

E-Commerce Success Factors: PLS-SEM Approach

Muntaha¹, Rudi Triadi Yulianto², Girang Permata Gusti³

Sekolah Tinggi Ilmu Ekonomi Boedi Oetomo^{1,2,3}

Jl. Ampera No.GG 1-2, Sungai Bangkong, Kota Pontianak, Kalimantan Barat 78116

Correspondence Email: b3081201001@student.untan.ac.id

ORCID ID: 0000-0001-5720-7289

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ABSTRACT

The current research gap on e-commerce is still relatively incomplete, with predictors in the research model still relatively weak in influence. The purpose of this research is to empirically test the role of the 'satisfaction' variable, whether it is able to fully mediate the relationship between predictors and e-commerce success variables. This research chose the location in the province of West Kalimantan, on the grounds that this province is one of three provinces in Indonesia which has a direct land border with a neighboring country (Malaysia). This research uses the WarpPLS 7.0 analysis tool, arguing that this research is more focused on exploring the 'satisfaction' variable which functions as a mediating variable to 'try' to cover the gaps of previous research. The results of this study found that the satisfaction variable has a significant influence in mediating the relationship between Website service quality, Customer Support System, Electronic Word of mouth and Personalization on E-Commerce success in MSMEs in West Kalimantan province. Consumer satisfaction in being an important factor for business managers, consumers who have high satisfaction will have a positive impact on MSMEs, so that the potential to increase sales turnover becomes bigger and better.

Keywords: Website service quality, Electronic Word of mouth, E-Commerce success.

INTRODUCTION

Research gaps were found, in the factors that influence the success of e-commerce (Sharma & Aggarwal, 2019), including (1) the service quality of the website, (2) consumer support systems, (3) electronic Word of Mouth, and (4) personalization, where these five components still have a relatively weak level of influence on the success of e-commerce, which should logically have a strong degree of influence. On this basis, the authors try to cover the gap in this research by offering a research model by including a mediating variable with the name satisfaction. It is hoped that the inclusion of this mediating variable will be able to fully link the influence between the four independent variables with the success of e-commerce.

E-commerce comes from the rapid development of the internet and technology and has led to many online sellers. Electronic commerce or what we know as e-commerce is a business model that involves buying and selling goods, such as online sellers, services, or transmitting funds or data, through an electronic network facilitated by the internet.

In general, e-commerce is divided into 4 types, including:

1. Business to business (B2B). Electronic transactions of goods or services are carried out between companies.
2. Business to consumer (B2C). Electronic commerce involves businesses and consumers.
3. Consumer to consumer (C2C). Transactions are carried out between consumers and consumers which include all electronic transactions of goods or services.
4. Consumer to business (C2B). Electronic commerce is in which consumers (end-users) provide products or services to a company.

Problems (Nugraha, 2021)

There are at least four problems with e-commerce today:

- (1) Cash on delivery is bad for online retailers' business. Cash on delivery disrupts the flow of online business. Carrying large amounts of cash can cause many problems, including: B. Theft, extra costs, cash flow restrictions, work delays. Courier services usually send payments to sellers in as little as two weeks. In addition to logistics services, Seller will also pay for the collection and delivery of any cash collected. To avoid problems, additional logistics are required. On the other hand, removing the COD system from your payment options is neither an option nor the right choice.
- (2) difficult to maintain customer loyalty; Customer loyalty is the essence of any successful business. The problem is in the world of e-commerce. Most people like to explore virtual worlds. Given that most Indonesian consumers are looking for relatively cheap and good quality products, this is why they are looking and comparing. If you do, other sellers or other online stores may be able to offer the same product at attractive discounts. This makes the competition more serious. And, of course, customers research thoroughly before purchasing a product.
- (3) E-commerce trends are constantly changing. E-commerce business methods and strategies are never static. They can be changed at any time. Fierce competition is pushing e-commerce companies to try something new to resonate with consumers. Sticking to the old ways is the same as not doing online business at all. In this case, reinventing the brand through better promotions, engaging product descriptions, and interaction with online platforms is essential for a company's survival in e-commerce.
- (4) Cyber Crime Issues. When running a company or online business, online sellers must strive to earn consumer trust. However, for most online shoppers in the

country, all online retail businesses are seen as a whole. Therefore, when a seller sells counterfeit goods on the market, the entire market is exposed to online buyers. COD has a bad impact on the online seller's business. Cash on delivery hinders the course of online business. Carrying large amounts of cash can bring many problems such as theft, additional costs, limited cash flow, and work delays. Courier services generally send payments to sellers in as little as two weeks. In addition to logistics services, the seller also pays for the collection and delivery of the cash collected. You have to add logistics to avoid problems. On the other hand, removing the COD system from the payment options is also not an option or the right choice.

The specific aim of this research is to empirically examine the role of the 'satisfaction' variable, and whether it can play a full role in mediating the relationship between (1) the service quality of the website, (2) the customer support system, (3) the electronic Word of Mouth and (4) personalization, to the success of e-commerce. This research is important to do, because the existence of E-Commerce makes it easy for online businesses to expand their reach without being limited by geographic area. With this research model, you can offer your products and services to customers around the world, regardless of distance or time of day. The study also supports government programs to bring the MSME movement online immediately.

LITERATURE REVIEW

The research journey on various research model findings related to e-commerce will be explained by the author over the last three years.

The authors consider research on e-commerce based on research findings (Ali & Bhasin, 2019). This shows that perceived price and quality of delivery have a significant impact on consumers' perceived benefits, and these benefits have a significant impact on their willingness to purchase again. Price is inversely related to perceived merit, while quality is directly related to the merit of the product or service offered. Further research explains that quality, value, innovation, and popularity positively influence satisfaction, which significantly influences repurchase intentions (Chiu & Cho, 2019).

The world of e-commerce will always be related to shipping methods, where of course the express or fast delivery method is the chosen shipping method that is chosen by many people. Express shipping is a growing industry that provides a means to facilitate buyers by sending goods and documents from one place to another, where the profitability of companies (e-commerce) is based on price, quality, reliability, and service (Farooq, Fu, Hao, Jonathan, & Zhang, 2019). Then the next finding, building e-commerce (user) satisfaction has a significant impact on increasing sales (Lin, Wang, & Hajli, 2019). Trust and credibility significantly affect e-commerce satisfaction which leads to purchase intention. Credibility is a new predictor of purchase intention that has a very significant effect on e-commerce (user) satisfaction (Attar, Shanmugam, & Hajli, 2020).

The latest research (2021) regarding the development of research models related to e-commerce will be briefly explained to the authors. The first development refers to the adoption of e-commerce which has a significant influence on MSME business performance, while entrepreneurial orientation can strengthen the relationship between these two variables (Yacob, Sulistiyo, Erida, & Siregar, 2021). Then, the use of e-commerce on the internet allows the expansion of foreign brands of MSME fashion products in Poland (Witek-Hajduk, Grudecka, & Napiórkowska, 2021). Furthermore,

Internet of Things (IoT) technology has become a technology that has a significant influence on the development of e-commerce, through the use of online platforms, automation and speed of service for consumers become more effective and efficient (Sun & Ji, 2021).

Then, the main drivers of e-shopping adoption are the level of urbanization, delivery systems, and internet connections, these three components are the determinants of increasing online shopping behavior (Song, 2021). The application of e-commerce plays a role in increasing consumer satisfaction when shopping online, logistics systems and delivery services have a significant role in developing business models using e-commerce (Kawa & Światowiec-Szczepańska, 2021). Customers rely not only on products, but also on company services. In e-commerce, it's important to shift focus beyond products and discuss the value of personalized service in the context of e-commerce fulfillment (Jain & Sundström, 2021).

The factors that significantly affect e-commerce consumer satisfaction are (1) variations in payment methods, (2) Loyalty Programs, (3) diverse product variations, and (4) Ease of Use of the Website Platform (Dospinescu, Dospinescu, & Bostan, 2021). Artificial intelligence (AI)-based chatbots have brought significant business potential, and exploration of consumer trust and response to text-based chatbots in e-commerce has played a major role in efforts to provide the speed of service to consumers (Cheng, Bao, Zarifis, Gong, & Mou, 2021).

RESEARCH METHOD

This research uses the analysis tool WarpPLS 7.0, arguing that this research is more focused on exploring the 'satisfaction' variable which functions as a mediating variable to 'try' to cover the gaps of previous research. WarpPLS software is included in the software that uses the statistical method "Exploratory Factor Analysis" (EFA), whereby choosing this method the author has the flexibility to carry out exploration well.

Website service quality (Sharma & Aggarwal, 2019):

1. The e-commerce website offers an effective interface
2. The e-commerce website provides an always-on interface.
3. The e-commerce website will take less time to reload/refresh and migrate various search results.
4. The e-commerce website provides an attractive website.
5. The e-commerce website notifies customers about products/services and arrivals/departures.
6. The e-commerce website provides data that is properly displayed on the site.
7. The e-commerce website provides information on products and services in a short period of time.
8. The e-commerce website provides accurate information about goods/services without discrimination.
9. The e-commerce website assures customers that personal information will not be leaked when conducting transactions.
10. The e-commerce website maintains the confidentiality of customer personal information and protects customer data from being entered into databases. The database may be used for purposes other than its intended purpose.

E-Wom (Sharma & Aggarwal, 2019):

1. The e-commerce website provides an interface to publish testimonials from buyers and previous browsers.
2. The e-commerce website provides an interface to publish star ratings from buyers and previous browsers.

Customer Support System (Sharma & Aggarwal, 2019):

1. The e-commerce website provides an interface to track the delivery of purchased products/services
2. The e-commerce website provides an interface to efficiently process customer inquiries
3. The e-commerce website offers a variety of payment options.
4. The e-commerce website provides an interface that allows customers to compare prices for products/services from multiple vendors.
5. The e-commerce website provides an interface with primary content related to products/services.
6. The e-commerce website offers a smooth interface for payment processing

Personalization (Sharma & Aggarwal, 2019):

1. E-commerce websites allow customers to create their shopping carts.
2. E-commerce website offering free products/services according to recent searches
3. E-commerce website offering additional products/services according to recent searches

Satisfaction (Chiu & Cho, 2019):

1. I am satisfied with my decision to use this online shopping site.
2. Based on all my experiences with this online shopping site, I am very satisfied.
3. I think I did the right thing when I decided to use this online shopping site.

E-Commerce Success (Sharma & Aggarwal, 2019):

1. I am satisfied with the e-commerce site
2. I will recommend the site to my friends and family
3. I will shop again on e-commerce sites

RESULTS

Table 1. Characteristics of respondents

Location			Type		
	F	%		F	%
Kapuas Hulu District	7	3.5	Automotive	7	3.5
North Kayong District	30	15	Fashion	54	27
Ketapang District	4	2	Daily needs	4	2
Kubu Raya District	47	23.5	Health	4	2
Sambas District	6	3	Culinary	76	38
Sekadau District	12	6	Other	19	9.5
Pontianak City	83	41.5	Food and Drink	25	12.5
Singkawang City	11	5.5	Agriculture	7	3.5
Total	200	100	Property	4	2
			Total	200	100
Category			Age (years)		
Small	109	54.5	0 - 1	98	49
Medium	42	21	1 - 2	68	34
Micro	35	17.5	10 >	7	3.5
Ultra Micro	14	7	3 - 5	8	4
Total	200	100	5 - 10	19	9.5
			Total	200	100

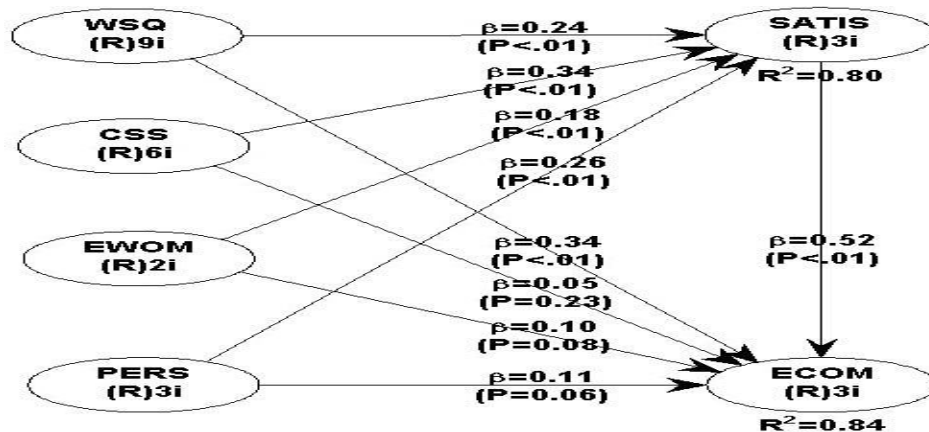
DISCUSSION

Table 2. Latent variable coefficient

	Wsq	Css	Ewom	Pers	Satis	Ecom
R-squared					0.795	0.844
Adj. R-Squared					0.791	0.84
Composite Reliab.	0.921	0.868	0.947	0.891	0.909	0.932
Cronbach's Alpha	0.903	0.816	0.887	0.815	0.849	0.891
Avg. var. extrac	0.566	0.527	0.899	0.733	0.771	0.821
Full collin. VIF	2.597	5.232	3.015	2.947	5.172	3.448

By referring to table two, for R^2 in model one it is 79.5%, but in model two it has increased to 84.2%, So, R^2 is in the strong category (Latan & Ghazali, 2017, p. 92). The reliability test in PLS uses two methods, with composite reliability and Cronbach's alpha, if a number is found between 0.7 - 0.9 then it is very good (Hair et al., 2021, p. 77). For average variance extracted (AVE), it is said to be good if it has a value above 0.5 (Hair et al., 2021, p. 78). For the value of full collinearity (VIF) is said to be good if it has a value below the number 5 (Hair et al., 2021, p. 93).

Figure 1. Model Research Result



Note: WSQ: Website service quality, CSS: Customer Support System, E-WOM: Electronic Word of Mouth, PERS: Personalization, SATIS: Satisfaction, ECOM: E-Commerce Success

Table 2. Direct and Indirect effect results

Direction	Path-Coef.	P-Value	Results
WSQ → ECOM	0.336	<0.001***	Accepted
CSS → ECOM	0.052	0.230	Rejected
EWOM → ECOM	0.097	0.081	Rejected
PERS → ECOM	0.110	0.056	Rejected
WSQ → SATIS → ECOM	0.122	0.007***	Accepted
CSS → SATIS → ECOM	0.177	<0.001***	Accepted
EWOM → SATIS → ECOM	0.093	0.030**	Accepted
PERS → SATIS → ECOM	0.136	0.003***	Accepted

Note: WSQ: Website service quality, CSS: Customer Support System, E-WOM: Electronic Word of Mouth, PERS: Personalization, SATIS: Satisfaction, ECOM: E-Commerce Success, *** 1% significant, ** 5% significant.

By referring to table three, it is found that the satisfaction variable is able to significantly mediate the four independent variables on the dependent variable. However, there is only one independent variable that has a significant effect on the dependent variable. It was found that the Website service quality variable had a significant effect on E-Commerce Success. And the rest for the variables of Customer Support System, Electronic Word of Mouth and Personalization do not have a significant effect on E-Commerce Success.

CONCLUSION

The findings of this research are that the satisfaction variable is included in the type of mediation in the partial category, in mediating the relationship between Website service quality and E-Commerce Success. Then, the satisfaction variable has a full role in mediating the relationship between Customer Support System, Electronic Word of Mouth, Personalization to E-Commerce Success.

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DECLARATION OF CONFLICTING INTERESTS

I declare that there is no conflict of interest in certain parties related to the results of this research and I am responsible for various things that will happen in the future.

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