use of information technology. The TAM model was further developed by Venkatesh & Davis (2000) into TAM 2 by adding external variables that only affect perceived usefulness and usage intention, namely social influence processes (Subjective Norm and Image moderated by Voluntariness and Experience) and cognitive instrumental processes (Job Relevance), Output Quality, and Result Demonstrability).

Up to TAM 3, self-efficacy is only used to measure its effect on perceived ease of use. Even though there have been many studies in the field of acceptance of online information technology that use self-efficacy to test not only its effect on perceived ease of use, but also perceived usefulness, trust, perceived risk, attitude, and usage intention. According to Marakarkandy et al. (2016), self-efficacy is a time variant parameter that can change when a person gets a lot of information and experience, especially in the current millennial era.

2. Materials and Methods

Online Purchasing Intention is transactional interest in referring online purchases as customers in exploratory online purchases providing an explanation of preferential products providing motivation in product satisfaction and pleasure. Online repurchase intention according
to Ajzen (2020) is a situation where consumers are willing and intend to make online transactions again. Due to the lack of face-to-face interaction with sellers and unreliable information online, online shopping faces more challenges than offline shopping, including distrust, low switching costs, uncertainty, and word-of-mouth spread. Quickly. Compared to men, women have consistently higher levels of concern about security. As a result, women more often engage in security and privacy protection behaviors to avoid potential financial losses in the online environment. TRA was first developed by Fishbein in 1967.

3. Results

In 1985, TRA was further developed by Ajzen into Theory of Planned Behavior (TPB) by incorporating additional constructs of perceived behavioral control to describe situations where an individual does not have great control over the desired behavior.

Ajzen (2002; 2022), TPB is one of the most influential models for predicting behavioral intentions and behaviors. As in behavioral SI models, TAM is rooted in Theory of Reasoned Action (TRA), which is a development of the theory of attitude which studies attitudes and behavior. TRA was developed by Icek Ajzen and Martin Fishbein in the early 1960s. While TAM was first developed by Davis et al. in 1989. TAM replaced subjective norm and perceived behavior control into two main constructs, namely perceived ease of use (PEOU) and perceived usefulness (PU) which affect attitudes and behavioral intentions in using information technology.

The TAM model was further developed by Venkatesh & Davis (2000) into TAM 2 by adding external variables that only affect perceived usefulness and usage intention, namely social influence processes (Subjective Norm and Image moderated by Voluntariness and Experience) and cognitive instrumental processes (Job Relevance, Output Quality, and Result Demonstrability). Venkatesh & Davis (2000) further developed TAM into TAM 3 by adding external variables that only affect perceived ease of use and usage intention, namely anchor variables (computer self-efficacy, perceptions of external control, computer anxiety, and computer playfulness) and variable adjustment (perceived enjoyment and objective usability). 

Davis (2000) worked out TAM 2 by adding external variables that only affect perceived usefulness and usage intention, namely social influence processes (Subjective Norm and Image moderated by Voluntariness and Experience) and cognitive instrumental processes (Job Relevance, Output Quality, and Result Demonstrability). On-line purchasing factors are described in Table 1.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security and trust</td>
<td>Authenticity, possibility of cash payment, exchange security, trust, having an electronic trust symbol, protection of customers' personal information</td>
</tr>
<tr>
<td>Originality</td>
<td>The most important thing for me is to make sure that what I bought is exactly the same; That is, be original</td>
</tr>
<tr>
<td>Honesty</td>
<td>Accuracy of the information provided, compliance of the purchased product with submissions, providing honest guidance and advice</td>
</tr>
<tr>
<td>The charm of the website</td>
<td>Visual eye play, beautiful template design, categorization and grouping of products and services, providing the possibility of comparing prices, point display, (other customers’ opinions, creating a space for conversation and interaction between customers, Creating a sense of excitement and desire in shopping, creating a fun atmosphere</td>
</tr>
<tr>
<td>Branding</td>
<td>Specializing in brand, brand credibility, brand personality, attractive logo, brand reputation, attractive name, cost of changing brand and identity-brand</td>
</tr>
</tbody>
</table>

Source: Compiled by the authors

Marakarkandy et al. (2016) examined the effect of perceived usefulness on the attitude of internet banking customers in Mumbai. Shankar and Kumari (2016) examines the effect of perceived usefulness on the attitudes of mobile banking individuals in India. Fawzy and Esawai (2017) examined the effect of perceived usefulness on the attitudes of internet banking individuals in Egypt. The results of their research explain that perceived usefulness has a significant effect on attitude. This indicates that the higher the number of customers and individuals using internet banking or online purchasing, the higher their attitude to use these online services. However, the research conducted by Lule et al. (2012) on M-banking application users in Kenya showed that perceived usefulness had no effect on attitude.

The effect of perceived usefulness on usage intention has also been widely carried out by researchers regarding online applications. Kesharwani and Bisht (2012) examined the effect of perceived usefulness on the usage intention of business school graduates in India who use internet banking.

Ariff et al. (2012) examined the effect of perceived usefulness on usage intention among marketing students at Malaysian public university. Alalwan et al. (2015) examines the effect of perceived usefulness on the usage intention of mobile banking customers in Amman and Al-Balqa’ Jordan.


The results of their research explain that perceived usefulness has a significant effect on usage intention. The effect of perceived risk on attitude has also been investigated by researchers regarding online applications. Many studies on the effect of attitude on usage intention have been carried out by TAM researchers which were developed from TRA and TPB related to online transactions.

Aderonke and Charles (2010) examined the effect of attitude on the usage intention of customers’ financial transactions of several private banks in Nigeria through internet banking. All of their research results explain that attitude has a significant effect on usage intention. Fauzi et al (2019) also give evidence TAM theory on financial management information system within government institution have a significant on user performance. While modified TAM theory have examined with Fauzi & Jatiningrum (2021) revealed that the TAM model becomes more perfect when imbued with the reinforcement theory.

4. Conclusion

Research on online applications using variables in the TAM model such as computer self-efficacy, perceived usefulness, trust, perceived risk, attitude, and usage intention has been widely carried out by researchers including internet banking, mobile banking, e-commerce, online purchasing, and online payments. Meanwhile, studies that use the TAM model to test usage intentions related to Gojek online applications which have different service features from internet banking (Aderonke and Charles, 2010; Ariff et al., 2012; Abadi et al., 2012; Fawzy and Esawai, 2017; Sharif and Raza, 2017), mobile banking (Wessels and Drennan, 2010; Lule et al., 2012; Alalwan et al., 2015; Koksal, 2015), online banking, B2C e-commerce (Kim and Kim, 2005; Madiitinos et al., 2010), online purchasing (Almousa, 2011), online shopping (El-Faqih, 2012), and mobile payment (Bailey et al., 2017).

Most of the research on the use of online applications using the TAM model still uses the perceived ease of use variable for student respondents. Meanwhile, a study of online applications involving respondents in the so-called Z generation by eliminating the perceived ease of use variable has not been carried out. There are still differences in the results of research on the effect of computer self-efficacy on trust Kim and Kim (2005) with Sharif and Reza (2017). There are still differences in the results of research on the effect of computer self-efficacy on perceived risk (Kim and Kim 2005).
In the practical field, it is suggested that companies that sell products and services online perform loyalty actions in the form of a set of codes obtained in this study, for example, in the context of technological organizers, in the context of accurate and intelligent grouping. Users are the most repetitive code in this study and have not been seen in the literature; it can guide their actions. These companies can better serve their customers by providing categories and groupings appropriate to their type of industry based on visits, device specifications, in-app behavior and location, and provide them with the opportunity to repurchase from the company.

References


Received 16.06.2021
Received in revised form 9.07.2021
Accepted 29.07.2021
Available online 19.10.2021