



Navigating Online Success: Innovation, Interaction, and Customer Engagement in E-commerce Performance

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Abstract. In the era of globalization, companies, exemplified by Indonesia's significant progress in the World Intellectual Property Organization's Global Innovation Index (GII) 2022, face the imperative to adapt to dynamic economic and technological shifts. The growing importance of innovation is underscored by the GII, emphasizing the pivotal role of managers who prioritize innovation in contributing to sustainability amid evolving market landscapes. Collaboration, particularly through the strategic use of information technology tools, emerges as a crucial element for fostering innovation and enhancing overall operational efficiency. This study addresses a research gap by thoroughly exploring the interplay among innovation, branding capabilities, customer engagement, and social media dynamics, aiming to uncover their collective impact on sustained business success. Key research questions focus on understanding the synergistic influence of these elements on business performance and elucidating the mechanisms connecting them to improved customer engagement. The research findings indicate that the outer model, scrutinizing observable variables, validates their reliability and validity. Multicollinearity tests using Variance Inflation Factor (VIF) and inner model analysis further confirm the reliability of measurement instruments, ensuring the overall integrity of the structural equation model. Despite these strengths, the study acknowledges limitations, urging caution in generalizing findings. To enhance the model's relevance, future research should explore moderating variables, contextual factors, and mediating mechanisms, considering the rapidly evolving technology and business landscapes. The study sets the stage for continuous efforts to refine and adapt the model, ensuring its applicability in navigating the ever-changing global business environment.

Keywords: Customer Engagement, Innovation, Performance.

1 Introduction

In the tech industry, for example, companies often engage in collaborative efforts with research institutions, industry partners, and start-ups to foster innovation. These partnerships enable them to share knowledge, pool resources, and collectively address industry challenges. Additionally, the adoption of advanced information technology

tools, such as cloud-based platforms and data analytics, serves to streamline communication processes, resulting in cost savings and improved overall operational efficiency. This strategic integration of innovation and technology not only reinforces a company's competitive edge but also ensures its resilience and adaptability in an ever-evolving global landscape.

In the contemporary global landscape, businesses grapple with the challenges posed by economic shifts and technological advancements. Navigating these complexities demands a strategic fusion of innovation, branding capabilities, and effective social media utilization to bolster overall business performance. While innovation is recognized as a linchpin for adaptation, the integration of branding strategies and customer engagement, especially through social media platforms, emerges as increasingly critical for shaping consumer perceptions and fostering lasting loyalty.

Within the existing body of literature, there is a discernible research gap that warrants a comprehensive exploration of how the intricate interplay among innovation, branding capabilities, customer engagement, and social media dynamics collectively contributes to sustained business success. Prior studies often fall short of providing an integrated examination, leaving unanswered questions about the combined effects of these elements on business performance.

To address this research gap, the study poses several key questions. Firstly, how do innovation, branding capabilities, customer engagement, and social media capabilities synergistically influence overall business performance? Secondly, what are the specific mechanisms that connect innovation, branding, and social media strategies to improved customer engagement and, subsequently, how do these factors impact business outcomes? Lastly, the study seeks to explore how the Dynamic Capabilities Theory elucidates the competitive advantage derived from effective resource allocation in the context of innovation, branding, and social media.

In line with these research questions, the study's objectives encompass examining both individual and collective impacts of innovation, branding, customer engagement, and social media capabilities on business performance. Additionally, the study aims to unearth the underlying mechanisms that link innovation, branding, and social media strategies to heightened customer engagement and subsequent effects on business outcomes. Leveraging the Dynamic Capabilities Theory as a theoretical framework, this research aspires to offer a holistic understanding of the strategic dimensions contributing to business success.

2 Literature Review

In this literature review, the Dynamic Capabilities Theory will serve as a foundation for understanding the research problems. Dynamic Capability is comprised of two words, each of which has its own meaning. The term 'dynamic' refers to the capacity to update competencies in order to achieve conformity with the changing business environment. Innovation is the key strategy, and its level should be increased in order to improve performance (1). When time is of the essence, the rate of technological development is rapid, and the nature of competition and future markets is uncertain, creative

responses are required. Whereas the phrase 'capabilities' highlights the critical role of strategic management in adapting, integrating, and restructuring an enterprise's resources and functional competences to meet the needs of a changing environment, 'capabilities' is a synonym for 'capabilities'.

There are three determinants of a company's dynamic capabilities: managerial and organizational procedures, roles, and pathways (2). Managerial and organizational processes refer to the manner in which tasks are carried out inside an organization, as a routine, practice pattern, or learning pattern. Integration is the ability of managers to coordinate or integrate activities inside the organization, as well as the efficiency and effectiveness with which internal coordination and integration can be performed. Strong relationships may enable a company to optimize synergy and respond rapidly to any concerns in order to generate a competitive edge (3). Learning is a process of repetition and experimentation that improves the performance of activities and identifies potential for new production. transformation and reconfiguration. For an activity to be considered part of a capability, the capability must have reached a specific level of routineness.

2.1 Innovation Dynamics in Branding and Social Media

In this section, we explore the multifaceted role of innovation in shaping both branding capabilities and social media capabilities, emphasizing its pivotal significance in fostering customer engagement. By delving into these interconnected aspects, we aim to illuminate the integral relationship between innovation and the overall effectiveness of brand presence in the digital landscape. Innovation plays a central role in strengthening customer engagement, becoming a key driver of business success and growth. By continuing to innovate, companies can respond quickly to changing market dynamics and evolving customer needs. This provides an opportunity to create a product or service that not only satisfies, but also builds an emotional bond with customers. The ability to consistently innovate also provides a competitive advantage by differentiating a company from competitors. More than just creating new products, innovation spans the entire operational spectrum, including processes and business models. Companies that focus on innovation create a responsive environment, ensure operational efficiency, and demonstrate social responsibility that can increase customer engagement (4). By participating in the innovation process, customers feel recognized, provide direct input, and become an integral part of the product or service development journey. In this way, innovation is not only a tool for meeting customer expectations, but also a solid foundation for building sustainable and mutually beneficial relationships.

In the pursuit of captivating consumer interest, a multifaceted and creative approach is essential. The key lies in offering unique and exclusive products to create a distinctive online shopping experience (5). Engaging content, such as visually appealing images and videos, serves not only to showcase products but also to tell a compelling brand story. Interactive features on the website, like virtual try-ons and augmented reality experiences, enhance the overall shopping experience (6). Personalization plays a crucial role, utilizing customer data to tailor recommendations and discounts based on individual preferences. Leveraging the power of social media aims to build a community

around the brand through conversations, contests, and user-generated content. Surprise elements, such as unexpected discounts and personalized thank-you notes, are incorporated to create memorable moments for customers. Collaborations and partnerships with influencers and like-minded brands further extend the reach and credibility of the online shop (7). Actively integrating and showcasing customer feedback adds a layer of authenticity and trust to the brand. Innovative marketing campaigns, whether through storytelling, humor, or interactive elements, are designed to leave a lasting impression. Moreover, the commitment to sustainability initiatives aligns with the growing environmental consciousness of consumers. By consistently experimenting with these strategies, the goal is to craft a dynamic and captivating online shopping experience that resonates with consumers and sets the brand apart in a competitive market.

2.2 Integrated Dynamics: Branding and Social Media Capabilities in Customer Engagement

This section delves into the synergistic relationship between branding capabilities and social media dynamics as catalysts for transformative customer engagement. By exploring the reciprocal influences between these elements, we aim to provide a comprehensive understanding of how innovations in branding seamlessly intertwine with changes in social media capabilities, collectively shaping and enhancing the customer engagement landscape. The presence of social media provides customers with an opportunity to familiarize themselves with a product or brand, serving as a means to engage customers in obtaining information and communicating with each other, ultimately enhancing the performance of a business (8). When sellers leverage live streaming sessions to showcase products, the value of the goods becomes clear to buyers, while sellers can connect directly with customers. Interactions not only occur between streamers and potential buyers, but also engage customers with each other. Research by a number of researchers has revealed that buyer behavior not only influences their own purchasing decisions, but also has a significant impact on the purchasing decisions of others (9). Hence, administrators managing brand pages on social media platforms need to be mindful that their posts can impact online engagement. Establishing a brand page on a platform like Facebook should not be a mere imitation of other organizations; rather, administrators should make this decision considering the potential influence their posts may have on the audience.

Proficiency in crafting marketing initiatives that effectively influence consumers to choose a product necessitates a strategic and holistic approach. Commencing with thorough market research, one must gain a deep understanding of the target audience, their preferences, and current market trends (10). The development of detailed consumer personas becomes pivotal, providing insights into specific needs and pain points. Clearly defining the unique selling proposition is crucial, emphasizing what sets the product apart and why it should be the preferred choice. Compelling storytelling, creating an emotional connection, and ensuring an omni-channel presence contribute to a cohesive and impactful marketing strategy (11, 12). Content marketing, through valuable and engaging content, positions the brand as an industry authority. Collaborating

with influencers, implementing strategic promotions, and showcasing positive user reviews further enhance the product's appeal. Maintaining ongoing customer engagement, utilizing data analytics to measure effectiveness, and embracing continuous innovation are essential elements for creating influential marketing initiatives. By incorporating these strategies, one can proficiently steer consumer preferences towards the product while building a loyal customer base.

2.3 Customer Engagement Impact on Business Performance

Consistently monitoring customer activities and interactions is facilitated through the use of customer tracking tools or Customer Relationship Management (CRM) systems (13). These platforms enable the recording and analysis of various customer interactions, providing valuable insights into preferences and needs. Simultaneously, tracking customer information via CRM or databases allows for the maintenance of detailed customer profiles, enhancing personalized services. Providing the latest updates to customers across all contacts is achieved through channels like email, text messages, or social media notifications, fostering brand awareness and sustaining customer engagement (14). Encouraging friends and relatives to purchase products involves effective word-of-mouth strategies, such as referral programs or discounts, capitalizing on existing social trust. Active participation in online community discussions, whether in industry forums or social media groups, builds brand presence, increases visibility, and allows for direct interaction with potential customers, contributing to positive relationships and heightened customer trust. Engaging in these practices is crucial, as it ensures the establishment of strong customer relationships, expands brand reach, and solidifies a positive reputation within online communities, ultimately fostering customer loyalty and business success.

The relationship between customer engagement and business performance is crucial for the overall success of a company. Customer engagement, reflecting the depth of interaction and connection with customers, significantly influences various performance metrics. Actively engaging with customers, fosters brand loyalty, leading to repeat purchases, increased sales turnover, and steady revenue growth. Engaged customers often become brand advocates, contributing to positive word-of-mouth and expanding market share (15). Moreover, customer engagement shapes a positive brand reputation, attracting new customers and retaining existing ones, impacting customer acquisition and retention metrics (13). Additionally, the data-driven insights derived from monitoring customer activities and preferences enhance decision-making, product offerings, and marketing strategies, leading to more efficient operations and increased profitability. In essence, a robust customer engagement strategy serves as a catalyst for improved business performance, creating a positive feedback loop that contributes significantly to sustained success in the competitive business landscape.

3 Method

Descriptive quantitative research was utilized by the author for this study. Whereas this form of research seeks to provide a methodical, factual, and accurate account of existing events and facts. This type of investigation yields data in the form of numbers and statistical analysis. Researchers are attempting to determine the relationship between social media proficiency and online store performance.

Data collection in a study is essential because the outcomes of the collected data can be used to test hypotheses or solve an issue. In this study, the authors employed a questionnaire as a data collection instrument in order to get pertinent and correct data from the intended respondents. The questionnaire is a strategy for collecting data in which respondents react to a series of questions or written remarks (16).

The analytical method used in this study is the Structural Equation Model (SEM) based on Partial Least Square (PLS), and Smart PLS version 3.0 is used to deal with or solve the SEM PLS. Structural equation modeling (SEM) is a multivariate technique that is a combination of regression analysis (correlation) that seeks to examine the relationship between variables that exist in a model, both between indicators and their constructs or relationships between constructs (16). In the meantime, PLS is an alternate method that replaces the covariance-based SEM method with a version. Covariance-based structural equation modeling (CB-SEM) typically examines causality or theory, whereas PLS is more of a predictive model that tests theory or develops theory for predictive reasons.

4 Results and Discussion

The examination of direct effects is a crucial aspect of statistical analysis, particularly through the scrutiny of P-values. In this analysis, a P-value less than 0.05 is indicative of a statistically significant impact on the dependent variable under investigation. The following table presents the outcomes of this assessment, and through the interpretation of P-values, it becomes possible to discern the significance of the influence exerted on the dependent variable. Let's delve into the details of the results to elucidate the meaningful relationships and their statistical significance (Table 1).

Table 1. Goodness of Fit

	Original Sample (O)	Standard Dev. (STDEV)	T-Statistic (O/STDEV)	P Values	Conclusion
BC -> BP	0.318	0.078	4.091	0.000	(+) significance
BC -> CE	0.448	0.097	4.621	0.000	(+) significance
CE -> BP	0.710	0.043	16.507	0.000	(+) significance
Innov -> BC	0.715	0.043	16.651	0.000	(+) significance
Innov -> BP	0.455	0.051	8.856	0.000	(+) significance
Innov -> CE	0.641	0.045	14.125	0.000	(+) significance
Innov -> SMC	0.657	0.047	13.889	0.000	(+) significance
SMC -> BP	0.215	0.068	3.157	0.002	(+) significance

	Original Sample (O)	Standard Dev. (STDEV)	T-Statistic (O/STDEV)	P Values	Conclusion
SMC -> CE	0.303	0.096	3.155	0.002	(+) significance

5 Conclusion

Construct validity and reliability assessment based on AVE and composite reliability values confirm the validity and reliability of variables, with all variables deemed valid in this study. Multicollinearity tests using Variance Inflation Factor (VIF) indicate no significant issues among variable pairs. The goodness of fit is evaluated through R-squared values, demonstrating substantial explanatory power for variables in the model. The inner model analysis further validates the reliability of measurement instruments, with Composite Reliability values exceeding the threshold. Results from VIF calculations indicate no multicollinearity concerns. Model fit indicators, such as SRMR and NFI, suggest the model adequately fits the data. Direct effects analysis confirms significant relationships between variables.

However, it's crucial to acknowledge the limitations of this study. First, the research design and findings are based on cross-sectional data, limiting the ability to establish causation. Longitudinal studies could offer a more nuanced understanding of the dynamic relationships over time. Second, the study relies on self-reported data, which may introduce social desirability bias. Future research could incorporate objective measures or employ mixed-methods approaches to enhance data reliability. Additionally, the study focuses on a specific industry or context, and generalization to other settings should be done cautiously. Exploring the model's applicability across diverse industries or cultural contexts could enrich the generalizability of findings.

As for future research directions, investigating moderating variables that may influence the relationships examined in this study could provide a deeper understanding of the complexities involved. Exploring the role of contextual factors, such as industry-specific dynamics (17) or technological advancements (18), may contribute to a more nuanced model. Furthermore, examining the mediating mechanisms through which certain variables influence outcomes could uncover additional layers of the causal pathways. Finally, considering the rapid evolution of technology and business landscapes, continuous research efforts are needed to adapt and refine the model to stay relevant in the ever-changing business environment.

Acknowledgment. We would like to express our heartfelt gratitude to our advisors for their invaluable guidance and to the participants for their crucial contributions to this research. Special thanks to the academic institutions that provided resources, with additional support from Universitas Muhammadiyah Surakarta (UMS) for their financial assistance. Our appreciation also goes to friends, family, and colleagues for their unwavering support. Your collective contributions have made this research possible. Thank you.

References

1. Arshad MZ, Arshad D, Lamsali H, Ibrahim Alshuaibi AS, Ibrahim Alshuaibi MS, Albashar G, et al. Strategic resources alignment for sustainability: The impact of innovation capability and intellectual capital on SME's performance. Moderating role of external environment. *J Clean Prod.* 2023;417:137884.
2. Gupta AK. Innovation dimensions and firm performance synergy in the emerging market: A perspective from Dynamic Capability Theory & Signaling Theory. *Technology in Society.* 2021;64:101512.
3. Susila I, Dean D, Harismah K, Priyono KD, Setyawan AA, Maulana H. Does interconnectivity matter? An integration model of agro-tourism development. *Asia Pacific Management Review.* 2024;29(1):104-14.
4. Harman DM, Porter MC. Your receipt is in the bag: Service and temporal effects as factors of customer engagement formation during acquisition. *Journal of Retailing and Consumer Services.* 2021;62:102603.
5. Sheth JN, Jain V, Ambika A. The growing importance of customer-centric support services for improving customer experience. *Journal of Business Research.* 2023;164:113943.
6. Cai X, Cebollada J, Cortiñas M. Impact of seller- and buyer-created content on product sales in the electronic commerce platform: The role of informativeness, readability, multimedia richness, and extreme valence. *Journal of Retailing and Consumer Services.* 2023;70:103141.
7. Kalra A, Briggs E, Schrock W. Exploring the synergistic role of ethical leadership and sales control systems on salesperson social media use and sales performance. *Journal of Business Research.* 2023;154:113344.
8. Borah PS, Iqbal S, Akhtar S. Linking social media usage and SME's sustainable performance: The role of digital leadership and innovation capabilities. *Technology in Society.* 2022;68:101900.
9. Zheng R, Li Z, Na S. How customer engagement in the live-streaming affects purchase intention and customer acquisition, E-tailer's perspective. *Journal of Retailing and Consumer Services.* 2022;68:103015.
10. Tarn DDC, Wang J. Can data analytics raise marketing agility?-A sense-and-respond perspective. *Information & Management.* 2023;60(2):103743.
11. Lim X-J, Cheah J-H, Dwivedi YK, Richard JE. Does retail type matter? Consumer responses to channel integration in omni-channel retailing. *Journal of Retailing and Consumer Services.* 2022;67:102992.
12. Saghiri S, Mirzabeiki V. Omni-channel integration: the matter of information and digital technology. *International Journal of Operations & Production Management.* 2021;41(11):1660-710.
13. Lamrhari S, Ghazi HE, Oubrich M, Faker AE. A social CRM analytic framework for improving customer retention, acquisition, and conversion. *Technological Forecasting and Social Change.* 2022;174:121275.
14. Bernabé-Moreno J, Tejada-Lorente A, Porcel C, Fujita H, Herrera-Viedma E. CARESOME: A system to enrich marketing customers acquisition and retention

- campaigns using social media information. *Knowledge-Based Systems*. 2015;80:163-79.
15. Belhadi A, Kamble S, Benkhati I, Gupta S, Mangla SK. Does strategic management of digital technologies influence electronic word-of-mouth (eWOM) and customer loyalty? Empirical insights from B2B platform economy. *Journal of Business Research*. 2023;156:113548.
 16. Hair JF, Babin BJ. *Multivariate Data Analysis*: Cengage; 2018.
 17. Benzidia S, Makaoui N, Subramanian N. Impact of ambidexterity of blockchain technology and social factors on new product development: A supply chain and Industry 4.0 perspective. *Technological Forecasting and Social Change*. 2021;169:120819.
 18. Dixit A, Jakhar SK, Kumar P. Does lean and sustainable manufacturing lead to Industry 4.0 adoption: The mediating role of ambidextrous innovation capabilities. *Technological Forecasting and Social Change*. 2022;175:121328.

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