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The impact of trust and service quality on customer loyalty in e-commerce

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ABSTRACT

This study analyzes the effect of customer trust and service quality on customer loyalty through e-commerce customer satisfaction. This research uses a survey method by distributing questionnaires distributed to Tokopedia, Shopee and Lazada consumers who make transactions in 2024. The object of this research is consumers of Tokopedia, Shopee and Lazada users in North Sumatra. The respondents of the study were taken by purposive sampling obtained 100 respondents. Data is processed using Smart PLS 3. The results of this study show that customer satisfaction has a significant effect on customer loyalty, satisfied customers usually make repeat purchases. Customers feel comfortable and trust in the company so they will do re-shopping. Satisfied customers often recommend products to friends and relatives. Loyal customers have high trust in the company. Customers believe that the company will continue to provide good service. Customer trust has no significant effect on customer loyalty. Customer trust does not have a significant effect on customer satisfaction. Service quality does not have a significant effect on customer loyalty. Product quality and delivery speed often have a greater impact on customer loyalty compared to service quality. Customers are more likely to be loyal to platforms that consistently provide quality products and fast delivery. Suggestions for researchers to add customer behavior variables in digital environments.



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Introduction

The quality of service of an e-commerce company covers various aspects such as speed of delivery, ease of order process, quality of products that match the description, responsive customer service, and easy return policies (Khan Mohammadi et al., 2023). When customers receive quality service, they are more likely to feel satisfied with their shopping experience. Based on the online survey platform Jakpat special report involving 1,054 respondents from 25 provinces. It was recorded that during 2021 Tokopedia was listed as an e-commerce with customer loyalty reaching 49%, ranked second to Shopee and third to Lazada. Center of Innivation and Digital Economy researchers assess the loyalty of Tokopedia users higher than its competitors, showing that this platform has more value than others. In 2020 Shopee became number one but now Tokopedia is able to compete. This is because Tokopedia is intensively conducting programs to attract customers, one of which is free shipping in collaboration with Gojek. The strategy of providing free shipping is one of the effective ways used by Tokopedia to attract customers. By partnering with Gojek, Tokopedia can take advantage of Gojek's extensive and fast delivery network. This allows for faster and efficient delivery of goods, increasing customer satisfaction.

The two companies can run promotional campaigns together, increasing visibility and appeal to consumers using both platforms.

Customer Lifetime Value Theory can be understood through the concept of term value, which is financial value that results from long-term relationships with customers (Sun et al., 2023). This theory connects several key concepts that affect customer loyalty (Valentini et al., 2024). The Customer Lifetime Value Theory assumes that customers who have a high level of trust in a brand or company are likely to make repeat purchases. High trust helps extend the customer lifecycle because they are likely to remain loyal and not switch to competitors. Good service quality can improve customer satisfaction and strengthen the long-term relationship between customers and the company. Customers who are satisfied with the quality of service tend to spend more, increasing the Customer Lifetime Value Theory CLV. Satisfied customers tend to leave positive reviews, recommend products or services to others, and remain loyal. This theory highlights the importance of maintaining a high level of satisfaction in order to increase the value of each customer in the long run. In e-commerce, the interactions that occur online affect the customer's perception of the brand. Customer Lifetime Value Theory helps understand how online interactions, such as the quality of user experience, delivery speed, online customer service, etc., will later have an impact on customer retention and long-term value.

Customer satisfaction is an emotional evaluation that occurs after a purchase, based on whether or not customer expectations are met (Trihudiyatmanto, 2024). High customer satisfaction often leads to customer loyalty. Satisfied customers tend to return more often to shop, recommend the e-commerce to others, and have a higher tolerance for small mistakes that may occur. Good service quality can directly increase customer satisfaction (Laia, 2022). The aspects of quality service make customers feel that they are getting good value for the money they spend. Customer satisfaction acts as a mediator between service quality and customer loyalty. That is, although the quality of service can directly affect customer loyalty, this effect is stronger when customers are satisfied first. Customer satisfaction strengthens the relationship between service quality and customer loyalty (Varriale et al., 2023). Customers who find fast delivery services and high-quality products more satisfied are more likely to return to shop and recommend e-commerce to their friends. Customer trust is the customer's belief that an e-commerce company will deliver the promised products and services with consistent quality and as expected (Maharani, 2010). This includes reliability, integrity, and transparency in transactions. When customers have high trust in e-commerce companies, customers will feel more comfortable and satisfied with their shopping experience.

Customer satisfaction is measured based on how well customer expectations are met by the services and products provided by the company. High customer satisfaction usually results in greater customer loyalty (Purnomo & Irmawati, 2024). Customer loyalty is characterized by a tendency to make repeat purchases, recommend the company to others, and keep using the company's services despite other alternatives. Customer trust in e-commerce companies plays an important role in creating satisfaction. When customers believe that the company is reliable and honest, they are more likely to feel satisfied with their experience. Customer who are satisfied with the services and products of an e-commerce company are more likely to become loyal customers. They tend to make repeat purchases and recommend companies to others. Customer satisfaction acts as a mediator in the relationship between customer trust and customer loyalty. That is, although trust can directly affect loyalty, this effect is amplified when customer trust also results in high satisfaction (Mutammam et al., 2019). Customer satisfaction strengthens the relationship between trust and customer loyalty. In order to increase customer loyalty, e-commerce companies need to build and maintain customer trust. Strong trust will increase customer satisfaction, which will ultimately encourage greater customer loyalty.

Service quality is the degree to which the services provided by a company meet or exceed customer expectations (Ria Setyawati, 2023). It covers various aspects that can be measured and evaluated to determine how good the service the customer is receiving (Handayani et al., 2020). Here are some of the main aspects of service quality, namely: 1) Reliability is the company's ability to provide the promised service consistently and accurately. This includes being punctual, error-free, and reliable whenever customers interact with the company. 2) Responsiveness, namely the ability of company staff to help customers and provide services quickly. This includes how quickly and efficiently the company responds to customer requests, questions, or complaints. 3) Assurance is the knowledge and courtesy of employees and their ability to inspire trust and confidence. This includes aspects such as competence, credibility, security, and respect shown by the company. 4) Empathy is personalized attention given to customers. This includes an understanding of the individual needs of customers, as well as friendliness and care from company staff. 5) Physical Evidence (Tangibles): The physical appearance of facilities, equipment, personnel, and communication materials. This includes things like the cleanliness and comfort of the service premises, as well as the professional look of employees and promotional materials.

Customer trust is the confidence or trust that customers have in a company or brand, that the company will fulfill its promises and provide products or services that are in line with expectations (Mutammam et al., 2019). This trust covers several important aspects: 1) Reliability is the belief that the company will do what is promised consistently and on time. Customers trust that the product or service they purchase will function as expected and as advertised. 2) Integrity is the perception that the company is honest, ethical, and transparent in all its interactions. This includes aspects such as compliance with laws, transparency in pricing and policies, and protection of customer privacy. 3) Competence is the belief that the company has the necessary ability and knowledge to provide high-quality products or services. It includes the company's technical expertise, staff skills, and experience in related industries. 4) Security: Customers feel secure in their dealings with the company, both in terms of financial security (e.g., fraud protection) and the security of their personal data. 5) Consistency is a consistent customer experience over time reinforcing their trust. This means that every time a customer interacts with a company, they get the same level of service and product quality.

Customers who trust the company are more likely to become loyal customers, who will continue to make repeat purchases and use the company's services (Purnomo & Irmawati, 2024). Customers who trust the company tend to recommend it to friends, family, and coworkers, which can help attract new customers. Trust reduces customers' perception of risk associated with purchasing a product or service, which can increase their convenience and satisfaction. Trust is the basis for building long-term, mutually beneficial relationships between companies and customers. To build and maintain customer trust, companies should focus on several strategies such as providing products and services that meet or exceed customer expectations consistently, responding to customer inquiries and complaints quickly and effectively, providing clear and honest information about products, services, prices, and company policies, protecting customers' personal and financial data with strong security measures. Conduct business in an ethical and responsible manner. Customer trust is the foundation of a strong and sustainable relationship between a company and its customers, which will ultimately support business growth and success.

Customer satisfaction is a measure of the extent to which the products or services provided by a company meet or exceed customer expectations (Handayani et al., 2020). This is an important indicator for business success because high customer satisfaction can lead to customer loyalty, a positive reputation, and increased revenue. There are several key elements that affect customer satisfaction, namely: 1) The quality of a product must meet or exceed the quality standards expected by customers. 2) Responsiveness where customers are prompt and responsive to customer requests or complaints. 3) Competitive prices that match the perceived value by customers. 4) Discounts and promotions where discount offers and promotions can increase value for customers and their satisfaction. 5) Ease of use where a user-friendly website or application makes it easy for customers to make purchases (Fujawati et al., 2024). Customer loyalty is a condition in which customers show a strong and consistent preference towards a brand, product compared to other competitors (Herman et al., 2024). Loyal customers tend to make repeat purchases and have a tendency not to switch to another brand even though there are many other options on the market.

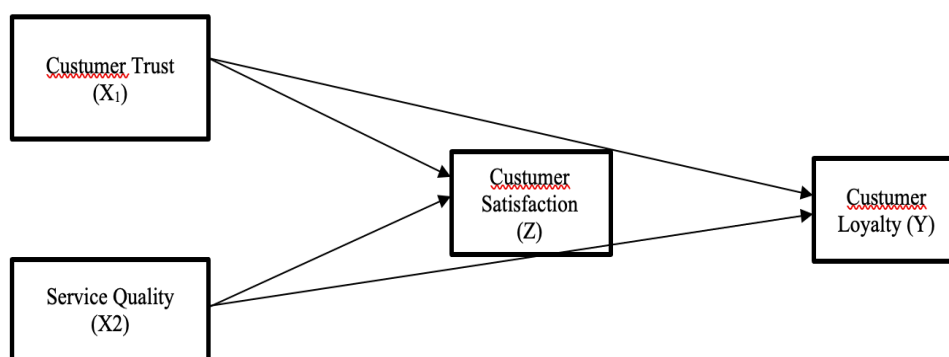


Figure 1. Conceptual Framework

Customer loyalty in e-commerce is a condition where customers choose to consistently make purchases from a particular e-commerce platform, even though there are many alternative options available. Customer loyalty is very important because competition is very fierce and it is easy for customers to move to other platforms. Important Aspects of Customer Loyalty in E-commerce are: 1) Customer Satisfaction where a positive shopping experience and satisfaction with a product or service greatly affect customer loyalty. It covers aspects such as ease of website navigation, speed of delivery, and product quality. 2) Customer trust in transaction security, privacy policy, and platform integrity is very important. Data security and transparency in the buying process can increase customer trust. 3) User Experience Easy-to-use, responsive, and fast applications can increase

customer loyalty. A positive user experience makes customers more likely to return. 4) Loyalty programs that offer incentives such as points, discounts, or rewards for repeat purchases can encourage customers to remain loyal. 5) Personalization of the shopping experience, such as relevant product recommendations and communication tailored to customer preferences, can increase customer engagement and loyalty.

Method

This research is quantitative research using descriptive analysis (Erlina, 2023). The data collection technique uses purposive sampling techniques with questionnaire instruments distributed to shopee, lazada and tokopedia users in the community in North Sumatra. The number of samples in this study was 100 respondents. Data was collected from respondents using questionnaires with interval scales of 1-5 and distributed to respondents in 2024. This research data was processed with the help of SmartPLS 3.0 software.

Results and Discussions

This analysis is used to determine how much influence exogenous variables have on endogenous variables (Erlina, 2023). In this study, it will be analyzed how much influence variable X has on variable Y. Here are the results of PLS analysis with the help of SmartPLS 4.0 software.

Validity Test based on Outer Loading Value and Average Variance Extract (AVE)

In validity tests, outer loading and AVE are used to evaluate construct validity as measured by measurement variables (Erlina, 2011). A high outer loading value indicates that the measurement variable is significantly connected to the factor in question, while a high AVE value indicates that the measurement variable has sufficient validity in measuring the factor. In general, in validity tests using SEM, the outer loading value that is considered good is 0.5 or more, while the AVE value that is considered good is 0.5 or higher. However, these limitations may vary depending on the context of the study and the domain being researched. It is important to note that the use of these cut-off values should be used as a preliminary guide and should be linked to broader theoretical and contextual considerations in construct validity assessments.

Table 1. Validity Test Results based on Outer Loading

	Cronbach's Alpha	Keandalan Komposit (rho_a)	Keandalan Komposit (rho_c)	Rata-rata Varian Diekstraksi
Customer Loyalty	0.849	0.855	0.898	0.688
Customer Satisfaction	0.872	0.873	0.912	0.722
Customer Trust	0.856	0.857	0.903	0.700
Service Quality	0.873	0.877	0.914	0.727

Based on the table above, we can see the validity and reliability tests based on *Outer Loading*, *Average Variance Extracted* (AVE) and *Cronbach's Alpha* (CA) and *Composite Reliability* (CR). The results of validity testing based on *Average Variance Extracted* (AVE) values based on brand image variables, consumer satisfaction, service quality and customer loyalty. For validity testing with AVE, the recommended AVE value is 0.5. It is known that all AVE values are above 0.7. This means that it has met the validity requirements based on the AVE value.

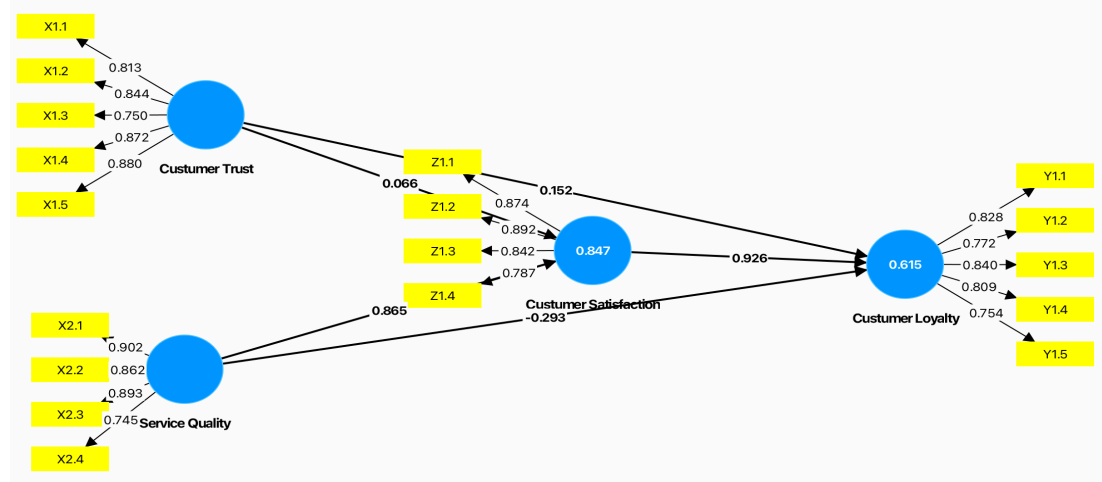


Figure 1. Validity Test Results based on Outer Loading

Path coefficient test

The path coefficient test in structural equation modeling (SEM) is used to test causal relationships between variables in the model. This test provides information about the significance and strength of the relationships between variables proposed in the model. The SEM model to be tested, including the variables to be included, the relationships between the proposed variables, and endogenous variables (variables influenced by other variables) and exogenous (variables affecting other variables).

Table 2. Hypothesis Testing of Direct Influence

	Real Sample (O)	Sample Average	Standard Deviation	Statistic T	P Value
Customer Satisfaction - Customer Loyalty	0.926	0.923	0.160	5.807	0.000
Customer Trust - Customer Loyalty	0.152	0.148	0.123	1.236	0.217
Customer Trust - Customer Satisfaction	0.066	0.065	0.086	0.770	0.441
Service Quality - Customer Loyalty	-0.293	-0.298	0.198	1.478	0.139
Service Quality - Customer Satisfaction	0.865	0.861	0.084	10.287	0.000

Based on the table above, it can be seen that the customer satisfaction variable has a significant effect on customer loyalty, it can be seen from the path coefficient value of 0.926 with a t-statistical value of 5.807 > 1.98, P value of 0.000 < 0.05. Satisfied customers tend to become loyal customers. They will return to shop on the same platform if they feel they have a good experience. This loyalty is very important because the cost of acquiring new customers is usually higher compared to retaining existing customers. Satisfied customers tend to recommend services or products to their friends, family, and colleagues. These word-of-mouth recommendations are very influential because people tend to trust the advice of people they know. In the world of e-commerce, positive reviews and ratings can also attract new customers. Customer satisfaction affects reputation and brand image. A good reputation will increase customer trust in the company and make them more inclined to shop on the platform. In the digital world, negative reviews can quickly spread and damage a company's reputation. Customer satisfaction can help reduce operational costs. Satisfied customers tend to file fewer complaints and problems, thus reducing the burden on customer service and other departments.

Customer trust has no significant effect on customer loyalty, it can be seen from the line coefficient value of -0.185 with a t-statistic value of 0.902 < 1.98, P value of 0.367 > 0.05. The platforms of each e-commerce company such as shopee, lazada and tokopedia provide a wide range of products and services that are very similar to each other. Customers easily switch to another platform if they find a more attractive offer, even if they already trust one particular platform. The majority of e-commerce customers are more influenced by price and promotions than the trust factor. Big discounts, special offers, and limited-time promotions are often the main deciding factors in their buying decisions (Li et al., 2023). Customer experience on e-commerce platforms can vary greatly depending on the individual seller. While customers may trust the platform as a whole, negative experiences with certain sellers can reduce their loyalty (Habib et al., 2023). Customers have many choices in the world of e-commerce.

They can easily search for other alternatives with a few clicks, making them less attached to one platform even if they believe in that platform (Agarwal & Dhingra, 2023a). On platforms like Shopee, Lazada, and Tokopedia, customers often deal with individual sellers. Trust in a platform does not necessarily mean trust in all sellers on that platform. Problems with one seller can reduce overall loyalty to the platform. E-commerce platforms often engage in price wars and aggressive promotions. Loyalty programs and attractive offers from competitor platforms can entice customers to try other services even if they already trust the platform they use. Customers have very high expectations for e-commerce services, including delivery speed, product quality, and customer support. Failure to meet these expectations, even if only once, can undermine customer loyalty. Customer trust has no significant effect on customer satisfaction, which can be proven by a line coefficient value of -0.029 with a t-statistic value of 0.377 < 1.98, a P value of 0.706 > 0.05. On the Lazada, Shopee and Tokopedia e-commerce platforms, customers deal with various sellers who have different service standards.

While they may trust the platform as a whole, their experience can vary greatly depending on the seller they choose, which affects overall satisfaction. Customer satisfaction is often influenced by technical aspects such as application reliability as well as logistical aspects such as delivery time and condition of goods upon receipt (Guiso, 2009). While customers may trust the platform, these technical and logistical issues can reduce their satisfaction. Customers may have high expectations for the online shopping experience, including deep discounts, high-quality products, and fast shipping (Maharani, 2010). When these expectations are not met, their satisfaction can decrease even if they trust the platform. Many e-commerce customers are attracted by attractive promotions and prices. Although they trust the platform, their satisfaction may be more influenced by how well they feel they are getting the best value for their money through promotions and discounts. Customer service

experience also affects satisfaction significantly (Purnomo & Irmawati, 2024). While customers may trust the platform, poor interaction with customer service can reduce their satisfaction. To increase customer satisfaction, e-commerce platforms need to pay attention to maintaining product quality standards and ensuring sellers comply with these standards. Provide responsive and helpful customer service. Improve technical aspects such as website speed and ease of navigation (Mutammam et al., 2019).

Service quality does not have a significant effect on customer loyalty can be proven by the line coefficient value of 0.024 with a t-statistic value of $0.612 < 1.98$ P value of $0.541 > 0.05$. On e-commerce companies lazada, shopee and tokopedia customers can easily move from one platform to another if they find more attractive offers. Loyalty to one platform becomes less strong even though the quality of service on that platform is high. Product quality and delivery speed often have a greater impact on customer loyalty compared to service quality (Maharani, 2010). Customers are more likely to be loyal to platforms that consistently provide quality products and fast delivery. In addition, a diverse and inconsistent user experience can reduce the impact of service quality on loyalty (Agarwal & Dhingra, 2023). Purchasing decisions in e-commerce are often influenced by customer reviews and recommendations from others. Good service quality may not be enough to build loyalty if reviews or recommendations from the community or friends are dominant. E-commerce customers may focus more on transaction aspects such as price, ease of transaction, and speed of delivery than service aspects. They are looking for an efficient and fast shopping experience (Damaiyanti et al., 2023). Service quality has a significant effect on customer satisfaction can be proven by the line coefficient value of 0.944 with a t-statistical value of $12.858 > 1.98$ P value of $0.000 < 0.05$.

A positive User Experience can create a positive user experience. When customers feel valued and well serviced, they tend to feel more satisfied with their overall shopping experience. Fast and efficient service, including quick response to questions or complaints, easy payment processing, and timely delivery, is highly appreciated by customers (Herman et al., 2024). This increases their satisfaction as their needs and expectations are well met. In addition, easy access to responsive customer support and quick solutions to customer-facing problems increases satisfaction. When customers feel that their problems are handled well, they tend to be more satisfied. Consistent and reliable quality service helps build trust and satisfaction (Handayani et al., 2020). Customers want to feel confident that every time they shop, they will have a good experience. Security guarantees in transactions and protection of personal data are very important in e-commerce. Quality of service that includes transaction security and trust in the platform increases customer satisfaction. Easy and fair policies regarding product returns and replacements are also an important part of quality service. This gives customers a sense of security that they can overcome problems if the product received is not as expected. Good service quality often gets positive reviews and good feedback from customers. This creates a positive image for the platform and increases the satisfaction of new customers who see these reviews before shopping.

Table 3. Testing the Indirect Influence Hypothesis

	Sampel Asli (O)	Rata-rata Sampel	Standar Deviasi	T Statistik	Nilai P
Customer Trust - Customer Satisfaction - Customer Loyalty	0.062	0.064	0.084	0.734	0.463
Service Quality - Customer Satisfaction - Customer Loyalty	0.801	0.792	0.144	5.580	0.000

Service quality has a significant effect on customer satisfaction through customer loyalty can be proven by t-statistic values of $5,580 > 1.98$, P values of $0.000 < 0.05$. Consumer experience such as speed of delivery, ease of site navigation, customer service responsiveness, and transaction security greatly affect the user experience. Satisfied customers are more likely to make repeat purchases. They feel comfortable and believe in the company, so they are likely to do some re-shopping. Satisfied customers often recommend products to friends and family, increasing their new customer base through personalized recommendations. Loyal customers usually have high trust in the company (Herman et al., 2024). They believe that the company will continue to provide good service. Loyal customers tend to be more tolerant of mistakes or problems that may occur because they have had previous positive experiences that support their commitment to the company. Customer loyalty is able to strengthen satisfaction because loyal customers tend to provide constructive feedback, helping companies improve the quality of service further, which in turn increases satisfaction even more. In competitive e-commerce companies, high service quality can be a strong differentiating factor. Companies known for high-quality service are more likely to attract and retain customers.

Customer trust does not have a significant effect on customer satisfaction through customer loyalty can be proven by a t-statistic value of $0.734 < 1.98$ P value of $0.463 > 0.05$. This is due to the high level of competition in the highly competitive e-commerce industry, customers have many choices (Morgeson et al., 2023). While they

may believe in one company, they may be more influenced by other factors such as the best price quote or convenience in making a purchase. Loyalty can be more difficult to build and maintain in these situations. Customer satisfaction is often directly related to their experience of the product or service purchased. If the product or service received matches or exceeds expectations, customers will feel satisfied even though their loyalty has not been fully formed. Customer expectations can vary widely and are influenced by many factors other than trust. For example, if a customer has a good experience with other aspects of the service, such as fast delivery or an easy return policy, this could have more of an effect on their satisfaction than trust levels.

Conclusions

Based on the discussion above, it can be concluded: (1) Customer satisfaction has a significant effect on customer loyalty. (2) Customer trust has no significant effect on customer loyalty. (3) Customer trust does not have a significant effect on customer satisfaction. (4) Service quality does not have a significant effect on customer loyalty. (5) Service quality has a significant effect on customer satisfaction. (6) Service quality has a significant effect on customer satisfaction through customer loyalty. (7) Customer trust does not have a significant effect on customer satisfaction through customer loyalty. Suggest that future researchers explore other factors that might affect customer loyalty in e-commerce, such as price, promotion, and product innovation. Propose comparisons between different e-commerce sectors to see if there are differences in the effect of customer trust and service quality on customer loyalty through customer satisfaction.

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