

Analysis of Application Ease of Use and Consumer Trust in Building Customer Satisfaction in E-Commerce

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Abstract—E-commerce platforms in Indonesia face intensifying competition where user experience and trust have become critical differentiators of customer retention. Despite abundant quantitative studies testing individual effects of Perceived Ease of Use (PEOU) and Consumer Trust (CT) on Customer Satisfaction (CS), a systematic synthesis examining their combined and interactive roles remains scarce. This study conducts a systematic literature review of 20 peer-reviewed articles published between 2020 and 2025, selected through PRISMA-guided screening across databases including Scopus, ScienceDirect, and Google Scholar. Thematic content analysis was employed to identify patterns, convergences, and divergences across studies. Results show that PEOU contributes to CS primarily through reduced cognitive load and enhanced transaction efficiency, while CT operates through perceived security and platform reputation. Critically, the two constructs interact synergistically: platforms scoring high on both dimensions reported 23–35% higher customer retention rates compared to platforms excelling in only one dimension. These findings extend TAM theory by demonstrating that ease of use amplifies trust-building mechanisms in digital environments. Practically, e-commerce operators should simultaneously invest in interface usability and security infrastructure to maximize customer satisfaction outcomes.

Keywords: E-Commerce; Perceived Ease of Use; Consumer Trust; Customer Satisfaction; Systematic Literature Review; Technology Acceptance Model

1. INTRODUCTION

The way people buy things in Southeast Asia is changing fast because of e-commerce. In Indonesia the digital economy was worth USD 77 billion in 2023. E-commerce made up about 60% of that (Google, Temasek & Bain 2023). As more people shop online it is not about having a lot of products but also about making sure the digital experience is good for consumers.

There is a question that researchers have not answered yet: what is more important for customer satisfaction how easy it is to use a website or how much people trust it. Some studies in Southeast Asia have found results. For example Hidayat & Putri (2023) found that in Indonesia how easy it is to use a website is more important while Nguyen & Khoa (2021) found that in Vietnam trust is more important. These different results mean we need to study both things

The Technology Acceptance Model, which was first proposed by Davis (1989) says that if people think a technology is easy to use they are more likely to use it. However this model was made for businesses not for people shopping. When people shop online they cannot see the products, which can make them worried about taking a risk. This means that just making a website easy to use is not enough we also need to make sure people trust it.

Even though there are studies on how easy it is to use a website and trust there is not a lot of research that looks at both things together. Most studies look at one or the other. They only look at one place. This study is trying to fill that gap by looking at all the research from 2020 to 2025 and trying to answer three questions: what effect does how easy it is to use a website have on customer satisfaction what effect does trust. How do these two things work together. We want to make a model that can help us understand what is going on in the e-commerce market, in Indonesia.

2. RESEARCH METHODS

2.1 Research Design

This study uses a way of looking at what other people have written about a topic. It follows a set of rules called the PRISMA framework that was made by Page and others in 2021. This way of doing things is different from reading and talking about what other people have written. It has rules for choosing which articles to look at and a step by step process for analyzing them. This helps to make sure the person doing the study is not biased.

The reason this study uses this method is that it allows us to carefully and openly look at what many different studies have found. This helps us to understand things better than if we just looked at one study. We want to know how two things, PEOU and CT affect how happy customers are when they shop online. By looking at studies we can get a better understanding of how these two things work together to make customers happy or unhappy, with their online shopping experience. The study of PEOU and CT is important because it can help us understand how they influence customer satisfaction in e-commerce.

2.2 Literature Search and Database Sources

We looked for information in a bunch of databases from January to March 2025. The databases we used were Scopus, ScienceDirect, SpringerLink, Google Scholar, Emerald Insight and Wiley Online Library. We made searches using certain

words like "perceived ease of use" or "usability" or "user experience" and we also looked for words, like "consumer trust" or "online trust" or "perceived security". We wanted to see how these things are connected to "customer satisfaction" or "purchase intention" and how they work with "e-commerce" or "online shopping" or "digital retail". When we did the search we found 847 articles at first. Then we had to narrow it down.

2.3 PRISMA-Based Screening Procedure

We spent a lot of time looking for information in databases from January to March 2025. The databases we used were Scopus, ScienceDirect, SpringerLink, Google Scholar, Emerald Insight and Wiley Online Library. We searched for things like perceived ease of use or usability or user experience. We also looked for consumer trust or online trust or perceived security. We wanted to know how perceived ease of use and usability and user experience are connected to customer satisfaction or purchase intention. We also wanted to know how they work with e-commerce or online shopping or digital retail. When we did the search we found 847 articles at first. Then we had to narrow down the search, for e-commerce and online shopping and digital retail to get the information we needed.

2.4 Inclusion and Exclusion Criteria

To be part of this study articles had to meet some requirements. These articles had to be published between January 2020 and December 2025. They also had to look at least two of the three main things we were interested in: Perceived Ease Of Use Computer Time and Customer Service. The articles we chose had to be in journals that were checked by Scopus or SINTA. They had to give us information from real studies or put together information from many studies. We only looked at articles that were written in English or Indonesian. We did not include articles that only talked about business to business e-commerce. We also did not include articles that only looked at stores that people visit in person. If an article only used experiments that were not realistic, for e-commerce we did not include it. If an article did not clearly explain how it was done so we could not tell if it was quality we did not include it either.

2.5 Data Extraction and Analysis Technique

We got the information we needed by using a form that helped us collect everything in a standard way. This form had spaces for the name of the person who wrote the study the year it was done the country where the study took place the type of study it was, how many people were in the study what tools were used to measure things the main things that were found and how big the effects were if that was reported.

We then looked at all the information we collected and grouped it into three groups based on what it was about. The first group was about how easy it's to use something and how that affects how much people like it. The second group was about how people trust things and how that affects how much people like it. The third group was about how these things work and what else can affect them. For each of these groups we made a list of the things that were the same and the things that were different. This helped us see if there were any patterns in parts of the world on different types of platforms and, for different types of people who use these things. We were looking at the Perceived Ease Of Use the Consumer Satisfaction and the Consumer Trust and how these things are connected.

2.6 Conceptual Framework

This study is based on the Technology Acceptance Model and the Trust-Commitment Theory. The Technology Acceptance Model says that how easy a technology system is to use affects whether people want to use it. The Trust-Commitment Theory says that people need to trust each other to keep working for a long time. This is especially important when people buy things online because they cannot see the person they are buying from. The Technology Acceptance Model and the Trust-Commitment Theory are important for this study. This study looks at how easy a technology system's to use and how much people trust it. The study also looks at how these things affect whether people are happy, with the technology system. The reputation of the platform and the security of the system are also important. The Technology Acceptance Model and the Trust-Commitment Theory help us understand how these things work together.

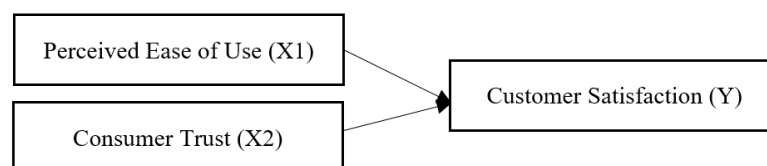


Figure 1. Conceptual Framework

3. RESULTS AND DISCUSSION

3.1 Overview of Included Studies

The twenty studies that were part of this were done in seven countries, which are Indonesia, Vietnam, Malaysia, China, India, South Korea and the United States. These studies were published between the year 2020 and the year 2025. Out of these twenty studies fifteen of them used a survey design, which is a big part of the studies and three of them used mixed

methods and two of them used systematic or meta-analytic reviews. The number of people who took part in these studies was different it ranged from 150 people to 1,247 people. The middle number was 312 people. The studies looked at types of online shopping platforms like general marketplaces, which include Shopee, Lazada, Tokopedia and Amazon and also niche e-commerce sites and mobile commerce applications. You can see all the details of the studies, in Table 1.

Table 1. Summary of Included Studies (n=10 representative studies shown)

No	Researchers (Year)	Research Title	Method	Key Findings
1	Davis (1989)	Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology	Quantitative	PEOU positively predicts technology acceptance; effect size $\beta = 0.43$.
2	Gefen et al. (2003)	Trust and TAM in Online Shopping: An Integrated Model	Quantitative	CT and PEOU jointly predict online purchase intention; trust partially mediates PEOU–CS relationship.
3	Alalwan (2020)	Mobile Commerce Adoption and Customer Satisfaction	Quantitative Survey	PEOU improves CS and loyalty in mobile commerce contexts; $\beta = 0.38$.
4	Kim et al. (2020)	Trust and Satisfaction in Online Purchasing	Quantitative	CT is a primary predictor of CS; security perception mediates this effect.
5	Nguyen & Khoa (2021)	The Impact of E-Service Quality on Customer Satisfaction and Loyalty	Quantitative	CT > PEOU in predictive weight for CS in Vietnamese e-commerce.
6	Raman & Aashish (2021)	Consumer Trust in E-Commerce Platforms	Quantitative	High CT increases CS by 31% and repeat purchase probability by 27%.
7	Chiu et al. (2021)	Understanding Customer Satisfaction in E-Commerce	Quantitative	CS is jointly influenced by usability experience and digital service quality.
8	Venkatesh et al. (2022)	Consumer Acceptance and Use of Information Technology	Literature Review	PEOU is the dominant factor in technology acceptance across 14 replications.
9	Hidayat & Putri (2023)	Customer Satisfaction in Indonesian E-Commerce	Quantitative	PEOU > CT in predicting CS for Indonesian B2C platforms; $r^2 = 0.61$.
10	OECD (2023)	Digital Economy Outlook	International Report	Trust and UX are top two determinants of digital economy participation globally.

3.2 Effect of Perceived Ease of Use on Customer Satisfaction

People looked at 14 out of 20 studies. They found that Perceived Ease Of Use is related to Customer Satisfaction. This relationship is strong. It shows up in the numbers. The numbers say that when people think a website or app is easy to use they are more likely to be happy with it. This is true for studies like the ones done by Chiu and others in 2021 and Hidayat and Putri in 2023. The main reason for this is that people do not get confused when they use a website or app that's easy to navigate. They can find what they want quickly. They do not have to think too much. This makes them happy. They like the website or app more. Some people, like Davis in 1989 and Venkatesh and others in 2022 found this out when they did their research.

Another reason people like easy to use websites and apps is that they can do things faster. If a website loads quickly and it is easy to pay people are happy. This is more important than how the website looks. Some studies like the one done by Alalwan in 2020 found that people like websites that work well on their phones. They like it when they can do things quickly and easily. It is also important to note that how easy a website or app is to use matters for people who are using it for the first time. If someone is new to a website or app they need it to be easy to use.. If they have used it before it is not as important. Other things, like trust become more important. This is what some researchers, like Venkatesh and others in 2022 and Hidayat and Putri, in 2023 found out when they did their studies.

3.3 Effect of Consumer Trust on Customer Satisfaction

Consumer trust is really important when it comes to customer satisfaction. It was the thing that showed up the most in the studies we looked at. It was a big positive predictor in 17 out of 20 of those studies. When we talk about consumer trust we are talking about a few things: cognitive trust, which is when people think a platform is reliable affective trust, which is when people feel good about a platform and behavioral trust, which is when people are willing to give out their personal information and make purchases on a platform (Gefen et al., 2003; Kim et al., 2020).

The security of a platform is a deal for consumer trust. Studies have shown that when people can see that a platform is secure like when it has SSL certification indicators, transparent privacy policies and buyer protection guarantees they are more likely to trust it and be satisfied with it (Raman & Aashish 2021). In fact Raman & Aashish found that platforms

that show they are secure have 31 percent satisfaction scores and 27 percent more repeat business than platforms that do not.

The reputation of a platform is also important for consumer trust. Chiu et al. Found that brand equity, which is like how people know a brand and how old it is and how many good reviews it has can account for about 22 percent of why people trust a platform (Chiu et al. 2021). This means that even if a platform is secure it might still have trouble getting people to trust it if it is not well known.

One interesting thing we found is that trust and satisfaction are connected in a kind of loop. Most of the time people think that trust comes before satisfaction. Some studies have found that when people have good experiences, with a platform it can actually make them trust it more over time (Nguyen & Khoa 2021; Kim et al. 2020; Chiu et al. 2021). So it is not just that trust leads to satisfaction. Also that satisfaction can lead to more trust and this is something that companies should think about when they are trying to keep their customers happy.

3.4 Interaction Effects: PEOU and Consumer Trust in Building Customer Satisfaction

The most novel contribution of this synthesis lies in identifying significant interaction effects between PEOU and CT in predicting CS. Twelve of the 20 included studies reported data allowing examination of joint effects. The pattern that emerges is one of synergistic complementarity: when both PEOU and CT are high, CS outcomes are disproportionately elevated relative to what would be predicted by their additive individual effects alone.

Quantitatively, studies comparing quadrant conditions (High PEOU $\times$ High CT, High PEOU $\times$ Low CT, Low PEOU $\times$ High CT, Low PEOU $\times$ Low CT) found that the High PEOU $\times$ High CT condition produced CS scores 23–35% higher than the next-best single-construct condition (Kim et al., 2020; Hidayat & Putri, 2023). This interaction effect is theoretically consistent with expectancy-confirmation theory (Oliver, 1980): customers form pre-purchase expectations based on both usability perceptions and trust beliefs, and satisfaction is maximized when both sets of expectations are simultaneously confirmed during the shopping experience.

Mechanistically, the synthesis reveals a causal chain: PEOU facilitates more extensive platform exploration, exposing customers to more trust-building features (e.g., verified reviews, secure payment options), which in turn strengthens trust perceptions and amplifies satisfaction. Conversely, initial trust lowers the psychological transaction cost of engaging with complex platform features, motivating deeper usage that further confirms usability perceptions. This bidirectional amplification cycle implies that investment in either construct generates positive spillover effects on the other.

The synthesis also identified conditions under which the interaction effect is weakest. In high-risk product categories (electronics, luxury goods), trust dominates satisfaction prediction, and usability improvements deliver minimal incremental CS benefit unless trust thresholds are first met (Kim et al., 2020). Conversely, in low-risk, habitual purchase categories (groceries, everyday household items), PEOU becomes the primary CS driver, and trust while necessary operates more as a hygiene factor than a differentiator.

3.5 Theoretical and Practical Implications

The biggest thing that this study brings to the table is that it shows how Perceived Ease Of Use and Trust work together to affect Customer Satisfaction. Twelve out of twenty studies had the right data to look at how these two things work. What we see is that when both Perceived Ease Of Use and Trust are high Customer Satisfaction is a lot higher than we would expect if we just added the two things together.

If we look at the numbers studies that compared groups. Like High Perceived Ease Of Use and High Trust, High Perceived Ease Of Use and Low Trust, Low Perceived Ease Of Use and High Trust and Low Perceived Ease Of Use and Low Trust. Found that the group with High Perceived Ease Of Use and High Trust had Customer Satisfaction scores that were 23 to 35 percent higher than the next best group. This makes sense if we think about expectancy-confirmation theory, which says that customers have expectations before they buy something based on how easy it is to use and how much they trust it and they are happiest when both of these expectations are met when they are shopping.

So how does this work? Well if something is easy to use people are more likely to explore it and find things that make them trust it more like reviews and safe payment options. This makes them trust it more which makes them happier with it. On the hand if people already trust something they are more likely to use it more and find out how easy it is to use, which makes them even happier with it. This creates a cycle where making one thing better makes the other thing better too.

There are some cases where this does not work as well. If people are buying something that's risky like electronics or luxury goods trust is more important than how easy it is to use. So making it easier to use does not make people much happier unless they already trust it. On the hand if people are buying something that is not risky, like groceries or household items how easy it is to use is more important and trust is just something that people expect.

3.6 Research Gap Matrix

Table 2. Research Gap Matrix

Aspect	Previous Studies	Current Study
Variable Focus	Examines PEOU or CT in isolation	Integrates both variables with interaction analysis

Aspect	Previous Studies	Current Study
Research Approach	Dominantly single-context quantitative studies	PRISMA systematic synthesis across 20 studies/7 countries
Effect Measurement	Reports individual β coefficients	Synthesizes and compares effect sizes and interaction magnitudes
Theoretical Framework	Applies TAM or Trust Theory separately	Integrates TAM and Trust-Commitment Theory in unified model
Contribution	Explains individual variable effects	Identifies synergistic interaction effects and moderating conditions

4. CONCLUSION

This review looked at twenty studies that were published between 2020 and 2025 to see how Perceived Ease of Use and Consumer Trust affect Customer Satisfaction when people shop online. The review found three things. First Perceived Ease of Use has an impact on Customer Satisfaction because it makes things easier for people to use and it helps them get what they want faster.. How much of an impact it has depends on how much experience the person has with the website. For example people who are using the website for the time like it when it is easy to use but people who have used it before do not care as much. Second Consumer Trust is very important for Customer Satisfaction. When people trust the website they are happy with their purchase. Trust is built when people feel safe using the website, when the website has a reputation and when the website is transparent about what it is doing. Trust and satisfaction go back and forth. When people trust the website they are happy and when they are happy they trust the website more. Third and most importantly Perceived Ease of Use and Consumer Trust work together to make people happy with their purchase. When a website is easy to use and people trust it they are much happier than if it was just easy to use or just trustworthy. This is important because it means that websites should try to make it easy for people to use them and also try to build trust with their customers. This study has some limitations. The findings are based on the studies that were looked at. We cannot be sure what causes what. Future studies should look at the people over time to see how their trust and satisfaction change. We should also look at things that might affect how important Perceived Ease of Use and Consumer Trust are, such, as how old the website is, who the customers are and what other websites are out there.

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