

# Technology Acceptance Model to Factors Customer Switching on Online Shopping Technology: Literature Review

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**Abstract:** Customer loyalty is a phenomenon that is the center of attention of an organization or company because it greatly influences the continuity and development of the organization. Customers are said to be loyal if they have affection for a company's products or services. So that loyal customers will express this affection by saying positive things about the company's products or services to friends, relatives and co-workers. However, if customers feel uncomfortable with a company's products and services, there is a possibility that customers will switch from loyal to disloyal. This is usually called customer switching. This research is based on a systematic review of the influence of usability and ease of use of online shopping applications as well as the factors causing customers to switch from online shopping applications to mobile retail applications. Three phases are used in this study's systematic literature review (SLR). The factors that were discovered were categorized using three main themes. Interconnected among these three elements are perceived utility, perceived ease of use, and behavioral intention to use. This study also found that when TAM is added as a new component to gauge the intention to adopt an online shopping application, "trust, ease, and information quality" are the most important factors. By carefully identifying the effects of online shopping application on business management, this research contributes theory. The findings assist online shopping application service providers in formulating sensible plans for foreseeing and enhancing clients' intentions to use online shopping applications.

**Keywords:** customer loyalty, perceived usefulness, ease of use, technology acceptance model, customer switching, online shopping application.

## INTRODUCTION

Currently, the business environment is experiencing intense competition. The challenge for entrepreneurs today is that technology is advancing while entrepreneurs are experiencing a lack of capital to open new businesses. So that it provides more sophisticated and modern offers to customers. Currently, customers tend to prefer something that has many choices and ease of use in order to meet customer needs. Nowadays customers prefer to learn to use something new rather than they have to keep using the company's old products or services but cannot solve problems related to their needs quickly and flexibly (Rachinger, 2019). Currently, an increasingly popular business growth is online shopping.

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With the advancement of internet technology, the opportunity to shop online is easier and can improve customer experience (Farooq, 2022). The reasons for the surge in online shopping applications include sophisticated infrastructure, ever-changing customer lifestyles, and improved lives for customers to be socially accepted. In addition, another factor that also motivates customers in online shopping is that it can improve customer experience. Customers can compare companies' products or services easily (Ellison, 2020).

The customers discussed in this study are Indonesian customers. Customers also trust reviews and ratings from other people or other customers more than offers provided directly by the company. Satisfied customers will give a good review of the company's products or services. From this review, it will have a positive influence on other potential customers.

But along with the surge in customers who shop online also pose a threat to all business people, there are many competitor offers. With advances in information and communication technology, customers will increasingly be interested in getting company products or service offerings. In a business situation that has changed like this, business people must think of new strategies to bring customers back. Customer loss is a phenomenon that is considered a large loss that can threaten the company's finances and potential future income (Le Wang, 2019). From a cost point of view, retaining customers is more profitable than attracting new customers. It is rumored that the cost of acquiring new customers can be up to 5 times as much as that of retaining existing customers (Hamilton-Ibama, 2022).

In online shopping, customers use an application that customers can use to shop like shopping at a market or shop. Then the customer chooses the product, then the customer puts it in the basket and finally the customer makes payment. Apart from that, by using the application customers do not need to come to the shop or market, customers only need to call and interact with the application until the product they have purchased is received by the customer. Due to the interaction of business with technology and the increasing amount of research conducted regarding consumer dangers of technology, several technology research models have been developed as Technology Acceptance Models (Tavallae, 2017). The Customer Acceptance Model in this research will be studied to determine the factors that influence customer acceptance of technology on customer movement to new technology.

Due to the increasing interaction of business with technology and the increasing amount of research conducted regarding consumer dangers of technology, several technology research models have been developed as Technology Acceptance Models (Tavallae, 2017). This research aims to obtain a model of customer acceptance of technology so that the final result can be concluded about the factors that influence customer acceptance of technology which causes customers to switch to new technology. The technology in question is online shopping application technology. There are several studies on the acceptance of online shopping technology, but there is no research that discusses the large number of customer shifts to mobile-based shopping applications. By finding the factors that influence customers to accept technology, especially mobile-based shopping applications, it can be used as a reference for business application developers to be able to pay attention to push and pull factors that can encourage or attract customers to switch to using mobile-based shopping applications.

Table 1. Summary of SLR in RE

Literature Study	Number of Paper	SLR Topic and Description
Eriska, 2018	6	Perceived ease of use and other factors on the intention of millennials in using application-based transportation
Singh, 2016	13	Factors Influencing Online Shopping Behavior
Yongchang, 2018	5	Online purchase intention based on technology acceptance model
Juniwati, 2014	3	Perceived risk theory using technology acceptance model
Le Wang, 2019	8	Switching behaviors in online shopping application

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Farooq, 2022	3	Customer loyalty in online shopping application
Sajidm, 2022	5	Acceptance model towards mobile application
Suhir, 2014	10	Online customer purchasing decisions
Makmor, 2019	2	Extended technology acceptance model on online shopping application

In accordance with the study's objective, the phrase "systematic review" is used to describe particular research procedures utilized to collect data and carry out evaluations. A systematic literature review, or SLR, is a process used to evaluate data obtained from the literature. Based on a clear technique that lessens bias in SLR outcomes, SLR has a number of advantages. This approach can generate substantial and in-depth information based on empirical data obtained from the findings of performed study, and for quantitative investigations, this approach permits the combining of data using meta-analytic techniques (Kitchenham, 2004).

A three-stage process called concepts, research, and findings is used to conduct SLR. Formalizing the issue through a research question that will act as the cornerstone for information extraction from the gathered data is what the concept stage entails. Studies are the step of doing a review by dissecting the given evidence's substance, contrasting it, or connecting its many parts in the second stage. The research findings will serve as the foundation for the compilation outcome. New information and knowledge gained from the data analysis and synthesis will be presented in conclusions at the results stage. Planning, review execution, and result analysis are the three fundamental SLR operations that are based on these three phases. (Kitchenham, 2004). Building review methodologies, suggesting research subjects, and need identification are all planning duties at the SLR. The execution part of the review includes tasks for identification, choosing primary research, evaluating the quality of studies, data extraction, and monitoring. Reviewing results involves duties including data synthesis and analysis. Result information is presented in a review report.

## LITERATURE REVIEW

### THEORY OF ACCEPTANCE AND USE OF TECHNOLOGY

The Technology Acceptance Model (TAM) is an information technology system acceptance model used to measure human attitudes as users of new information technology systems (Abdillah, 2015). The model was developed by Davis in 1989 and is widely used in researching the information technology adoption process due to its simplicity and ease of application (Abdillah, 2015).

The TAM model posits two individual beliefs: perceived usefulness and perceived ease of use, which are the main influences on computer acceptance behavior. Perceived usefulness refers to how users feel that their performance can be improved by using the help of technology. On the other hand, perceived ease of use is defined as how users feel that online shopping is not difficult and does not require great effort to operate (Abdillah, 2015).

The TAM is an adaptation of the Theory of Reasoned Action (TRA) and has been used to explain the relationship between attitude toward using e-commerce and intention to purchase (Adhiputra, 2015). This theory explains that several variables influence the tendency to behave in using a technology called the TAM factor, which consists of perceived usefulness and perceived ease of use (Adhiputra, 2015).

### ATTITUDE TOWARDS USING ONLINE SHOPPING APPLICATION

Attitude towards using online applications refers to a user's cognitive reaction to the actions taken when using the application. This attitude can be influenced by the user's perception of the application's usefulness and ease of use (Lee, C.-Y, 2015).

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Perceived usefulness refers to the belief that using a particular system would enhance job performance. If users find an online application useful in accomplishing their tasks, they are more likely to have a positive attitude towards using it. Perceived ease of use, on the other hand, refers to the degree to which a person believes that using a particular system would be free of effort. If users find an online application easy to use, they are more likely to have a positive attitude towards using it.

In the context of e-commerce, a positive attitude towards using an online shopping platform can be influenced by the user's experience or belief and can trigger the intention or desire of e-commerce users to buy (Sianadewi, 2017). Furthermore, a positive attitude towards e-commerce can be influenced by experience, which in this case means learning from the past to the present through cognitive, affective, and conative thinking that forms patterns or habits in e-commerce users.

### METHOD

This section discusses the methodology used to conduct SLR. The activities carried out refer to figure 1. Figure 1 begins with the identification of the need for SLR, followed by research question formulation, the searching process using keywords, screening of papers, keywording using abstract, and the data extraction mapping process.



Figure 1. Systematic Literature Review and Mapping Diagram (Kitchenham, 2004)

#### Identification of Research

The goal of a systematic review is to find primary studies that address a research problem using an objective search methodology (Kitchenham, 2004). Therefore, assessment by making research questions. Table 2 shows a general description of the SLR method.

For the purpose of this work, data was collected from academic databases such as Scopus, Web of Science (WOS), and Springer. Searches were conducted on the titles, abstracts, and keywords of indexed papers in various academic databases using custom search string. Publications from 2012 to 2022 were included in the search. The end outcome was the collection of 45 studies.

Table 2 an Overview of the SLR Method

Item	Description
Research Question	1. What factors affect of technology acceptance model towards online shopping site and application in the business sector? 2. What factors cause customers to move from online shopping applications (web stores) to mobile retail applications?
Created a set of search parameters	Database used: SCOPUS, WoS and Springer Time range: 2018–2022
Search Criteria	Topic choice: Online Shopping Application The initial search in SCOPUS was followed by WoS and Springer Search words: Online Shopping Application Search loop: “electronic retail”, “e-shopping”, “electronic

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		shopping”, “a web store”, “e-shop”, “web shop”, “web-store”, “online store”
Journal selection	paper	Criteria for inclusion English and Indonesia Paper, paper published between 2012 and 2022, abstract related to the research question Criteria for exclusion Any none English and Indonesia paper , paper published before 2012, abstract and keyword not related to the research question
Conducting reporting and review	and the	Looking for appropriate papers, inclusion and exclusion according to the title and keywords in the abstract, inclusion and exclusion based on the entire content from introduction to conclusion

### Definition of Research Questions

The purpose of this SLR is to learn more about Perceived usefulness and ease of use of technology used by customers in online shopping applications. SLR is very important because there has been a lot of research on the factors that influence the switching of renewable customers. This research wants to identify trends in research conducted on the topic of customer switching. A research question (RQ), which will guide the SLR analysis, is created to learn more about a more structured study. Based on the objectives of the SLR, the research questions (RQ) are formulated as follows:

RQ1: What factors affect of technology acceptance model towards online shopping site and application in the business sector?

Rationale:

User experience using the internet is one of the motivations for users to be able to use online shopping applications anywhere and anytime. So that the progress of internet technology is directly proportional to the customer's online shopping intention. However, what kind of technology acceptance factors can encourage the use of online shopping applications by customers will be discussed further in the results of this study.

RQ2: What factors cause customers to move from online shopping applications (web stores) to mobile retail applications?

Rationale:

Shopping activities and communication have shifted to be more mobile-based as a result of the rapid development and widespread use of smart mobile devices (Yunita, 2019). Retail apps are a significant purchasing channel due to their widespread mobile adoption as well as their inherent advantages. Around 51% of people in the globe have access to mobile internet, while more than 67% of people worldwide own a mobile phone (GSMA, 2021a).

Rationale: Through this RQ, fields or systems that are widely researched and targeted as case studies for the implementation of automatic RE will be known so that the opportunity for the application of automatic RE for future research will be revealed.

### Study Selection

After collecting relevant studies, then evaluating the content. Then a screening of duplicate titles was carried out so that there were 46. Inclusion and exclusion criteria were applied to papers remaining in the evaluation (see Table 1). All papers that are not in English or not in Indonesian are rejected. Papers that were disqualified included those that did not detail how customers perceive online shopping apps. Using this strategy, the list was reduced to 30 papers.

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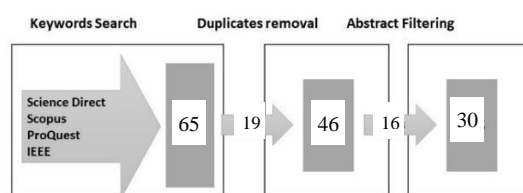


Figure 2. Screening Phases and Number of Selected Papers

### Quality Assessment

The quality of each source can be used to determine whether it is appropriate to the research topic. Each source is ranked in relation to each source, with 1 indicating the best possible match, 0.5 the best partial match, and 0 the worst possible mismatch. Then the author classifies each paper based on the Research Question by adding up the scores/ranks and the minimum score is 3.5 (Arazy, 2017). So that the number of final papers in this SLR is 15 papers that are relevant and meet quality standards.

Table 2. Classification Scheme

RQ	Classes / Categories
RQ1	perceived ease of use, perceived usefulness, and behavioural intention to use, repurchase intention in online shopping consumer
RQ2	Mobile retail application, switching intention

### Data Extraction and Synthesis

In 30 papers, data extraction will be carried out based on previously formulated classifications. Excel tables are used to facilitate the extraction and mapping process. Based on the finals table, the number of papers related to 4 aspects in online shopping application, namely perceived ease of use, perceived usefulness and behavioral intention to use, integration of the TAM with other frameworks.

## RESULT

Based on the research questions that have been defined, the results and analysis of the SLR are compiled in this section. Based on the screening process, there were 30 relevant papers distributed within 4 years of publication, namely from 2012 to 2022. This section will discuss research findings and discussion based on RQ.

### RQ1: What factors affect of technology acceptance model towards online shopping site and application in the business sector?

#### Perceived Ease of Use towards Online Shopping Applications

Perceived usefulness has a substantial indirect impact on intention via perceived ease of use (Eriska, 2018). In this research, there is a considerable relationship between perceived usefulness and aim. Because of the inconsistent roles played by these factors, this study uses perceived usefulness as a mediating variable in the link between ease of use and purchase intentions. In this research, only factors that influence users' intentions to use transportation applications are discussed, including perceived convenience and perceived usefulness. It is proven by the hypothesis that perceived convenience influences users' intentions to use transportation applications, while trust has no effect on users' intentions to use transportation applications. However, the weakness of this research is that there is no detailed discussion about other factors of perceived usefulness besides trust that can influence users' intentions to use transportation applications. The same is true of research conducted by Damayanti (2019), perceived usefulness does not have a favorable and significant impact on purchase intentions, claims Damayanti.

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In contrast to Eriska and Damayanti's research, Singh (2016) Esyeria (2017) and Suleman's (2018) research shows that perceived benefits and risks do not have a significant influence on purchasing decisions, but the appearance of advertising and the level of trust have a significant influence. The research concludes that these variables together have a significant influence on purchasing decisions. The researchers suggest that online stores increase consumer trust by providing genuine testimonials and information about how to transact and track deliveries. They also recommend including other variables such as store image and price in future research. The frequency of use and interaction between the users and the system can also indicate ease of use. The research (Putro, 2015) discusses the factors that influence customers' purchasing intentions when online shopping at Zalora Indonesia. The research does not mention any limitations explicitly. However, potential limitations could include the following:

1. The study is limited to Zalora Indonesia, so the findings may not be applicable to other online shopping platforms or to Zalora in other countries.
2. The sample size of 150 online consumers may not be representative of the entire population of online shoppers.
3. The study relies on self-reported data, which can be subject to bias.
4. The research does not consider other potential factors that could influence purchase intention, such as price, product quality, or customer service.
5. The study does not explore the potential impact of demographic factors like age, gender, or income on purchase intention.

In addition to perceived usefulness and ease of use, perceived risk is another factor that can affect online shopping decisions (Guritno, 2013). While this research provides valuable insights into the factors influencing attitudes towards online airline ticketing usability, it does have some limitations. Firstly, the research is limited to Indonesian consumers. This may limit the generalizability of the findings to other cultural or geographical contexts. Secondly, the research relies on self-reported data collected through questionnaires. This method may be subject to response bias, where respondents may not accurately report their attitudes or behaviors. Thirdly, the research does not explore other potential factors that may influence attitudes towards online ticketing, such as personal characteristics or previous online shopping experiences. Lastly, the research does not address the potential impact of technological changes or advancements on attitudes towards online ticketing. As technology and online platforms continue to evolve, consumer attitudes and behaviors may also change. Therefore, future research could aim to address these limitations by expanding the sample to include consumers from different cultural or geographical contexts, using other data collection methods to validate the findings, exploring other potential influencing factors, and considering the impact of technological changes or advancements.

### **Perceived Usefulness towards Online Shopping Applications**

The perceived usefulness of a system determines its adoption and user behavior. If a technology provides the customer with the value they need, it can be said to be successful. Whether the system is simple to use or not, users will still utilize it if it is beneficial (Makmor, 2019). The present study identified two main limitations. The first limitation is that the study is based on students' responses, which may not accurately represent the responses of real consumers. Therefore, future researchers should collect responses from real consumers to generalize the results. The second limitation is that only 100 respondents participated in the study, which may not be representative of the entire population. Future studies should therefore increase the number of respondents to improve the representativeness of the results. Perceived usefulness has a significant impact on consumers' online purchase decisions, claim (Mandilas, 2013), (Guritno, 2013). This research provides valuable insights into the factors influencing online shopping intentions, with a focus on perceived usefulness, self-efficacy, and perceived ease of use. However, it lacks a comprehensive analysis of the potential risks and security concerns associated with e-commerce, which have been identified as significant factors affecting user acceptance of online shopping. Moreover, the research does not consider the potential impact of gender differences on online shopping behavior, which has been highlighted in previous studies. The research also does not explore the role of user interface features in influencing overall ease of use and personalization, which can significantly affect online shopping intentions. Finally, the research does not delve into the potential

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impact of non-functional motives for online shopping, such as enjoyment, which can also influence online shopping intentions.

The idea that perceived usefulness can affect consumers' online purchase decisions is backed by (Singh, 2016), (Cho, 2015). According to the research from (Suhir, 2014), the variable of perceived usefulness has a partial and considerable impact on consumers' decisions to shop online. The research have focused on the influence of various factors such as trust, perceived benefits, perceived ease, and perceived risk on online purchasing decisions. However, there seems to be a deficiency in research on the influence of other potential factors such as cultural influences, social influences, personal preferences, and technological literacy on online purchasing decisions. Furthermore, the researches have primarily focused on the Indonesian context, and there is a deficiency in research on the influence of these factors in different cultural and geographical contexts. This finding in this research is supported by the fact that perceived usefulness has been shown to have a large and favorable impact on consumers' decisions to shop online (Yunita, 2019). The author utilizes the following variables to measure perceived usefulness in this study: speed of work, job performance, increase productivity, effectiveness, ease of task, and useful. This research has several limitations. Firstly, the study was conducted within a specific community, the Buka Lapak Community in Ponorogo, which limits the generalizability of the findings. Future research should consider using a more diverse sample to allow for broader applicability of the results. Secondly, the research only considered three variables - risk perception, trust, and security - in influencing online purchasing decisions. There may be other factors, such as price, product quality, and customer service, that could also significantly impact online purchasing decisions. Future research should consider including these variables to provide a more comprehensive understanding of online purchasing behavior. Lastly, the research methodology used, including validity and reliability tests, multiple linear regression, and r square, may have its own limitations. Future research could consider using other statistical methods to validate and complement the findings of this study.

### **Behaviour Intention to Use towards Online Shopping Applications**

Using an online shopping application has been proven to directly affect behavioral intention in a number of studies. Technology users' intended conduct is described as attitude toward use (Mohamed, 2014). The research identified a gap in the literature regarding the continuance of online shopping. It also noted that research focusing on the role of individual attributes in online shopping continuance is sparse. However, the study itself has several limitations. It used a cross-sectional, static survey design and the sample was drawn using a convenience approach in one country, which means the findings cannot be generalized to other countries. The study also did not consider different demographic groups as it aimed to examine the psychographics, perceptions, attributes, and experience of online shoppers. Future research should consider longitudinal designs that capture temporal aspects and conducting qualitative interviews to triangulate findings is also recommended.

The positive or negative attitudes that users have toward using new technology are reflected in their attitude toward use. Depending on the technology, it could be either positive or negative (Yi Jin Lim, 2016). While the research provides valuable insights into the factors influencing online shopping behavior, there are a few potential deficiencies that could be addressed in future studies:

1. The research does not consider other potentially influencing factors such as trust, security, and privacy concerns, which are crucial in the context of online shopping.
2. The study uses self-reported measures, which may be subject to social desirability bias. Future research could employ more objective measures or triangulate self-reported data with other data sources.
3. The research does not explore the potential moderating or mediating effects of other variables, such as individual differences in personality or cultural factors. Future studies could incorporate these aspects to provide a more comprehensive understanding of online shopping behavior.
4. The study does not provide a longitudinal perspective, which could offer insights into how online shopping behavior changes over time. Future research could adopt a longitudinal design to address this gap.
5. The study does not explore the role of mobile shopping, which is a significant trend in the e-



commerce sector. Future research could investigate this aspect to provide a more comprehensive understanding of online shopping behavior.

6. The research does not consider the role of social media in influencing online shopping behavior. Future studies could explore this aspect to provide more current insights.

A real state for using that specific technology is described as having a good attitude (Juniwati, 2014). According to (Moshrefjavadi, 2012), a good attitude regarding online purchasing influences a consumer's behavior intention. Additionally, several research supported and showed a link between consumers' favorable attitudes and their behavioral intention to utilize technology for online purchasing.

### Repurchase Intention in Online Shopping Consumer

Sajid (2022) investigates the evolving trends of consumers' online purchasing behavior during the COVID-19 pandemic in Pakistan. The study employs the Technology Acceptance Model (TAM) and Theory of Planned Behavior (TPB) to analyze the influence of perceived benefits, perceived ease of use, perceived enjoyment, and social influence on consumers' intention to purchase online. It also examines the moderating role of gender and payment mode. The findings reveal that perceived benefits, perceived ease of use, perceived enjoyment, and social influence significantly and positively impact consumers' intention to purchase online. However, gender and payment mode do not significantly moderate the relationship between perceived ease of use and behavioral intention, and between behavioral intention and actual behavior, respectively. The results have implications for Pakistani businesses, marketers, and e-traders to better understand and cater to the changing online buying behavior of consumers. While this research provides valuable insights into the factors influencing online buying behavior in Pakistan during the COVID-19 pandemic, it has some limitations. First, the study is limited to the context of Pakistan, and the findings may not be generalizable to other countries or regions. Second, the study focuses on perceived benefits, perceived ease of use, perceived enjoyment, and social influence as predictors of online buying behavior, but there may be other factors not considered in this study that could influence online buying behavior, such as trust in online platforms, privacy concerns, and product quality. Third, the study uses a cross-sectional design, which does not allow for the examination of changes in online buying behavior over time. Lastly, the study relies on self-reported data, which may be subject to social desirability bias. Future research could address these limitations by conducting comparative studies in different countries, considering additional factors influencing online buying behavior, using a longitudinal design, and employing other data collection methods to validate self-reported data.

The Theory of Planned Behavior (TPB) on online shopping behavior, focusing on the impact of attitudes, subjective norms, and perceived behavioral control on the intention to shop online. The research reveals that both attitudes and perceived behavioral control significantly influence the intention to shop online, which in turn impacts online shopping behavior. However, subjective norms were found not to have a significant impact on the intention to shop online. The study also highlights the low awareness of e-business in Indonesia and the barriers that prevent people from shopping online (Sutisna, 2022). The deficiencies in this research could potentially include:

1. **Sample Size:** The research sample consists of only 100 respondents who shopped in e-business X. This small sample size may not be representative of the larger population, limiting the generalizability of the findings.
2. **Limited Scope:** The research focuses only on e-business X. The findings may not apply to other e-businesses or traditional retail settings.
3. **Subjective Measures:** The research relies on questionnaires for data collection. This method is subject to response bias and may not accurately reflect actual behaviors.
4. **Theoretical Limitations:** The research is based on the Theory of Reasoned Action and the Theory of Planned Behavior. These theories may not fully capture the complexity of online shopping behavior.
5. **Lack of Practical Implications:** The research does not provide clear practical implications or recommendations based on the findings.

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In other research on the factors that influence a customer's repurchase intention among others the perceived reliability, privacy, web design, and customer service. The findings suggest that these factors have a significant and positive impact on repurchase intention. Moreover, the perception of customer service mediates the effect of web design on repurchase intention. The study, conducted on Shopee users in Denpasar, underscores the importance of fostering positive perceptions of online platforms to enhance repurchase intention. However, the study's scope is limited to Denpasar, indicating a need for further research to explore other variables and factors (Miandari, 2021).

## **RQ2: What factors cause customers to move from online shopping applications (web stores) to mobile retail applications?**

### **Mobile Retail Applications**

Several factors influence customers' preference for mobile shopping over online stores. Firstly, the convenience and accessibility of mobile shopping applications are significant factors. Mobile apps offer the ability to shop anytime, anywhere, which is particularly appealing to today's busy consumers. Secondly, mobile apps often provide a more personalized shopping experience. They can tailor product recommendations and promotions based on the user's browsing history and past purchases, enhancing the relevance of the shopping experience. Thirdly, the entertainment and socialization aspects of mobile apps can also contribute to their appeal. Many apps incorporate features that make shopping more enjoyable and engaging, such as interactive product displays and social sharing options. Lastly, the rise of smartphones and their increasing functionality have also played a significant role in the shift towards mobile shopping (Grob, 2018), (Greene, 2014). This research has several deficiencies. Firstly, the relative explained variance for attitude, behaviour intention, and usage behaviour suggests that there may be other relevant factors that affect m-shopping acceptance that were not included in this study. This indicates that the research model could be extended in future studies to include both drivers and barriers of acceptance, which could strengthen the model's explanatory power. Secondly, the study does not account for the unobserved data heterogeneity. This could be addressed in future research by using methods such as FIMIX-PLS to account for unobserved heterogeneity. Lastly, while the study provides strong support for the causal relationship between attitude, intention, and behaviour, it does not sufficiently characterize different m-shopper types. This could be addressed in future research by including a more diverse sample of m-shoppers.

### **Opportunity for Future Research**

To measure the intention to adopt an online shopping application (web store), the TAM model had been reviewed and augmented with new structures or components. The most prevalent components included in the TAM model are shown in Table 3. This primarily relies on the 15 online shopping application studies that were examined and used TAM as its theoretical framework. Technology Acceptance Model (TAM) to include variables such as trust, perceived enjoyment, and attitude. The study finds that these variables have a significant impact on attitude towards online shopping, intention to shop online, and customer satisfaction (Singh, 2016). The decision to shop online is influenced by several factors. Trust plays a significant role in consumer decision-making in electronic commerce. Perceived ease of use and usefulness also play a crucial role in the decision to shop online. Monisa suggests that the perception of ease and usefulness of an online public access catalog (OPAC) can influence the decision to use it (Suh, 2015). Similarly, Adityo found that trust, ease, and information quality influence online purchase decisions on the Kaskus site (Parag, 2018). Previous research by Suhir et al. concluded that risk perception and benefits can be considered as independent variables that significantly influence online purchase decisions (Suhir, 2014). In the context of e-commerce, Gefen discusses the importance of customer loyalty, which can be influenced by the overall online shopping experience.

Finally, the decision to shop online can also be influenced by the level of trust in the product and the alignment of the product with the consumer's wants or needs (Puspitasari, 2017). High trust in the product and the suitability of the product with the consumer's desires or needs can lead to repeat purchases and recommendations to others.

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Perceived usefulness in the context of social commerce refers to the degree to which a person believes that using a particular system would enhance his or her job performance (Makmor, 2019). In the context of online shopping, perceived usefulness could refer to the belief that using a particular online shopping platform would make shopping more efficient or effective.

According to the Technology Acceptance Model (TAM), perceived usefulness, along with perceived ease of use, are key determinants of user acceptance and usage of technology. In the context of social commerce, perceived usefulness could influence a consumer's decision to engage with and purchase from a social commerce platform. For instance, if consumers perceive that a social commerce platform provides useful information, such as product reviews or detailed product descriptions, they may be more likely to use the platform for their shopping needs (Suleman, 2018).

Similarly, if consumers perceive that a social commerce platform makes the shopping process more efficient, such as by providing personalized product recommendations or streamlined checkout processes, they may be more likely to use the platform (Cho, 2015). However, perceived usefulness is not the only factor that influences consumer behavior in social commerce. Other factors, such as trust in the platform, perceived ease of use, and the quality of the user experience, can also play a significant role (Yunita, 2019).

Online shopping behavior and purchase intention are influenced by several factors. According to Suh et al, (2015), buying interest is always related to consumers' plans to buy certain products that are needed at a certain time. This interest is strongly influenced by consumer experiences. Utami and Rahyuda (2019) identified four indicators in measuring online purchase interest: future purchase plans, intention to purchase recommended e-vouchers, intention to buy recommended products, and higher purchase intention after using a specific app.

In conclusion, online shopping behavior and purchase intention are influenced by a variety of factors, including consumer attitudes, perceived usefulness, perceived risk, and ease of use of the online shopping platform. These factors can either encourage or discourage consumers from making online purchases (Grob, 2018), (Greene, 2014), (Zhang, 2012), (Nielsenwire, 2012), (Monisa, 2012), (Adityo, 2011), (Utami, 2019), (Abdullah, 2017), (Aditya, 2016), (Al Khattab, 2015), (Hogail, 2018)

## CONCLUSION

In conclusion, 30 papers from 2012 to 2022 were examined for this study. Based on the themes obtained from systematic literature analysis, this study effectively identifies the impact of the TAM model on online shopping applications in the business sector. Thematic analysis is used to find components, understand their significance, and group them into appropriate themes. This article fills a theoretical gap in the literature regarding the application of the TAM model in online shopping applications. The factors discovered provide a new perspective on the focus of the research and set a framework for further research. It is necessary to carry out a systematic review of subjective norm factors such as social influence and the use of other models that can be integrated with TAM to find out other factors that have an impact on the online shopping application technology acceptance model which ultimately makes customers have the intention to repurchase. The findings of this research are useful for businesses and online shopping app developers who want to provide good customer service and meet their customers' expectations.

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