

CONSUMER PRIVACY CONCERN, TRUST, AND INTIMACY AS DRIVERS OF E-LOYALTY: THE MODERATING ROLE OF NEED FOR RELATEDNESS IN SHOPEE USERS

Boby Arinto^{1*}

Program Studi Doktor Ilmu Manajemen,
Fakultas Ekonomi dan Bisnis, Universitas Esa Unggul
boby.arinto@student.esaunggul.ac.id

Arief Kusuma Among Praja²

Fakultas Ekonomi dan Bisnis, Universitas Esa Unggul
arief.kusuma@esaunggul.ac.id

Triyono Arief Wahyudi³

Fakultas Ekonomi dan Bisnis, Universitas Esa Unggul
triyono.rief@esaunggul.ac.id

Dimas Angga Negoro⁴

Fakultas Ekonomi dan Bisnis, Universitas Esa Unggul
dimas.negoro@esaunggul.ac.id

(*Corresponding Author)

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Abstract-Indonesia's e-commerce adoption continues to expand as consumers increasingly depend on digital platforms for fast and convenient transaction, yet customer loyalty is becoming more difficult to sustain due to heightened competition and privacy concerns. Sh Shopee remains the leading marketplace in Indonesia in terms of market share and platform engagement. This study investigate This study examines how privacy concern, online trust, and brand intimacy influence e-loyalty within the Shopee ecosystem. In addition, the study investigates whether the need for relatedness moderates users' formation of relational bonds with the platform. A survey of 225 Shopee users in Greater Jakarta was analyzed using PLS-SEM, and the results show that; (1) privacy concern negatively affects trust and intimacy, (2) trust positively influences intimacy and e-loyalty, (3) intimacy strongly predicts e-loyalty, and (4) need for relatedness strengthens the trust and intimacy relationship. The findings contribute theoretically by integrating privacy, trust, and relational bonding perspectives in an online marketplace context, and provide managerial implications for strengthening customer loyalty through emotionally driven platform experiences.

Keywords: Privacy Concern; Online Trust; Brand Intimacy; E-Loyalty; Need for Relatedness; Shopee.

1. INTRODUCTION

1.1 Background

In recent years, Indonesia has emerged as one of the fastest-growing e-commerce markets in Southeast Asia, driven by improved internet accessibility, rising mobile device adoption, and changing consumer lifestyles. Industry reports show that internet penetration reached over 221 million users in 2024 (Indonesia, 2024). Meanwhile, the marketplace platform Shopee holds a dominant position, commanding approximately 46–52% of Indonesia's e-commerce gross merchandise value (GMV) and ranking as the most-visited online marketplace in the country (Databoks, 2024). These developments place Shopee at the forefront of Indonesia's digital retail landscape.

However, such expansive growth in the digital ecosystem brings with it significant consumer concerns regarding data privacy, security, and platform integrity. Legal analyses of Indonesia's Personal Data Protection Law (No. 27/2022) highlight recurring issues of data breaches, limited enforcement, and consumer distrust toward online services (Wiraguna et al., 2024). When consumers perceive that their personal information may be misused or insufficiently protected, they often adopt defensive behaviors, which can erode both trust and ongoing engagement with the platform.

In the context of digital marketplaces like Shopee, where personalization, recommendation-engines, big data analytics and interactive features are central to the value proposition, these privacy-related concerns are especially salient. Higher levels of privacy concern are associated with reduced trust in the platform and diminished willingness to engage emotionally or relationally with the brand (Alkis & Kose, 2022; Yao & Tarofder, 2024). On the other hand, a platform that is perceived as trustworthy can serve not only as a functional transaction facilitator but also as a relational anchor, leading to stronger emotional bonds (brand intimacy) and ultimately e-loyalty (Batra et al., 2012; Chaudhuri & Holbrook, 2001).

Importantly, the role of psychological needs such as the desire for connection and belonging (need for relatedness) has been under-explored in the marketplace context. According to Self-Determination Theory, when the need for relatedness is satisfied, individuals are more likely to develop stronger emotional ties with brands or platforms (Deci & Ryan, 2000 ; Gilal et al., 2019). In this study we propose that for Shopee users who have a higher need for relatedness, the progression from trust to brand intimacy will be stronger compared to those with lower relatedness needs.

1.2 Research Problem and Questions

While prior research has examined privacy concerns, trust and loyalty in e-commerce, fewer studies have addressed how privacy concern simultaneously influences trust and brand intimacy, especially within a dominant marketplace in an emerging economy such as Indonesia. Most existing research has focused on purchase intention or satisfaction rather than relational outcomes like brand intimacy. Additionally, much of the brand intimacy research focuses on hedonic or luxury goods rather than large transactional platforms. The moderating effect of consumer psychological need for relatedness within this trust, intimacy and loyalty chain remains largely unexplored. Therefore, the following central questions guide this study:

1. How does consumer privacy concern influence online trust and brand intimacy toward Shopee?
2. How do online trust and brand intimacy, individually and sequentially, shape e-loyalty toward Shopee?
3. Does the need for relatedness strengthen the positive effect of online trust on brand intimacy for Shopee users?

1.3 Research Objectives

Aligned with the research questions, the study aims:

1. To examine the negative effects of consumer privacy concern on online trust and brand intimacy toward Shopee.
2. To analyze the positive effects of online trust on brand intimacy and e-loyalty, as well as the effect of brand intimacy on e-loyalty toward Shopee.
3. To test whether the need for relatedness moderates the relationship between online trust and brand intimacy, such that the relationship is stronger among consumers with a higher need for relatedness.

1.4 Theoretical Contributions and Novelty

From a theoretical standpoint, this research integrates privacy-trust literature, consumer-brand relationship theory, and Self-Determination Theory into a unified model focused on brand intimacy and e-loyalty. While prior research has examined the effect of privacy concern on trust, few studies have positioned brand intimacy as a mediating mechanism in the marketplace context. Furthermore, incorporating the need for relatedness as a moderating variable enriches theoretical understanding of individual psychological differences in forming emotional bonds with digital platforms.

1.5 Managerial Implications

This study provides actionable insights for Shopee and similar platforms:

1. Understanding that privacy concern erodes trust and intimacy emphasises the need for transparent data-practices and privacy assurances.
2. Recognising that trust leads to emotional connection suggests that platforms should invest not only in functionality but also in relational experiences, such as personalised communication and community orientation.
3. Segmenting users based on their need for relatedness enables more tailored loyalty-building strategies; for instance, consumers high on relatedness may respond better to community-focused features or storytelling-based marketing.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 Consumer Privacy Concern

Consumer privacy concern refers to users' perceived vulnerability to data misuse, identity exposure, or unauthorized tracking when interacting with digital platforms. High privacy concern often triggers avoidance and defensive behaviours, reducing trust in online services. This mechanism is commonly observed in e-commerce environments that depend on personal data collection and algorithmic personalization (Alkis & Kose, 2022). When privacy risks appear high, users experience psychological discomfort, which restricts their motivation to emotionally engage with brands and platforms (Yao & Tarofder, 2024).

In Indonesia, concerns are amplified due to increasing cybercrime incidents and ongoing challenges in the enforcement of personal data protection regulations (Wiraguna et al., 2024). This suggests privacy concerns may erode not just transactional confidence but also relational connection toward platforms like Shopee. Therefore, we hypothesize:

H1: Consumer privacy concern negatively influences online trust toward Shopee.

H2: Consumer privacy concern negatively influences brand intimacy with Shopee.

2.2 Online Trust

Online trust is a belief that a digital platform behaves reliably, securely, and with consumer interests in mind. Trust is foundational for online behaviours because it reduces perceived risk in environments where face-to-face verification is absent (Martin & Murphy, 2017). When trust is established, consumers become more willing to deepen their engagement with the platform and attribute human-like virtues to the brand (Chaudhuri & Holbrook, 2001).

Trust also fosters emotional closeness and brand intimacy by enabling consumers to feel comfortable relying on the platform for personal and repeated interactions (Roy et al., 2023). Higher trust leads to stronger loyalty behaviours such as repeat purchases and continued usage intention (Al-Adwan, 2020). We propose:

H3: Online trust positively influences brand intimacy with Shopee.

H4: Online trust positively influences e-loyalty toward Shopee.

2.3 Brand Intimacy

Brand intimacy reflects the degree of emotional closeness and relational attachment consumers experience with a brand (Batra et al., 2012). It is driven by feelings of identity expression, personal relevance, and interaction experiences that build psychological bonds. Although brand intimacy has been mostly studied in luxury, hedonic, or high-involvement brands, emerging research shows it is increasingly relevant in digital service environments such as mobile apps, social commerce and online platforms (Dan & Ngo, 2023).

In marketplace settings where brand identity is mediated through user interface, service experience and recommendation systems, intimacy becomes a differentiator beyond price or convenience. We propose:

H5: Brand intimacy positively influences e-loyalty toward Shopee.

2.4 Need for Relatedness as a Moderator

Need for relatedness is one of the three fundamental psychological needs in Self-Determination Theory, reflecting individuals' desire for belonging and meaningful connection with others (Deci & Ryan, 2000). Consumers with a stronger desire for affiliation tend to form deeper relational bonds with brands and are more receptive to trust-based interactions (Gilal et al., 2019).

In e-commerce platforms like Shopee, relational cues include personalized engagement, friendly branding elements, and community-enabled interactions. When users with higher need for relatedness trust the platform, they may translate that trust into emotional intimacy more strongly compared to users with lower relatedness needs (Lin, 2016; Appolloni et al., 2023). Accordingly, we hypothesize:

H6: Need for relatedness strengthens the positive influence of online trust on brand intimacy, such that the relationship is stronger for users with high need for relatedness.

2.5 Research Conceptual Model

The conceptual model developed in this study posits that:

1. Privacy concern reduces trust and intimacy (H1, H2)
2. Trust increases intimacy and loyalty (H3, H4)
3. Intimacy increases loyalty (H5)
4. Relatedness moderates trust and intimacy (H6)

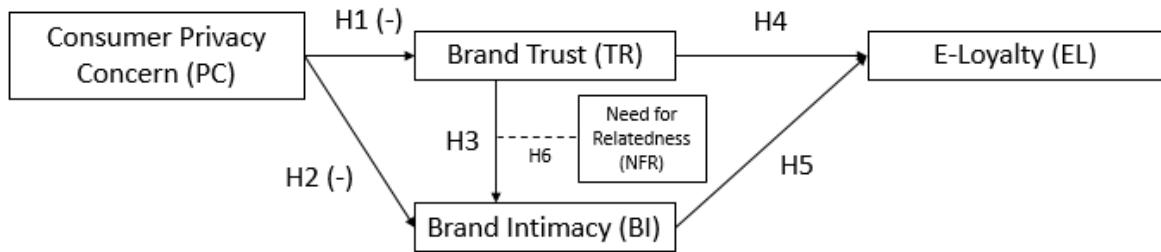


Figure 1. Research Model

The conceptual model developed in this study posits that consumer privacy concern negatively affects online trust and brand intimacy, which subsequently influence e-loyalty. Online trust is proposed to enhance both brand intimacy and e-loyalty, while brand intimacy serves as a direct predictor of e-loyalty. In addition, need for relatedness is incorporated as a moderating variable that strengthens the relationship between online trust and brand intimacy.

Collectively, this model focuses on the examination of core direct and moderation effects. At a conceptual level, the model also implies potential indirect and conditional pathways through which consumer privacy concern may influence e-loyalty via online trust and brand intimacy. These mechanisms are acknowledged as theoretical extensions and are discussed as directions for future research, rather than being empirically tested in the present study.

3. METHODOLOGY

3.1 Research Design

This study employs a quantitative approach with a cross-sectional survey design. Partial Least Squares-Structural Equation Modeling (PLS-SEM) was chosen to test the hypothesized relationships and moderating effect. PLS-SEM is appropriate for predictive modeling, complex relational structures and theory development in social sciences (Hair et al., 2022).

3.2 Sample and Data Collection

The target population consisted of active Shopee users in Indonesia who have completed purchases at least once in the past three months. A non-probability purposive sampling method was used to ensure respondents had relevant experience with Shopee services.

A total of 240 responses were initially collected through an online survey. Respondents were recruited using a purposive sampling approach, targeting individuals who actively used Shopee as an e-commerce platform. To ensure eligibility, screening questions were embedded at the beginning of the questionnaire, requiring respondents to confirm that they had made at least one purchase on Shopee within the last three months and were aged 18 years or older. Responses that failed to meet these criteria, were incomplete, showed straight-lining patterns, or contained duplicated email addresses were excluded. After data cleaning, 225 valid responses were retained for final analysis, exceeding the minimum sample size requirements for PLS-SEM (Hair et al., 2022). The questionnaire was distributed via social media channels and instant messaging platforms, including WhatsApp and Instagram, without offering monetary incentives to reduce response bias.

3.3 Measures and Instruments

All constructs were measured using reflective indicators adapted from established scales:

Table 1. Indicators of Research Variables

Construct	Source	Indicators	Likert Scale
Consumer Privacy Concern	(Alkis & Kose, 2022)	PC1. I worry that Shopee collects too much personal information about me. PC2. I am afraid that my personal data on Shopee could be used for other purposes without my knowledge. PC3. I feel that I do not have enough control over how Shopee uses my personal information. PC4. I often think about privacy issues when I shop on Shopee.	1-5
Online Trust	(Komariyah et al., 2024)	TR1. I believe Shopee acts in the best interests of its customers. TR2. I feel confident Shopee delivers its service promises (e.g., delivery, promotions). TR3. I feel safe making transactions and payments through Shopee. TR4. Overall, I trust Shopee as an online shopping platform.	1-5
Brand Intimacy	(Dan & Ngo, 2023)	BI1. I feel that Shopee understands my shopping needs and preferences. BI2. I feel an emotional closeness to Shopee as my shopping platform. BI3. I feel that Shopee truly cares about my shopping experience. BI4. My relationship with Shopee feels like more than just occasional transactions.	1-5
E-Loyalty	(Al-Adwan, 2020)	LOY1. I intend to continue using Shopee as one of my main shopping platforms. LOY2. If prices and services are similar, I would choose Shopee over other platforms. LOY3. I am willing to recommend Shopee to my friends or family. LOY4. I usually look for products on Shopee first before checking other platforms.	1-5
Need for Relatedness	(Gilal et al., 2019)	NR1. When shopping online, I want to feel connected with other users.	1-5

	<p>NR2. I enjoy Shopee's features (reviews, live streams, chat, communities) that make me feel close to sellers or other users.</p> <p>NR3. It is important for me to feel a sense of connection with the brand or platform where I shop online.</p> <p>NR4. I feel more comfortable shopping on Shopee when there is social interaction (reviews, live streams, chat, communities).</p>	
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All items were measured on a five-point Likert scale (1-5), 1 strongly disagree, 5 strongly agree, consistent with prior studies in digital consumer behaviour research.

3.4 Data Analysis

The data were analyzed using SmartPLS 4 in two stages. (1) Measurement Model Evaluation, consists of Internal consistency Cronbach's Alpha (≥ 0.70), Convergent validity AVE (≥ 0.50), Discriminant validity HTMT (< 0.85). (2) Structural Model Evaluation; Path coefficients (β), t-values, and p-values using Bootstrapping (5,000 subsamples), Coefficient of determination R^2 , Effect size f^2 , Model fit SRMR (< 0.08). The moderating effect was tested by creating an interaction term (Trust \times Need for Relatedness) using the product-indicator approach in SmartPLS.

3.5 Ethical Considerations

Respondents provided informed consent prior to participation. The survey guaranteed voluntary participation, anonymity and confidentiality in accordance with academic ethical guidelines for social research.

4. Results

4.1 Measurement Model Evaluation

All constructs demonstrated strong internal consistency, indicated by Cronbach's Alpha and Composite Reliability values exceeding 0.70. Average Variance Extracted (AVE) scores were above the recommended 0.50 threshold, demonstrating convergent validity (Hair et al., 2022). HTMT values were below 0.85, confirming construct discriminant validity.

4.2 Structural Model Evaluation

The structural model demonstrated satisfactory predictive power across the endogenous variables. The R^2 value for Online Trust was 0.214, indicating a weak to moderate level of explained variance. Brand Intimacy showed a higher level of predictability with an R^2 of 0.523, reflecting a moderate explanatory strength. Meanwhile, E-Loyalty achieved the strongest predictive accuracy, with an R^2 value of 0.629, signifying moderate to strong explanatory power. In addition to predictive accuracy, the overall model fit was also supported by an SRMR value of 0.059, which falls well below the recommended threshold of 0.08 and therefore indicates good model fit.

4.3 Hypothesis Testing

Bootstrapping results (5,000 subsamples):

Table 2. Structural Model Results and Hypotheses Testing

Hypothesis	Path	β	t-value	p-value	Result
H1	PC - TR	-0.463	8.992	<0.001	Supported
H2	PC - BI	-0.207	3.284	0.001	Supported
H3	TR - BI	0.543	11.422	<0.001	Supported
H4	TR - EL	0.328	4.514	<0.001	Supported
H5	BI - EL	0.452	5.923	<0.001	Supported
H6	TR \times NR - BI	0.111	2.037	0.042	Supported

All structural relationships were significant and aligned with theoretical predictions that trust drives both emotional and behavioural outcomes (Chaudhuri & Holbrook, 2001; Roy et al., 2023).

4.4 Discussion

The findings illustrate a privacy and trust paradox in Indonesia's digital marketplace environment: even though online shopping is highly convenient and widespread, concerns over personal data vulnerabilities significantly weaken trust toward the platform (Alkis & Kose, 2022; Wiraguna et al., 2024).

Trust plays a critical dual role, facilitating emotional bonding and behavioural loyalty reflecting prior relational marketing studies (Martin & Murphy, 2017; Al-Adwan, 2020). In contexts like Shopee, where competition is intense and switching costs are low, trust becomes a unique relational asset that translates into stronger loyalty intentions.

Furthermore, brand intimacy emerged as a powerful emotional mechanism that strengthens customers' long-term loyalty (Batra et al., 2012). As Indonesian users increasingly expect personalized and socially engaging digital experiences (NielsenIQ, 2023), emotional factors appear to significantly shape loyalty beyond just price and convenience.

Notably, the moderating role of need for relatedness confirms Self-Determination Theory: users with higher relational needs convert trust into intimacy more easily (Deci & Ryan, 2000; Gilal et al., 2019). This suggests that segmenting users by psychological traits can unlock more efficient loyalty strategies.

Beyond the core direct and moderation effects examined in this study, the conceptual model also suggests broader explanatory mechanisms through which consumer privacy concern may shape e-loyalty. Specifically, privacy concern may indirectly influence e-loyalty

by undermining online trust and weakening brand intimacy, as well as through a potential serial process involving trust and intimacy. Moreover, the moderating role of need for relatedness indicates that these conceptual pathways may be more salient among consumers with stronger relational orientations.

While these indirect and conditional relationships were not empirically tested in the current analysis, they offer meaningful theoretical extensions that future studies may explore using mediation and moderated mediation approaches to further unpack the psychological mechanisms underlying consumer–brand relationships in digital marketplaces.

5. Conclusion

This study demonstrates that privacy concern reduces trust and emotional intimacy in online shopping environments, reinforcing the need for platforms to strengthen data protection credibility. Trust not only lowers transactional uncertainty but also enables emotional bonding, sustaining loyalty in competitive digital markets (Chaudhuri & Holbrook, 2001). Brand intimacy was found to be a key predictor of e-loyalty, suggesting that relational factors have become central to consumer–brand engagement in Indonesia’s marketplace sector (Dan & Ngo, 2023). Need for relatedness significantly moderates the trust-to-intimacy link, offering a novel theoretical lens in marketplace behavioural studies (Deci & Ryan, 2000).

5.1 Managerial Implications

Platform managers, especially Shopee, should:

1. Communicate privacy policy updates in simple and user-friendly language to mitigate privacy-related fears,
2. Strengthen trust-based design (anti-fraud actions, seller verification, dispute resolution),
3. Invest in emotional branding and relational experiences,
4. Create engagement programs tailored to high-relatedness users, such as gamified community features.

5.2 Limitations and Future Research

This study is not without limitations, which offer opportunities for future research. First, the use of cross-sectional data restricts the ability to capture changes in consumer perceptions over time. Longitudinal or experimental designs could provide deeper insights into how privacy concern, trust, and intimacy evolve during the customer journey. Second, the sample was limited to Shopee users. Although Shopee represents a major e-commerce platform in Indonesia, the findings may not be fully generalisable to other marketplaces with different brand identities and user experiences. Future research would benefit from incorporating multiple platforms, such as Tokopedia, Lazada, or TikTok Shop, enabling comparative analysis across digital ecosystems. Third, the present model focused primarily on relational mechanisms and a single psychological moderator (need for relatedness). Future studies may explore additional psychological and social variables, including autonomy, community belonging,

cultural orientations, or platform gamification, to increase predictive accuracy and broaden theoretical implications.

6. References

Al-Adwan, A. S. (2020). Building customer loyalty in online shopping: The role of online trust, online satisfaction and electronic word of mouth. *International Journal of Electronic Marketing and Retailing*, 11(3), 278–306.
<https://doi.org/10.1504/IJEMR.2020.108132>

Alkis, A., & Kose, T. (2022). Privacy concerns in consumer e-commerce activities and response to social media advertising: Empirical evidence from Europe. *Computers in Human Behavior*, 135, 107412. <https://doi.org/10.1016/j.chb.2022.107412>

Appolloni, A., Colasanti, N., Fantauzzi, C., & Frondizi, R. (2023). An innovative approach to online consumer behaviour segmentation: The self-determination theory in an uncertain scenario. *European Journal of Innovation Management*, 26(5), 1220–1244.
<https://doi.org/10.1108/EJIM-11-2022-0609>

Batra, R., Ahuvia, A., & Bagozzi, R. P. (2012). Brand love. *Journal of Marketing*, 76(2), 1–16.

Chaudhuri, A., & Holbrook, M. B. (2001). The chain of effects from brand trust and brand affect to brand performance: the role of brand loyalty. *Journal of Marketing*, 65(2), 81–93.

Dan, N. T. N., & Ngo, L. V. (2023). Does brand anthropomorphism and brand intimacy matter in deepening consumers' brand engagement and behavioral intentions? *Cogent Business & Management*, 10(2), 2249897.
<https://doi.org/10.1080/23311975.2023.2249897>

Databoks, K. (2024). *Shopee pimpin pangsa pasar e-commerce Indonesia*.
<https://databoks.katadata.co.id>

Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268.
https://doi.org/10.1207/S15327965PLI1104_01

Gilal, F. G., Zhang, J., Sharif, A., & Gilal, N. G. (2019). The role of self-determination theory in marketing science: An integrative review and agenda for research. *European Management Journal*, 37(1), 29–44. <https://doi.org/10.1016/j.emj.2018.10.004>

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd edition). Sage.

Indonesia, A. P. J. I. (2024). *Laporan Survei Internet Indonesia 2023–2024*.
<https://apjii.or.id/berita/d/apjii-jumlah-pengguna-internet-indonesia-tembus-221-juta-orang>

Komariyah, I., Arifin, Z., & Efendi, A. (2024). The impact of online satisfaction and trust of e-commerce customers toward loyalty: A study on Indonesia e-commerce customers.

International Journal of Business, Law, and Education, 5(2), 2158–2164.
<https://doi.org/10.56442/ijble.v5i2.824>

Lin, R. (2016). Need for relatedness: A self-determination theory perspective on social networking site use and well-being. *Asian Journal of Communication, 26(3), 214–231.*
<https://doi.org/10.1080/01292986.2015.1126749>

Martin, K. D., & Murphy, P. E. (2017). The role of data privacy in marketing. *Journal of the Academy of Marketing Science, 45(2), 135–155.* <https://doi.org/10.1007/s11747-016-0490-3>

NielsenIQ. (2023). *Consumer behaviors driving the future of e-commerce in Asia Pacific.* <https://nielseniq.com/global/en/insights/analysis/2023/consumer-behaviors-driving-the-future-of-e-commerce-in-asia-pacific/>

Roy, S. K., Singh, G., Sadeque, S., Harrigan, P., & Roy, R. (2023). Customer engagement with digitalized interactive platforms in retailing. *Journal of Business Research, 164, 114001.* <https://doi.org/10.1016/j.jbusres.2023.114001>

Wiraguna, S. A., Sulaiman, A., & Barthos, M. (2024). Implementation of consumer personal data protection in e-commerce from the perspective of Law No. 27 of 2022. *Journal of World Science, 3(3), 410–418.* <https://doi.org/10.58344/jws.v3i3.584>

Yao, Y., & Tarofder, A. K. (2024). Privacy concerns in e-commerce marketing: A systematic literature review study. *International Journal of Global Economics and Management, 2(3).* <https://doi.org/10.62051/IJGEM.v2n3.07>



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