The Influence of the New Normal on Customer Satisfaction in E-Commerce: Examining the Mediating Role of Trust Among Millennials

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Abstract

The COVID-19 pandemic has profoundly reshaped consumer behaviour, accelerating the adoption of e-commerce as part of the emerging "new normal." This study examines the impact of these behavioural shifts on customer satisfaction within the e-commerce sector, with a specific focus on the mediating role of trust among millennials in Indonesia. The research investigates how key factors - namely customer behaviour, product attributes, and time-saving benefits - affect trust and, consequently, customer satisfaction. Employing a quantitative research design, data were collected via an online survey administered to millennial respondents and analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). The results reveal that product attributes significantly influence customer trust, whereas customer behaviour and time awareness do not exhibit a direct effect. Furthermore, trust is found to mediate the relationship between product attributes and customer satisfaction, but does not significantly mediate the effects of customer behaviour or time-saving perceptions. These findings underscore the pivotal role of trust in enhancing customer satisfaction, particularly in the post-pandemic digital economy. The study offers strategic implications for e-commerce platforms, highlighting the necessity of trust-building measures to attract and retain millennial consumers. Future research should consider extending this investigation across diverse demographic groups and geographic contexts to develop a more comprehensive understanding of the evolving dynamics of customer satisfaction in e-commerce.

Keywords: Customer Behaviour; Product; Time-savings; Customer Trust; Customer Satisfaction.

Introduction

The emergence of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), the virus responsible for COVID-19, in late 2019 brought unprecedented disruptions to global business operations (Kumar et al., 2021). Indonesia, like many other nations, experienced significant challenges across supply chains, trade, and overall business management (Sinha et al., 2021). Enterprises ranging from large-scale corporations to small vendors were compelled to adapt rapidly, with many shifting toward online sales and contactless delivery methods to accommodate consumers unable to access physical retail spaces.

This transformation in consumer behaviour marked the onset of the "New Normal"—a period defined by the adoption of new habits aimed at reducing infection risk. One of the most notable behavioural shifts was the substantial increase in online purchasing (Firmandani, Fitri, Abdani, & Madani, 2021).

Recent data from databoks.katadata.co.id illustrates the rapid expansion of Indonesia's e-commerce sector. Shopee maintained market dominance with an average of 184.8 million monthly visits in Q4 2022. Tokopedia followed with 133.2 million monthly visits, securing its

place as a key competitor. Other major platforms included Lazada (78.2 million visits), Blibli (35.8 million), and Bukalapak (19.7 million) (Ahdiat, 2023).
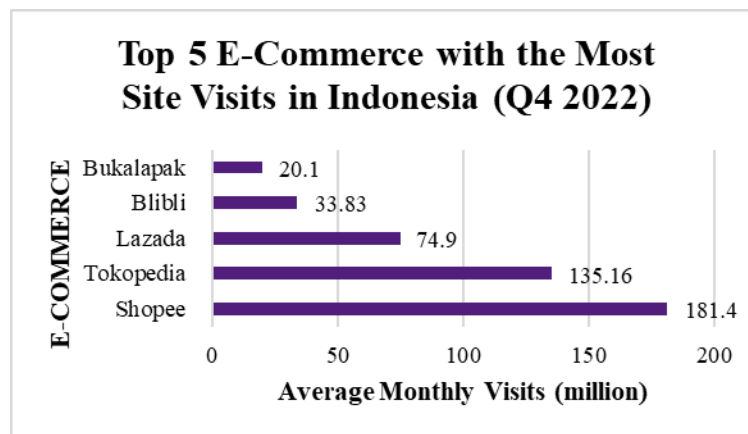

Figure 1.
Top 5 E-Commerce Platforms by Monthly Site Visits in Indonesia (Q4 2022)
Source: Ahdiat, 2023.

While the pandemic catalysed the growth of online commerce, it also revealed critical vulnerabilities. According to en.tempo.co, the Indonesian Ministry of Trade reported that 6,911 out of 7,464 e-commerce-related complaints in 2022 were tied to issues such as refund processing, inaccurate product information, missing deliveries, and unilateral cancellations by sellers (Putri, 2023). Additional concerns, including lengthy delivery times and high shipping costs, further contribute to customer dissatisfaction (Wang, Xie, & Fan, 2021), often resulting in product returns and order cancellations.

Nevertheless, the shifts brought on by the pandemic also present new opportunities. The New Normal may signify a permanent reorientation towards digital shopping as consumers adapt to evolving lifestyles (Echegaray, 2021). Heightened time constraints in daily life are pushing consumers to favour the convenience of online shopping. Streamlined user interfaces and efficient product search capabilities further emphasize the time-saving benefits of e-commerce platforms (Prasetyo et al., 2021). Additional advantages, such as rapid payment processing and cashless transactions, reinforce the appeal of digital marketplaces (Noviana & Darma, 2020).

Amid these developments, customer satisfaction emerges as a critical driver of consumer trust. Satisfied customers are more likely to perceive consistent service quality, thereby increasing their trust, loyalty, and propensity for repeat purchases (Halim, Claudia, & Hebrard, 2023). E-commerce platforms that address consumer grievances effectively and consistently prioritize product and service quality are well-positioned to thrive in Indonesia's competitive online retail landscape.

Literature Review
Customer Satisfaction
Customer satisfaction occurs when a product or service meets or exceeds a customer's needs, wants, and expectations. This positive experience fosters loyalty, encourages repeat purchases, and promotes word-of-mouth recommendations. According to Taher (2021), consumer

satisfaction is a response to and evaluation of the level of fulfillment provided by a specific product or service. To maintain a positive company image and retain customer loyalty, businesses must foster trust in their offerings, ensuring that customers perceive the products as reliable and effective. This is crucial, as both brand satisfaction and trust significantly influence repurchase intentions (Indah & Jokhu, 2023).

Customer Trust
Customer trust is the willingness of individuals to rely on others in transactional relationships, grounded in the belief that others will act reliably and ethically (Ginting, Chandra, Miran, & Yusriadi, 2023). In the context of e-commerce, this trust is closely tied to perceptions of the platform's credibility and transparency. Providing clear, complete, and accurate information helps build consumer trust. To enhance this trust, e-commerce platforms must prioritize the delivery of high-quality online services (Juwaini et al., 2022).

H7: Customer Trust has a significant influence on Customer Satisfaction.

Prior studies affirm that customer trust significantly impacts customer satisfaction. Trust is a fundamental factor shaping consumer behaviour and perceptions of service quality. When consumers trust a brand or business, they are more likely to express overall satisfaction (Linh Dang, Van Bao, & Cho, 2023). Trust also positively influences behaviours such as repurchase intentions and word-of-mouth referrals. Consumers who trust online merchants generally report more satisfying experiences and are more likely to return (Rita, Oliveira, & Farisa, 2019).

Customer Behaviour
Consumer behaviour encompasses the decision-making processes and actions individuals undertake before, during, and after purchasing products or services. It involves evaluating promotional strategies, considering timing and purpose, and reflecting on frequency and preferred purchasing channels (Lestari & Genoveva, 2021). Key constructs influencing consumer behaviour include purchase intention, perceived ease of use, perceived usefulness, actual usage, and attitudes toward technology (Gundarania, 2023).

Trust has been shown to positively influence consumer behaviour, encouraging communication and reinforcing the credibility of information (Ardyan & Sudyasjayanti, 2020). Furthermore, consumer attitudes and perceptions toward a brand significantly affect their level of trust. Positive behaviours such as engagement, loyalty, and satisfaction are indicators of consumer trust (C. Halim, Sinaga, & Gultom, 2023).

H1: Customer Behaviour has a significant influence on Customer Trust.
H4: Customer Behaviour has a significant influence on Customer Satisfaction.

Research indicates that behaviours such as repeat purchases, returning to the same platform, and sharing positive experiences via word-of-mouth significantly enhance customer satisfaction (Rita et al., 2019). The perceived value of a product or service also strongly influences both behaviour and satisfaction. When customers believe they are receiving good value, their overall satisfaction tends to increase (Ilieva, Yankova, Klisarova, & Dzhabarova, 2022).

Product
A product is any offering that can be marketed to satisfy a consumer's need or want (Manurung & Febridiansyah, 2023). Product quality refers to a product's ability to meet customer expectations and perform its intended function reliably. Key indicators of quality include consistency, performance, and compliance with customer expectations, all of which contribute to brand positioning (Reyhan, Faizah, & Putri, 2021).

Previous studies have emphasized that perceived product quality fosters trust and long-term engagement. High-quality products encourage customers to trust a brand and develop enduring relationships (Juwaini et al., 2022; Utama & Susila, 2024). Positive experiences with a product reinforce this trust and encourage repeat transactions.

H2: Product has a significant influence on Customer Trust.
H5: Product has a significant influence on Customer Satisfaction.

Customers often experience higher satisfaction when the quality of purchased products aligns with or surpasses their expectations. Product quality is a significant driver of satisfaction and loyalty (Ramadani, Syaichoni, & Handri, 2022; Jannah, Mappatompo, & Haanurat, 2019). High-quality offerings lead to increased customer contentment and strengthen their relationship with the brand.

Time-Saving
Time-saving refers to the efficiency and convenience offered by e-commerce platforms, which allow customers to make purchases without physically visiting stores (Sarwar, Tareq, Siddika, & Seng, 2023). E-commerce enables consumers to shop from any location, browse multiple options, compare prices, and access reviews, all of which reduce time and effort. This efficiency appeals particularly to time-conscious consumers (Purwanto, 2022).

Customers increasingly value platforms that streamline their shopping process. A time-efficient platform enhances perceived value and supports the development of long-term relationships (Miao et al., 2022). Time-saving benefits are especially critical in grocery shopping and everyday purchases, where consumers prioritize quick and convenient solutions (Neger & Uddin, 2020).

H3: Time-Saving has a significant influence on Customer Trust.
H6: Time-Saving has a significant influence on Customer Satisfaction.

Previous research has demonstrated a strong positive correlation between time-saving and customer satisfaction in online transactions (Wilson & Christella, 2019). Customers are more satisfied with platforms that simplify procedures and minimize waiting times. Additionally, studies show that even hybrid behaviours like webrooming - researching online before buying in-store - can save time and improve customer experiences (Dündar & Öztürk, 2020).

Research Methodology
This study adopts a quantitative research design to explore the influence of the evolving "new normal" landscape on customer satisfaction among millennial consumers in the e-commerce sector. Quantitative research is particularly appropriate for this inquiry due to its emphasis on

the systematic collection and analysis of numerical data, enabling objective evaluation of the relationships among key variables (Mohajan, 2021).

A non-probability sampling technique, namely quota sampling, was utilized to select participants. This method ensured the inclusion of respondents who met specific criteria: individuals born between 1981 and 1996 (millennials) who possess significant experience with e-commerce platforms or online shopping. The sample size was determined based on the guideline recommending five to ten respondents per item across all measured variables (Genoveva, Ahyadi, & Ariestiningsih, 2021). With an average of six to eight items per construct and a total of 35 measurement items, the study established a minimum sample size of 175 respondents. Data were analyzed using SmartPLS software, employing Partial Least Squares Structural Equation Modeling (PLS-SEM). PLS-SEM is a robust multivariate technique well-suited for analyzing complex structural models involving both latent and observed variables. Its flexibility and suitability for exploratory research, coupled with its tolerance for smaller sample sizes and non-normal data distributions, make it ideal for this study (Becker, Cheah, Gholamzade, Ringle, & Sarstedt, 2022).

Research Results and Discussions
Respondent Profile
The data for this study were obtained via an online questionnaire disseminated through Google Forms. The target population consisted of individuals born between 1981 and 1996, commonly referred to as millennials. Out of the 207 individuals who accessed the questionnaire, 201 provided complete and analysable responses. A comprehensive breakdown of respondent demographics is presented in Table 1.

Table 1.
Respondent Profile

Demographic Information	Category	Sample	
		N	Percentage
Gender	Female	146	72.64%
	Male	55	27.36%
Occupation	Private Employees	86	42.79%
	Student	62	30.85%
	Self-employed	32	15.92%
	State Employee	18	8.96%
	Others	3	1.50%
Frequency of Online Shopping	Sometimes (2-3 times a month)	96	47.76%
	Often (4-5 times a month)	61	30.35%
	Rarely (once a month or less)	25	12.44%
	Very Often (more than 5 times a month)	19	9.45%
Frequently used applications	Shopee	136	67.66%
	Tokopedia	25	12.44%
	TikTok Shop	20	9.95%
	Lazada	12	5.97%
	Others	8	3.99%

The sample was predominantly female (72.64%), with a significant proportion employed in the private sector (42.79%) and actively engaged in higher education (30.85%). Regarding the frequency of e-commerce app usage, nearly half of the respondents (47.76%) reported shopping online two to three times per month. Shopee was identified as the most frequently used platform, with a usage rate of 67.66%.

Descriptive Statistics
The variables in this study were measured on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). As detailed in Table 2, the highest mean score was observed for Customer Behaviour (CB) at 4.35, indicating a strong consensus among respondents. This was followed by Customer Satisfaction (CS) with a mean of 4.25. Both Product (PR) and Time Savings (TS) yielded mean values above 4, suggesting general agreement among respondents. In contrast, Customer Trust (CT) recorded a mean of 3.91, reflecting a more neutral stance.

Table 2.
Descriptive Statistics Result

Variable	Min	Max	Mean	Median	Standard Deviation	N	Result
CB	1	5	4.35	4	0.71		Strongly agree
PR	1	5	4.16	4	0.69		Agree
TS	1	5	4.12	4	0.83	201	Agree
CT	1	5	3.91	4	1.00		Neutral/Uncertain
CS	1	5	4.25	4	0.74		Strongly agree

Reliability and Validity
Internal consistency was assessed using Cronbach's Alpha, where values ≥0.6 are considered acceptable (Ramli, 2019). Additionally, composite reliability metrics (rho_a and rho_c), all above 0.7, confirmed satisfactory reliability (Azmi & Rozman, 2024). Convergent validity, measured by Average Variance Extracted (AVE), was deemed adequate for all constructs with values exceeding 0.5, except for CB, which approached the threshold (Purwanto & Sudargini, 2021).

Table 3.
Reliability and Convergent Validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
CB	0.764	0.768	0.835	0.457
CS	0.728	0.740	0.831	0.553
CT	0.729	0.743	0.830	0.551
PR	0.703	0.714	0.818	0.531
TS	0.680	0.683	0.807	0.512

Discriminant Validity
Discriminant validity was evaluated using the Fornell-Larcker criterion, whereby the square root of each construct's AVE exceeded the inter-construct correlations (Afthanorhan et al., 2021), as shown in Table 4.

Table 4.
Fornell-Larcker Criterion

	CB	CS	CT	PR	TS
CB	0.676				
CS	0.613	0.807			
CT	0.361	0.450	0.742		
PR	0.510	0.478	0.579	0.729	
TS	0.639	0.656	0.362	0.493	0.716

The Heterotrait-Monotrait (HTMT) ratio further assessed discriminant validity. Most construct pairs were below the threshold of 0.90, except for TS–CS, which slightly exceeded the acceptable limit (Yusof et al., 2019), indicating potential multicollinearity between these constructs.

Table 5.
Heterotrait-Monotrait Ratio (HTMT)

	CB	CS	CT	PR	TS
CB					
CS	0.806				
CT	0.461	0.599			
PR	0.691	0.653	0.794		
TS	0.883	0.919	0.505	0.724	

Multicollinearity Assessment

Variance Inflation Factor (VIF) values were evaluated to assess multicollinearity. All VIF values were below the critical threshold of 5, indicating no significant multicollinearity concerns (Purwanto & Sudargini, 2021).

Table 6.
VIF Values

	CB	CS	CT	PR	TS
CB		1.85	1.846		
CS					
CT		1.526			
PR		1.852	1.444		
TS		1.814	1.806		

Structural Model Analysis

As shown in Figure 2, the initial measurement model consisted of 35 indicators. Following the criterion that outer loadings should exceed 0.6 to ensure adequate representation of constructs (Andrian & Trinanda, 2019), several indicators were excluded from the final model.
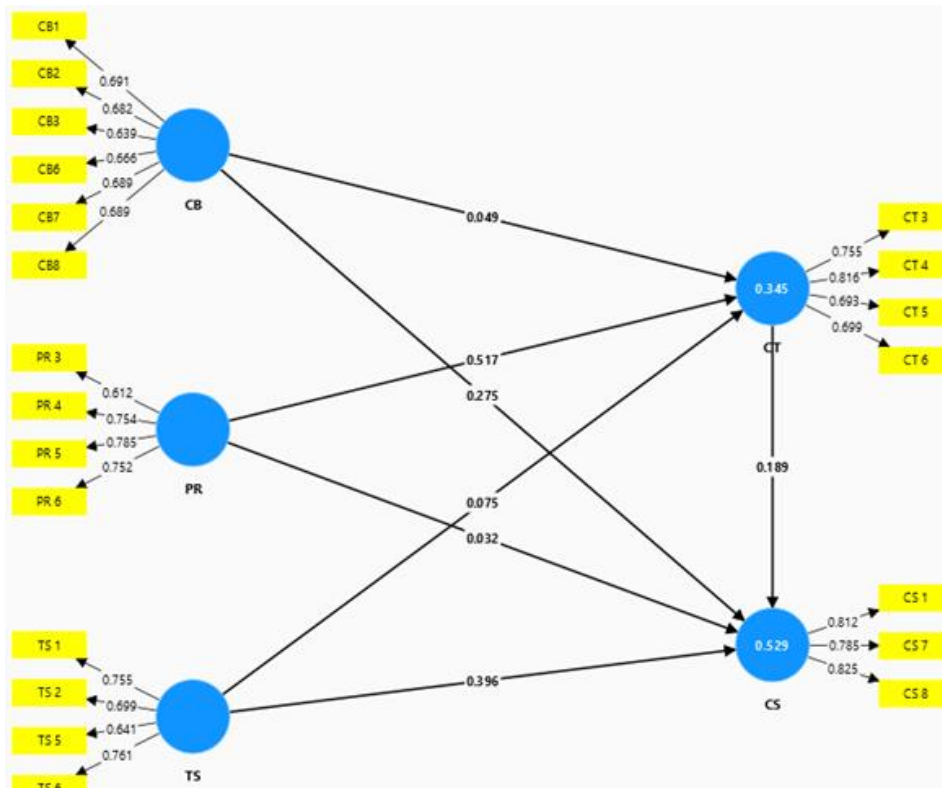
Figure 2.
Inner Model Measurement

The R-square statistic evaluates the model's explanatory power regarding endogenous variables, with values ranging from 0 to 1. Higher R-square values indicate stronger explanatory capacity. According to Hair et al. (2021), R-square values of 0.75, 0.50, and 0.25 represent substantial, moderate, and weak explanatory power, respectively. In this study, Table 7 demonstrates that Customer Satisfaction (CS) achieves a moderate R-square value, whereas Customer Trust (CT) reflects a weak R-square value based on these thresholds.

Table 7.
R-Square Values

Variable	R-square	Interpretation
Customer Satisfaction	0.529	Moderate
Customer Trust	0.345	Weak

Path Coefficient Analysis
Precise estimation of path coefficients is crucial for understanding relationships among variables. These coefficients form the basis for hypothesis testing, where statistical significance is typically determined by a t-value exceeding 1.96 (Yang et al., 2022). In addition, p-values below 0.05 indicate statistical significance, though this threshold can be adjusted depending on the study context (Kwak, 2023).

Results reveal significant positive effects of Product on Customer Trust (Hypothesis 2) for most related constructs, with two exceptions. Customer Behaviour and Time-Saving significantly impact Customer Satisfaction (Hypotheses 4 and 6), although one construct in each category did not reach significance. Furthermore, Customer Trust significantly influences Customer Satisfaction (Hypothesis 7).

Table 8.
Direct Path Testing

	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Result
Customer Behaviour -> Customer Satisfaction (H$_4$)	0.081	3.408	0.001	Significant
Customer Behaviour -> Customer Trust (H$_1$)	0.102	0.481	0.631	Not Significant
Customer Trust -> Customer Satisfaction (H$_7$)	0.066	2.861	0.004	Significant
Product -> Customer Satisfaction (H$_5$)	0.080	0.404	0.686	Not Significant
Product -> Customer Trust (H$_2$)	0.063	8.256	0.000	Significant
Time-Saving -> Customer Satisfaction (H$_6$)	0.089	4.438	0.000	Significant
Time-Saving -> Customer Trust (H$_3$)	0.081	0.925	0.355	Not Significant

Hypothesis-Based Discussion

H1: Customer Behaviour → Customer Trust

The analysis found no significant relationship between customer behaviour and trust. The original sample estimate (O) was 0.049, with a t-value of 0.481 and a p-value of 0.631, well above the 0.05 threshold. These results contradict Purwanto (2022), who suggested a causal link. While cultural, social, personal, and psychological factors influence consumer perceptions, trust appears more dependent on strategic alignment with customer expectations, satisfaction, and consistent service delivery.

Table 9.
Customer Behaviour to Customer Trust

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Result
Customer Behaviour -> Customer Trust (H$_1$)	0.049	0.057	0.102	0.481	0.6310	Not Significant

H2: Product → Customer Trust

A strong positive association was observed between product quality and customer trust, with O = 0.517, t = 8.256, and p < 0.001, providing robust support for this hypothesis. This aligns with Aditiya et al. (2024), highlighting product excellence as fundamental to building trust, customer satisfaction, and loyalty through understanding consumer needs.

Table 10.
Product to Customer Trust

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Result
Product -> Customer Trust (H$_2$)	0.517	0.519	0.063	8.256	0.0000	Significant

H3: Time-Saving → Customer Trust

No statistically significant effect was found between time-saving and trust (O = 0.075, t = 0.925, p = 0.355), diverging from Bulacan et al. (2022). Although prompt delivery often enhances trust, this study suggests that speed alone may not suffice to foster trust.

Table 11.
Time-Saving to Customer Trust

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Result
Time-Saving -> Customer Trust (H₃)	0.075	0.077	0.081	0.925	0.355	Not Significant

H4: Customer Behaviour → Customer Satisfaction

Customer behaviour significantly influenced satisfaction, supported by O = 0.275, t = 3.408, and p = 0.001. This confirms findings by Rita et al. (2019) that behaviours such as repurchase intentions and word-of-mouth positively affect satisfaction in e-commerce contexts.

Table 12.
Customer Behaviour to Customer Satisfaction

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Result
Customer Behaviour -> Customer Satisfaction (H₄)	0.275	0.289	0.081	3.408	0.001	Significant

H5: Product → Customer Satisfaction

The relationship between product quality and satisfaction was not statistically significant (O = 0.032, t = 0.404, p = 0.686), contrasting Murni (2018). This may indicate that product quality influences satisfaction indirectly through mediators such as trust.

Table 13.
Product to Customer Satisfaction

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Result
Product -> Customer Satisfaction (H₅)	0.032	0.031	0.08	0.404	0.686	Not Significant

H6: Time-Saving → Customer Satisfaction

Time-saving positively and significantly affected satisfaction (O = 0.396, t = 4.438, p < 0.001), consistent with Rashaduzzaman (2020) who linked convenience to perceived value and purchase intentions in online retail.

Table 14.
Time-Saving to Customer Satisfaction

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Result
Time-Saving -> Customer Satisfaction (H_6)	0.396	0.381	0.089	4.438	0.000	Significant

H7: Customer Trust → Customer Satisfaction

Customer trust showed a significant positive effect on satisfaction (O = 0.189, t = 2.861, p = 0.004), reinforcing Surapati et al. (2020) who emphasize trust as a key antecedent to satisfaction due to perceived reliability and honesty.

Table 15.
Customer Trust to Customer Satisfaction

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Result
Customer Trust -> Customer Satisfaction (H_7)	0.189	0.189	0.066	2.861	0.004	Significant

Conclusion and Recommendation

This study explores the impact of the "new normal" on customer satisfaction in e-commerce, with a specific focus on the role of trust among millennial consumers in Indonesia. The findings reveal that product quality significantly influences customer trust, which in turn has a substantial effect on customer satisfaction. However, customer behavior and time-saving factors do not demonstrate a direct impact on trust. The central conclusion underscores that building and maintaining customer trust is crucial for e-commerce platforms aiming to enhance customer satisfaction. In the context of the COVID-19 pandemic, trust has become a pivotal factor in fostering customer loyalty and satisfaction, particularly among millennials, who constitute a substantial segment of the online consumer market.

Despite its contributions, this study has certain limitations, notably its focus on Indonesian millennials, which may limit the generalizability of the results to other demographic groups or geographic regions. Future research should examine these dynamics across diverse populations to develop a more comprehensive understanding of customer satisfaction in the e-commerce sector. Additionally, further investigation is warranted to assess the long-term effects of the "new normal" on consumer behavior and trust in digital marketplaces.

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