DIFFUSION OF INNOVATIONS MODELS FOR ENHANCING CONSUMER BEHAVIOR INTENTION IN SOCIAL COMMERCE: A SYSTEMATIC REVIEW

Eva Septiarni Chabibah[1*], Mudjahidin[2]
Department of Information Systems, Institut Teknologi Sepuluh Nopember, Surabaya[1,2]
E-mail: evaschabibah@gmail.com[1], mudjahidin.its@gmail.com[2]

Abstract: The Diffusion of Innovations (DOI) theory is fundamental for explaining the mechanisms of technology adoption, especially within the rapidly expanding domain of social commerce. Despite the significance of DOI models, their application in the context of social commerce remains underexplored. Although DOI theory has been widely used across various domains, its integration with social commerce to enhance behavior intention has not been sufficiently studied. There is a need to identify the most appropriate methodologies for analyzing the relationship between DOI constructs and behavior intention within this domain. This systematic literature review (SLR) aims to investigate the current application of DOI models in social commerce, with a focus on how these models can be leveraged to enhance consumer behavior intention. Moreover, the review seeks to identify the most suitable methodologies for conducting future research in this area. Relevant studies were systematically gathered from academic databases, focusing on peer-reviewed articles related to DOI, social commerce, and behavior intention. A total of 30 studies were selected through a rigorous screening process and analyzed to assess their methodologies and findings. The review indicates that DOI theory has been underutilized in social commerce research, and while various methodologies have been employed, there is no clear consensus on the most effective approach. This review highlights a critical gap and presents opportunities for further exploration. The paper contributes to the literature by identifying key gaps and providing recommendations for future research, including the exploration of appropriate methodologies to better understand and enhance consumer behavior intention in social commerce.

Keyword: *Diffusion of Innovations, Social Commerce, Behavior Intention, DOI Models, Technology Adoption, Systematic Literature Review*

1. Introduction

The rapid growth of social commerce has fundamentally changed how businesses interact with consumers, combining social media and e-commerce to create a unique digital marketplace. In this dynamic environment, understanding consumer behavior and the adoption of new technologies is crucial for businesses seeking to remain competitive. The Diffusion of Innovations (DOI) theory provides a valuable framework for analyzing how

consumers adopt new technologies, particularly in social commerce, where factors such as social influence, perceived ease of use, and the perceived benefits of innovation are critical (Rogers, 2003). Social commerce, driven by peer influence and real-time interactions, presents distinct challenges that differ significantly from traditional e-commerce models (Benyoucef & Zhang, 2016).

Despite the relevance of DOI theory in understanding technology adoption, there remains a gap in its application to the social commerce domain. While DOI has been widely applied in areas like information systems and general technology adoption, its integration into social commerce studies remains underexplored. This gap is particularly concerning given the distinct features of social commerce, such as community-driven decision-making and the need for continuous consumer engagement, which are not typically addressed in broader technology adoption models (Liang & Turban, 2011).

The application of DOI theory in social commerce diverges significantly from its traditional usage in other technological domains. In conventional technology adoption contexts, DOI primarily emphasizes technical attributes such as functionality, performance, and quantifiable benefits, including cost reduction and efficiency gains (Hong & Pavlou, 2014). Social commerce is characterized by unique dynamics that prioritize social influence, trust, and emotional engagement. Social commerce innovations rely extensively on peer recommendations, real-time interactions, and community trust, fostering a highly interactive and socially driven ecosystem (Busalim, et al., 2021). Consequently, DOI constructs such as relative advantage and compatibility assume broader interpretations in this context. Relative advantage extends beyond practical utility to include social capital and perceived enjoyment, while compatibility encompasses alignment with prevailing social norms and community values. Social commerce prioritizes sustained consumer engagement and ongoing participation, in contrast to the one-time adoption emphasis typical of DOI applications in traditional technological frameworks.

Research in social commerce has examined various aspects of consumer behavior and technology adoption. It reveals diverse perspectives on factors influencing consumer behavior, trust, and adoption processes. (Al-kfairy, et al., 2024) explored the role of trust in social commerce, identifying factors like institution-based trust and web experience as significant, while perceived page quality showed no impact. This highlights the complexity of trust formation in social commerce environments. (Mensah, 2021) utilized the DOI framework alongside the Technology Acceptance Model (TAM) to identify significant predictors of continued technology adoption, such as perceived usefulness, service quality, and social influence. Similarly, (Geissinger, et al., 2020) applied DOI in their research on mobile payment services, emphasizing ease of use as a critical factor, which aligns with DOI's concept of complexity influencing innovation diffusion. (Axsen & Kurani, 2012) also explored DOI principles in their study on social influence and consumer behavior, underscoring the need for an integrative framework to understand how innovations spread. Meanwhile, (Khan, et al., 2023) combined DOI with TAM to investigate social commerce adoption in developing countries, identifying perceived ease of use, usefulness, and trust as key drivers of adoption, further reinforcing DOI's focus on innovation characteristics that impact user adoption decisions. These studies collectively highlight the relevance of DOI theory in analyzing the factors that influence the adoption and diffusion of innovations in various technological and commercial domains.

Existing literature has made progress in identifying factors influencing social commerce adoption. However, many studies focus on individual variables such as trust or user

preferences without integrating these elements within the broader DOI framework. Moreover, although social influence and trust are recognized as key factors, the evolving dynamics of innovation adoption in social commerce are often overlooked. This gap in understanding the ongoing diffusion process and its impact on consumer behavior highlights a significant research gap. The effectiveness of social commerce depends not only on initial consumer adoption but also on sustained engagement and behavioral shifts. Without a clear understanding of these dynamics, businesses may struggle to design effective strategies that foster long-term consumer participation in social commerce.

The primary objectives of this research are to conduct a systematic literature review (SLR) that synthesizes existing research on DOI theory in social commerce and to identify effective methodologies for future research. This review will provide a comprehensive overview of factors influencing social commerce adoption and propose a framework for future studies. By achieving these objectives, this study aims to contribute to both theoretical and practical knowledge in social commerce. The theoretical contribution of this research lies in extending DOI theory to social commerce by integrating with the unique characteristics of this field. This integration will enhance the understanding of how innovations diffuse within online communities and how these processes influence consumer behavior intention. Additionally, the study will provide practical insights for businesses aiming to enhance their social commerce strategies by identifying key drivers of consumer adoption and sustained engagement. The novelty of this research is its systematic application of DOI theory specifically to social commerce, a relatively underexplored area. By bridging existing research gaps and offering new perspectives on innovation diffusion in social commerce, this study will contribute valuable insights to both academic literature and industry practices.

2. Literature Review
2.1 Diffusion of Innovation

Everett M. Rogers in 1962 explains how innovations, ideas, or new technologies spread in social populations over time. Diffusion is the process of spreading new ideas or technology in a social system. DOI theory focuses on how innovations spread through social systems and has been widely used to investigate the factors that influence an individual's decision to adopt new innovation or technology. DOI theory identifies five main characteristics that influence innovation adoption, including relative advantage, compatibility, complexity, trialability, and observability.

Relative advantage refers to the extent to which an innovation is perceived as superior to existing alternatives. In social commerce, relative advantage is often tied to enhanced convenience, social capital, and perceived enjoyment. For example, platforms like Instagram Shopping enable users to browse and purchase products directly, reducing the time and effort required to complete transactions. (Hajli, et al., 2017) demonstrate that real-time support and user-generated reviews further amplify this perceived advantage by improving trust and enhancing the overall shopping experience. Compatibility measures how well an innovation aligns with the values, experiences, and needs of potential users. In social commerce, this could mean seamless integration into existing social media habits and alignment with community-driven behaviors. Facebook Marketplace, for instance, fits well into user's existing activities on social platforms, making it easier for users to adopt and participate in buying and selling activities (Liang & Turban, 2011).

Complexity refers to the difficulty of understanding and using an innovation. Social commerce platforms aim to minimize complexity through intuitive designs and simple user

interfaces. TikTok Shop, for example, provides a streamlined shopping experience where users can explore product recommendations, view demonstrations, and make purchases in just a few steps. (Chen, et al., 2017) emphasize that reducing complexity plays a crucial role in increasing consumer adoption of social commerce technologies. Trialability refers to the degree to which an innovation can be tested before adoption. Social commerce platforms often leverage trialability through features like virtual fitting rooms or free trials. For example, Amazon's AR View, which allows users to visualize products in their own environment before making a purchase, exemplifies this concept. (Liao, et al., 2021) highlight that providing opportunities to test products builds consumer trust and encourages adoption.

Meanwhile observability refers to the visibility of an innovation's benefits to others. Social commerce platforms make heavy use of user-generated content, such as reviews, ratings, and influencer endorsements, to showcase the value of products and services. Pinterest, for instance, highlights visual inspiration and peer recommendations, enabling potential users to observe the benefits of adoption indirectly. (Kim & Park, 2013) found that such visibility significantly influences consumer's willingness to adopt new technologies in social commerce. In the context of social commerce, DOI helps explain how various innovative features of a platform can influence consumer adoption and use. Apart from that, (Rogers, 2003) also classifies users as innovators, early adopters, early majority, late majority, and laggards.

2.2 Social Commerce

Social commerce is a business model that emerged from the use of social media and allows customers to participate in marketing and sales activities for products or services through social networks and platforms. In contrast to e-commerce, social commerce promises greater interactivity and collaboration between customers and companies, as well as providing the opportunity to create social-based communities. In social commerce, companies use social media to sell, create communities, interact with customers, and develop loyalty through various social media features such as online chat, virtual groups, review systems, and so on (Liao, et al., 2021). This two-way communication also allows companies to know their customers better, facilitates value creation, and improves the customer experience. The interpersonal relationships that develop from these interactions facilitate the exchange of information and recommendations that help customers make purchasing decisions (Kim & Park, 2013; Hajli, et al., 2017). Moreover, nowadays many potential customers look for other people's opinions and recommendations before making purchasing decisions (Chen, et al., 2017). Social commerce makes it easy to connect sellers and customers and helps them to share and obtain information.

2.3 Behavior Intention

Behavior intention is a concept used to describe a person's subjective possibility of carrying out a certain action or behavior (Silton, et al., 2020). According to the theory of planned behavior proposed by (Ajzen, 1991), behavioral intentions are influenced by three main factors, namely attitude toward the behavior, subjective norms, and perceived behavioral control. Attitude toward the behavior reflects an individual's positive or negative evaluation of a particular behavior. Subjective norms are individual perceptions regarding social pressure to do or not do certain behavior. Meanwhile, perceived behavioral control refers to the extent to which individuals feel capable of carrying out certain behaviors. In the

context of social commerce, behavioral intention can be influenced by several main factors related to platform characteristics, social interactions, and user perceptions (Rogers, 2003; Liang & Turban, 2011).

3. Research Method

This research was conducted as a systematic literature review (SLR) based on the guidelines proposed by (Kitchenham, et al., 2009). The steps in this SLR method are illustrated in
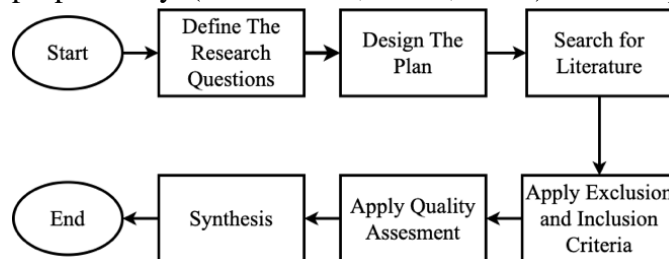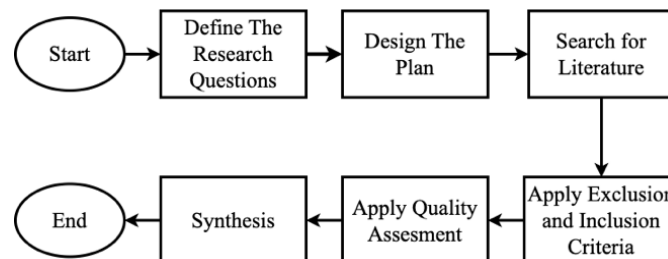

Figure *1*.

Figure 1. Research Methodology

3.1 Define the Research Question

This SLR aims to investigate the role of DOI models in enhancing consumer behavior intention in social commerce. The review seeks to explore how DOI theory can explain the adoption and continued engagement of consumers on social commerce platforms. The research is guided by two primary questions. First, how do DOI models influence consumer behavior intention in social commerce? This question seeks to understand which DOI characteristics that can influence consumer's decisions to engage and adopt social commerce platforms. Second question, what are the critical factors in DOI models that enhance consumer engagement in social commerce platforms? This question focuses on identifying key elements of DOI models that drive sustained consumer participation and interaction, beyond initial adoption, within social commerce environments.

3.2 Design the Plan

A comprehensive review plan was developed to ensure that all relevant studies were included in the analysis. The literature search was designed to cover key databases, specifically targeting peer-reviewed articles that focus on the application of DOI models and their connection to consumer behavior in social commerce. The selected databases for the review were Emerald Insight, ScienceDirect, and SpringerLink. These databases were chosen for their robust collections of scholarly articles and their relevance to the topic of interest.

3.3 Search for Literature

A systematic literature search was conducted across the selected databases using a combination of keywords related to DOI models and consumer behavior in social commerce. The keyword combinations and search methods were tailored to each database. The main keywords included: "Diffusion of Innovations", "DOI", "Social Commerce", "Behavior Intention", and related terms.

Search queries were performed based on journal titles, abstracts, and keyword fields within the databases. In the Science Direct database, literature search uses advanced search by writing keywords: "Diffusion of Innovations" OR "DOI" AND "Social Commerce" OR "S-Commerce" AND "Behavior Intention" OR "Behavioral Intention". Similarly, in the Emerald Insight database uses advanced search by writing keywords: (content-type:article) AND ("Diffusion of Innovations" AND ("DOI") AND ("Social Commerce ") AND ("S-Commerce ") AND ("Behavior Intention") AND ("Behavioral Intention"). Literature search in the Springer database uses advanced search by writing keywords: Diffusion AND of AND Innovations, AND DOI, AND Social, AND Commerce, AND Behavior AND Intention.

3.4 Apply Exclusion and Inclusion Criteria

To comprehensively understand the application of Diffusion of Innovations (DOI) models in enhancing consumer behavior intention within the realm of social commerce, it is essential to systematically review existing literature, filtering studies based on relevance, quality, and recency. The inclusion criteria consisted of studies published between 2015 and 2024, ensuring the inclusion of recent research. Both empirical and theoretical research articles that applied DOI models in the context of social commerce were considered relevant, provided they were published in peer-reviewed journals. On the other hand, studies that did not pertain to social commerce, articles not published in English, and non-peer-reviewed sources, such as conference papers and book chapters, were excluded. These criteria were used to filter out irrelevant and lower-quality studies, ensuring that only the most pertinent and reliable research was included in the review.

3.5 Apply Quality Assessment

To ensure the rigor and relevance of the selected studies, a systematic quality assessment was conducted following the predetermined inclusion and exclusion criteria. The number of articles identified at each stage of the search and the final selection results are detailed in Table 1.

Table 1. Finding Result

Criteria	Emerald	Science Direct	Springer Link
Corresponding with entered keywords	1848	371	365
Article published in 2015-2024	1776	267	245
Keywords correspond with all fields criteria include title, abstract, and contributor	444	143	32
Assessment by read full text journal quickly to answer the research question	10	10	10

The journal selection process utilized as sources for conducting the SLR in this research is illustrated in the prisma diagram below in Figure 2. The initial stage involved identification using predetermined keywords across several scientific article databases. After searching

multiple journal providers, a total of 2,584 related articles were found based on the entered keywords. The researcher excluded results that were not scientific articles, such as book chapters or conference proceedings.
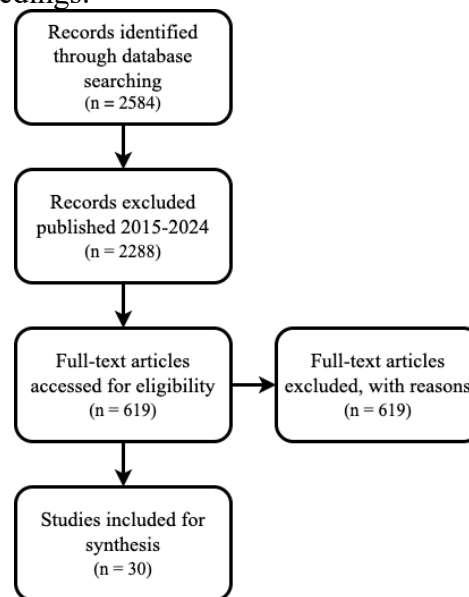

Figure 2. Journal Selection Diagram

The second stage involved the elimination of articles published between 2015 and 2024 to ensure that the selected articles remained relevant to the current context. This step reduced the number of articles to 2,288 articles scientific articles. Subsequently, in the third stage, full-text articles were screened to determine their alignment with the research topic. At this stage, 619 articles were deemed eligible for inclusion in the research topic. The final stage did not involve the exclusion of any articles for specific reasons, where 30 remaining articles were synthesized for the research. These 30 articles were thoroughly read to ensure that they would effectively address the research questions posed. The assessment in this context refers to the rapid reading of the entire content of the articles to determine whether the synthesized journals would be able to answer the research questions of the study.

3.6 Synthesis

This SLR provides a comprehensive evaluation of DOI model's role in enhancing consumer behavior intention in social commerce. The extracted data is synthesized to provide a comprehensive understanding of the topic. This synthesis can be qualitative (descriptive) or quantitative (meta-analysis) depending on the nature of the data. The final synthesis involved several steps. First, compiling and analyzing the results from the selected articles to gain a clear overview of existing findings. Secondly, identifying relevant case studies that showcase the application of DOI models in social commerce contexts. Next, categorizing the critical factors influencing consumer behavior as discussed in the literature. Finally, drawing conclusions that address the research questions posed at the outset of the review. This systematic approach ensures that the synthesis is comprehensive and contributes valuable insights to the field.

4. Results and Discussion

The SLR conducted in this research synthesizes findings from 30 peer-reviewed journal articles from Emerald Insight, ScienceDirect, and Springer Link. These articles examine the application of DOI models in enhancing consumer behavior intentions in social commerce. This section presents a detailed analysis of the results, structured around key themes such as study types, DOI model components, geographical distribution, platform focus, and consumer behavior intention factors, and methodological approaches.

Type of Study Classification

The analysis of the study types in Figure 3 presents a diverse distribution of research approaches within the domain of DOI models as applied to social commerce**.** The majority of the research papers (40%) focused on empirical studies, which involved the application of DOI models in real-world social commerce settings through surveys, experiments, and observational data. The aim of these empirical studies is to validate DOI models by testing them against actual consumer behavior and interactions in social commerce environments, making them crucial for understanding the practical impact of these models.
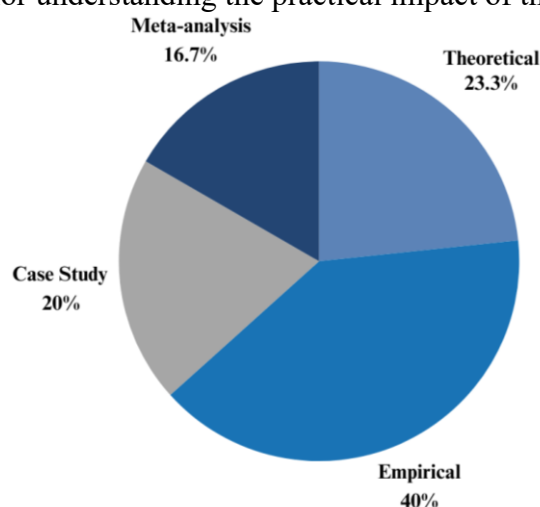

Figure 3. Type of Study Classification Results

Theoretical studies represent 23.3% of the papers, and these works lay the groundwork for the empirical studies. Theoretical research typically involves the development of frameworks, conceptual models, and hypotheses that inform subsequent empirical investigations. This category of studies is vital as it provides the foundational theories and constructs that guide empirical testing and practical applications**.** Case studies, comprising 20% of the research, delve into specific instances or scenarios where DOI models have been implemented. These studies offer contextual insights into how DOI models function in particular settings, such as specific social commerce platforms or consumer segments. The detailed nature of case studies allows researchers to explore the nuances of DOI model implementation, revealing challenges, successes, and potential areas for improvement in applying these models to social commerce.

Meta-analysis made up the remaining 16.7% of the research papers. These studies synthesize the findings from existing research to provide an overarching view of the field. By aggregating data and results from various studies, meta-analysis identifies broader trends, highlight gaps in the research, and suggest future directions for study. The meta-analysis

plays a crucial role in shaping the research agenda by summarizing what is known and where the research should head next.

This distribution of study types underscores the empirical focus of most research in this domain, with a significant portion of the work dedicated to validating DOI models through data-driven methods. The presence of a substantial number of theoretical and case studies emphasizes the importance of both developing a strong theoretical foundation and understanding the practical implications of DOI models in real-world applications. Meanwhile, meta-analyses provide a necessary reflection on the body of existing research, offering a comprehensive perspective that can guide future studies in the field.

DOI Model Components Classification

The review categorizes the components of DOI models into five key areas: innovation attributes, communication channels, time, social system, and adopter categories. The analysis in Figure 4 reveals that innovation attributes are the most frequently studied component, appearing in 33.3% of the papers. This emphasis highlights the pivotal role of attributes such as relative advantage, compatibility, and complexity in influencing consumer adoption decisions within social commerce environments. These attributes are critical in determining how and why consumers decide to embrace or reject innovations, underscoring their importance in the diffusion process.

Communication channels are also a major focus, discussed in 23.3% of the papers. This reflects the significant role that channels such as social media and influencer marketing play in disseminating information about innovations to consumers. Effective communication is essential for ensuring that innovations reach the target audience and are perceived favorably. In contrast, social system factors are addressed in 20% of the studies, and adopter categories in 10%, indicating that while these aspects are acknowledged, they are less frequently explored. Social system factors, which include the social and cultural environment affecting innovation adoption, and adopter categories, which classify consumers based on their readiness to adopt innovations, are crucial for understanding the broader context of diffusion. The relatively limited focus on the time component (13.3%) suggests a gap in research concerning the temporal aspects of innovation diffusion, such as the speed and stages of adoption over time. This indicates a need for further investigation into how the timing of innovation introduction impacts its acceptance and spread within social commerce.
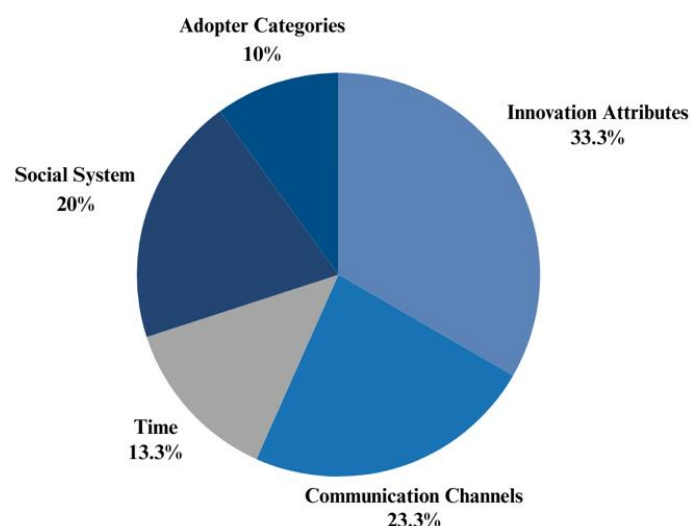
Figure 4. Components Classification Results

The analysis of social system factors (20%) and adopter categories (10%) suggests that while these components are important, they are less frequently explored in the context of DOI models in social commerce. The limited attention to the time component (13.3%) indicates that more research is needed to understand the temporal dynamics of innovation diffusion in this domain.

Application of DOI Models in Social Commerce

The geographical distribution of the studies in Figure 5 indicated that Asia was the most frequently researched region, accounting for 36.7% of the papers. This prominence can be attributed to the rapid expansion of social commerce in Asia, especially in countries like China, where social media and e-commerce are highly integrated. The significant research focus on Asia highlights the region's advanced social commerce environment and its impact on consumer behavior. Europe and North America followed with 26.7% and 20% of the papers, respectively. This suggests a strong global interest in exploring how DOI models can enhance consumer behavior across different regions.
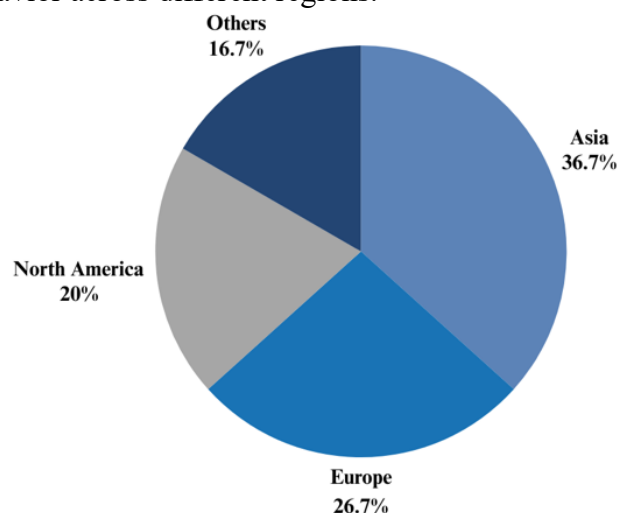

Figure 5. Geographical Distribution Results

Regarding platform focus shown in Figure 6, total 42.9% of the studies concentrated on mainstream social commerce platforms such as Facebook and Instagram. This focus highlights the dominant role of these platforms in social commerce due to their extensive adoption and significant influence on consumer behavior. Niche platforms like Pinterest and Etsy were 28.6% of the studies, demonstrating a growing interest in understanding how specialized communities interact with innovations. These platforms, while less mainstream, offer valuable insights into how specific user groups adopt and engage with new innovations.
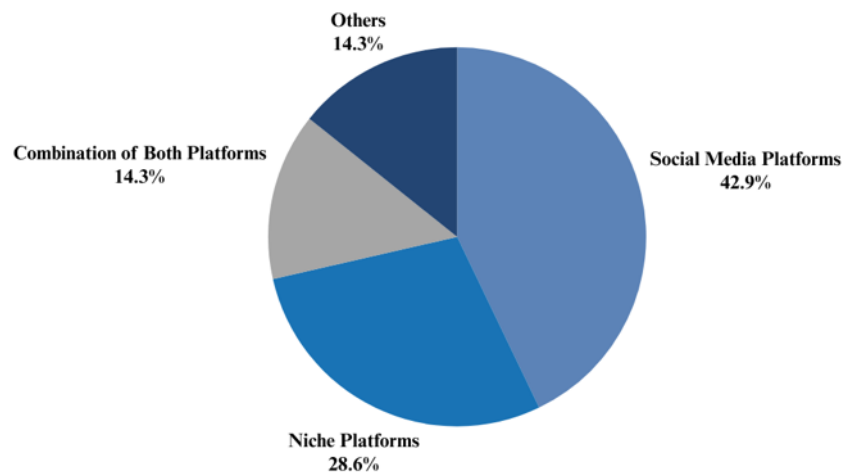
Figure 6. Platform Focus Results

The remaining 14.3% of the studies examined a combination of both mainstream and niche platforms. This approach provides a more comprehensive view of the social commerce landscape by capturing insights from both widely used and specialized platforms. It helps in understanding the broader spectrum of consumer behavior and innovation adoption across different types of social commerce environments.

Consumer Behavior Intention Factors

The review identified three main categories of factors influencing consumer behavior intention: cognitive, affective, and conative factors which shown in Table 2. Affective factors, discussed in 36.7% of the papers, were the most prominent, emphasizing the importance of emotions, trust, and social influence in driving consumer adoption in social commerce. This highlights how emotional responses and social interactions are crucial in shaping consumer attitudes towards innovations. Cognitive factors, such as perceived usefulness and perceived risk, were highlighted in 30% of the papers. These factors play a significant role in shaping consumer perceptions and intentions by affecting how useful and risky consumers perceive a new innovation to be.

Conative factors, which involve behavioral intentions like purchase intentions, word-of-mouth, and repeat usage, were discussed in 33.3% of the papers. This distribution indicates a balanced interest in understanding not only the cognitive and affective precursors to behavior but also the actual behaviors themselves, such as intentions to purchase and engage in word-of-mouth promotion, within the context of social commerce.

Table 2. Consumer Behavior Intention Factors

Factor Dimension	Key Factors	Number of Papers	Percentage (%)
Cognitive	Perceived Usefulness, Perceived Ease of Use, Perceived Risk	9	30%
Affective	Trust, Social Influence, Emotions, Social Support	11	36.7%
Conative	Purchase Intentions, Word-of-Mouth, Repeat Usage	10	33.3%

Methodological Approaches

Figure 7 reveals that quantitative methods are the most commonly used, accounting for 46.7% of the studies. These studies typically employ surveys, regression analysis, structural equation modeling (SEM), and other statistical techniques to quantify the relationship between DOI model components and consumer behavior. Quantitative methods are favored for their ability to provide generalizable data and validate theoretical models through empirical evidence. Qualitative methods are utilized in 33.3% of the studies, involving case studies, interviews, and thematic or content analysis. These approaches allow researchers to explore the contextual and experiential aspects of innovation adoption, offering rich, detailed insights that quantitative methods might overlook. Qualitative research is particularly valuable in understanding the nuanced ways in which consumers interact with innovations within specific social commerce environments.

Mixed-methods approaches are employed in 20% of the reviewed papers, combining the strengths of both quantitative and qualitative research. These studies often start with quantitative data collection and analysis, followed by qualitative methods to explore the underlying reasons behind the observed trends. Mixed-methods designs are particularly effective in providing a comprehensive understanding of the diffusion process, allowing for both broad generalizations and in-depth contextual analysis.
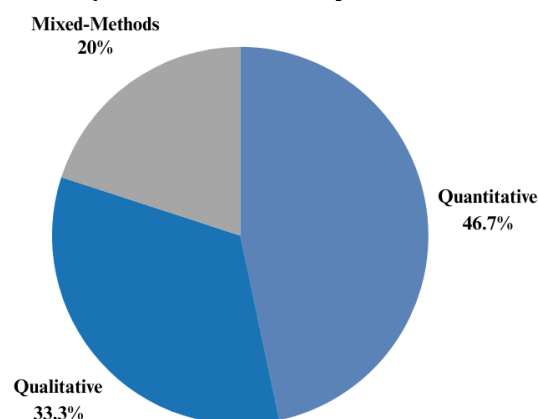

Figure 7. Methodological Approaches Results

The methodological diversity observed in the reviewed papers suggests that no single approach can fully capture the complexity of innovation diffusion in social commerce. Quantitative methods provide valuable generalizations and help validate theoretical models, while qualitative methods offer deeper insights into the contextual and experiential aspects of innovation adoption. Mixed-methods approaches are particularly powerful in providing a holistic view by integrating both quantitative and qualitative data, thereby capturing both the breadth and depth of consumer behavior. The combination of different research methods across studies enhances the robustness of the findings and provides a more nuanced understanding of how DOI models operate in various social commerce environments. This methodological pluralism reflects the complexity of consumer behavior in the digital age and underscores the need for flexible and adaptive research designs in future studies.

Innovation Attributes Influencing Consumer Behavior

This review identifies five primary innovation attributes that significantly influence consumer behavior in social commerce: relative advantage, compatibility, complexity,

trialability, and observability. Figure 8 shows the distribution of these attributes across the reviewed papers. Relative advantage emerges as the most frequently discussed attribute, appearing in 33.3% of the papers. Consumers are more likely to adopt innovations that offer clear benefits, like greater convenience or cost savings.
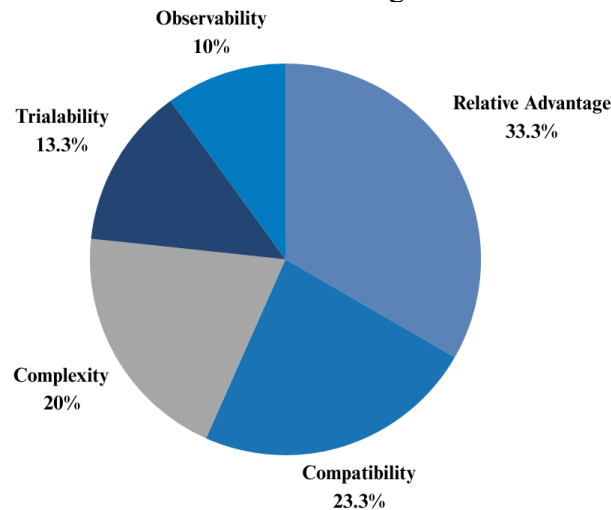

Figure 8. Innovation Attributes Results

Compatibility is the second most discussed attribute, featured in 23.3% of the papers. This highlights the importance of innovations aligning with the existing values, experiences, and needs of consumers. High compatibility reduces resistance to adoption, as consumers find these innovations more congruent with their current practices. Complexity is another critical factor, addressed in 20% of the studies. The simpler an innovation is to understand and use, the more likely it is to be adopted. Innovations perceived as complex or difficult tend to face higher resistance, slowing down the diffusion process.

Trialability and observability are less frequently discussed, appearing in 13.3% and 10% of the papers, respectively. Trialability allows consumers to experiment with an innovation before fully committing, reducing perceived risk, while observability refers to how visible and apparent the benefits of an innovation are to others, encouraging adoption through social proof. The analysis in Figure 8 underscores the critical role of relative advantage and compatibility in driving consumer adoption decisions within social commerce environments. These attributes are pivotal in determining how and why consumers choose to embrace or reject innovations, underscoring their importance in the diffusion process. The limited focus on trialability and observability suggests potential areas for further research, especially in understanding how these attributes influence the early stages of consumer adoption.

Factors Moderating the Diffusion of Innovations

The review also categorizes the factors that moderate the diffusion of innovations into three key areas: user characteristics, environmental factors, and social influences. Figure 9 illustrates that user characteristics are the most frequently examined moderating factor, discussed in 36.7% of the papers. These characteristics include demographic variables such as age, gender, and prior experience with technology, which can significantly impact how consumers perceive and adopt innovations. Younger users, for instance, may be more open to adopting social commerce platforms due to their higher digital literacy.
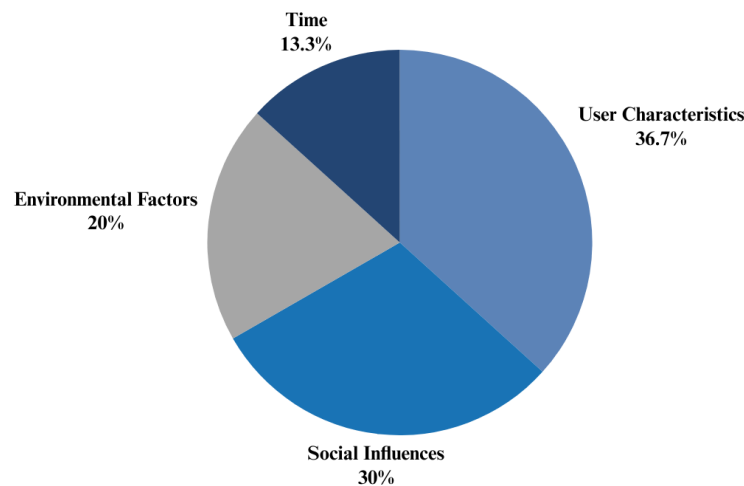
Figure 9. Moderating Factors Results

Social influences are also a major focus, discussed in 30% of the papers. These include the effects of peer recommendations, social media interactions, and cultural norms on consumer behavior. Social commerce thrives on the interconnectedness of users, and social influences can act as powerful catalysts for adoption. Environmental factors comprised 20% of the studies, highlighting the role of external conditions such as technological infrastructure and regulatory environments in the diffusion process. A robust infrastructure supports the seamless operation of social commerce platforms, making them more appealing to consumers, while restrictive regulations can pose significant barriers to adoption. The relatively limited attention to time factors (13.3%) suggests a gap in research concerning the temporal dynamics of innovation diffusion. This includes understanding how the timing of an innovation's introduction impacts its acceptance and spread within social commerce. Further investigation into the speed and stages of adoption over time could provide valuable insights into optimizing the diffusion process. This analysis indicates that user characteristics and social influences are critical moderators of innovation diffusion, heavily shaping consumer behavior in social commerce. Limited attention to environmental and temporal factors highlights the need for further research to better understand innovation diffusion.

5. Conclusion

This systematic literature review has explored how DOI models influence consumer behavior intentions within the context of social commerce, addressing two primary research questions. The findings reveal that DOI models significantly enhance consumer behavior through key innovation attributes, there are relative advantage, compatibility, and complexity. These attributes directly influence how consumers perceive and decide to adopt innovations on social commerce platforms. Specifically, innovations that offer clear and distinct benefits over existing alternatives (relative advantage) and align with user's existing values and practices (compatibility) are more likely to be adopted. The perceived ease or difficulty of using these innovations (complexity) also plays a crucial role, with simpler, more intuitive platforms gaining faster adoption. The studies reviewed consistently validate these attributes as central to driving consumer behavior intentions, highlighting the practical relevance of DOI models in predicting and influencing how consumers engage with social commerce.

In addition to the innovation attributes, the review identifies critical factors that enhance consumer engagement on social commerce platforms, particularly user characteristics, social influences, and environmental factors. User characteristics such as age, gender, and prior technological experience are found to significantly impact how consumers perceive and engage with innovations. Younger, more technologically adept users tend to be more open to adopting new platforms, while social influences, including peer recommendations and the broader cultural context, act as powerful motivators for adoption. The role of social media and community interactions is also emphasized as a key driver in the diffusion process, reinforcing the importance of social factors in consumer engagement. Moreover, environmental factors like technological infrastructure and regulatory conditions are shown to either facilitate or hinder the adoption process, though these factors are less frequently explored compared to others.

This SLR underscores the effectiveness of DOI models in understanding and enhancing consumer behavior intentions in social commerce. The critical innovation attributes and moderating factors identified provide a robust framework for influencing consumer adoption and engagement. However, the review also highlights gaps in the existing research, particularly regarding the temporal dynamics of innovation diffusion and the impact of environmental factors. These areas warrant further investigation to refine DOI models and expand their applicability in the rapidly evolving field of social commerce. Future research should focus on these aspects to develop a more comprehensive understanding of how innovations diffuse across different social commerce environments and over time.

References

Al-kfairy, M., Shuhaiber, A., Al-khatib, A. W., Alrabaee, S., & Khaddaj, S. (2024). Understanding Trust Drivers of S-commerce. *Heliyon, 10*.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179-211.

Asanprakit, S., & Limna, P. (2023). Understanding the Role of Social Influence in Consumers' Intention to Use Social Commerce. *Rom Yoong Thong Journal*, 103-121.

Axsen, J., & Kurani, K. S. (2012). Social Influence, Consumer Behavior, and Low-Carbon Energy Transitions. *Annual Review of Environment and Resources, 37*(1), 311-340.

Benyoucef, M., & Zhang, K. Z. (2016). Consumer behavior in social commerce: A literature review. *Decision Support Systems, 86*, 95-108.

Busalim, A. H., Ghabban, F. & Hussin, A. R. C., 2021. Customer engagement behaviour on social commerce platforms: An empirical study. *Technology in Society,* Volume 64, pp. 88-101.

Chen, A., Lu, Y., & Wang, B. (2017). Customers' purchase decision-making process in social commerce: A social learning perspective. *International Journal of Information Management, 37*(6), 627-638.

Geissinger, A., Laurell, C., & Sandström, C. (2020). Digital Disruption beyond Uber and Airbnb—Tracking the long tail of the sharing economy. *Technological Forecasting and Social Change, 155*.

Hajli, N., Sims, J., Zadeh, A. H., & Richard, M.-O. (2017). A social commerce investigation of the role of trust in a social networking site on purchase intentions. *Journal of Business Research, 71*, 133-141.

Hong, Y. & Pavlou, P. A., 2014. Product Fit Uncertainty in Online Markets: Nature, Effects, and Antecedents. *Information Systems Research,* 25(2), pp. 328-344.

Khan, A. G., Hasan, N., & Ali, M. R. (2023). Unmasking the Behavioural Intention of Social Commerce in Developing Countries: Integrating Technology Acceptance Model. *Global Business Review*.

Kim, S., & Park, H. (2013). Effects of various characteristics of social commerce (s-commerce) on consumers' trust and trust performance. *International Journal of Information Management, 33*(2), 318-332.

Kitchenham, B., Brereton, O. P., Budgen, D., Turner, M., Bailey, J., & Linkman, S. (2009). Systematic literature reviews in software engineering – A systematic literature review. *Information and Software Technology*, 7-15.

Liang, T.-P., & Turban, E. (2011). Introduction to the Special Issue Social Commerce: A Research Framework for Social Commerce. *International Journal of Electronic Commerce, 16*(2), 5-14.

Liao, S.-H., Widowati, R., & Hsieh, Y.-C. (2021). Investigating online social media users' behaviors for social commerce recommendations. *Technology in Society, 66.*

Mensah, I. K. (2021). Predictors of the Continued Adoption of WECHAT Mobile Payment. *Research Anthology on E-Commerce Adoption, Models, and Applications for Modern Business, 25.*

Ng, C.-P. (2013). Intention to purchase on social commerce websites across cultures: A cross-regional study. *Information & Management, 50*(8), 609-620.

Rogers, E. M., 2003. *Diffusion of Innovations.* 2 ed. New York: The Free Press.

Silton, N. R., Riley, P. & Anzovino, A., 2020. *Exploring Best Child Development Practices in Contemporary Society.* 1 ed. Pennsylvania: IGI Global Publishing House.