

Unravelling the Social Commerce Users' Engagement: A Mixed Method Analysis using Bibliometric and Systematic Literature Review

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Abstract. Social commerce is not a new thing to society. Since the year 2020 till to date, online purchases is a common activities and customers are demanding more than that. Beyond that traditional e-commerce transaction, customers will like more interaction between them, other customers and sellers, i.e., sharing experiences, live promotion, product pictures and videos like features in social media. The objective of this study is to conduct a systematic analysis of research trends in social commerce and the commonly researched issue topics or factors. This study conducts a bibliometric analysis and systematic literature review (SLR) to uncover social commerce user engagement research trends and measurement factors. An analysis of 150 publications reveals that social commerce research trends are in the fields of social commerce, trust, and customer engagement, with the key focus areas being trust, content, motivation, and intentions. Additionally, stimulus-organism-response theory and platform-specific insights are identified.

Keywords: social commerce, user engagement, bibliometric, systematic literature review, analysis

1. Introduction

Purchase, i.e., cloth, food, house hold, and personal care via online is commonly known as E-commerce and can be done in any available platform, such as in Indonesia, i.e., Lazada, Tokopedia, Shopee, and in Malaysia, i.e., Signature Market, myNEWS. The traditional e-commerce usually caters basic transaction between seller and customers. However, social media serve more interactive features such as live, photos and videos sharing, comments and much more. It is norm for users to expect more than the basic features available. To create more attraction and interactive platform among customers, new concept has been introduced which called “Social Commerce”. This concept is introduced by Wu et al. (2019) (Wang & Xie, 2020). SocComm will be used throughout this study as the acronym of “Social Commerce”. The SocComm is combination of social media features and is a part of e-commerce that companies can use to reach a wider market with more developed features where the platform provides content creation features and consumers can provide feedback, suggestions, and recommendations to the online community (Saha & Verma, 2022; Busalim et al., 2019). To succeed in SocComm, a strong commitment and well-designed marketing strategy are necessary. SocComm is a new area that requires further exploration in today's business world.

Since SocComm involves consumers in marketing to increase purchasing transactions, customer engagement can become a key strategic element. Customer engagement includes individual participation in offering relationships, marketing, and organizational activities. SocComm allows companies to consider customer engagement in sharing their experiences online to help companies increase the value of their brands and products (Santini et al., 2020; Ebrahimi et al., 2023). According to data from the Institute for Development of Economics and Finance (INDEF), SocComm trends will continue to grow rapidly throughout the world, including in Indonesia. Sales transactions in social commerce in 2023 were recorded at 18.8 trillion worldwide and it is predicted that it will reach 24.6 trillion in 2024 and will even continue to increase until 2026. To maximize SocComm in 2024, it is necessary to adopt strategies that are in line with consumer behavior where trust is still the most important thing to be able to build lasting relationships with customers (Sujatmiko, 2023). In addition, user-generated content can generate customer engagement which is expected to solve problems and build commitment from customers. Therefore, it is necessary to know what factors need to be maximized in SocComm to increase customer engagement.

A systematic, clear, and repeatable approach for locating, assessing, and synthesizing research articles and concepts created by other researchers is the literature review (Mengist & Soromessa, 2020). Bibliometric analysis can be used to determine trends in research topics that are being widely discussed and determine the relationships between research topics that are often discussed in previous research (Donthu et al., 2021). Meanwhile, a Systematic Literature Review (SLR) can be utilized to identify, evaluate, and interpret all prior research to address specific research inquiries. Several previous studies have more frequently conducted literature reviews using only one technique, either bibliometric analysis or SLR. Therefore, in this study, researchers combine bibliometric and SLR analysis techniques to find out the latest trends and get insight on the factors that influence social commerce engagement. In addition, this study allows the researchers to dissect more deeply the results of previous researches to obtain more specific and detailed data. Future discussion on the process bibliometric and SLR is discussed in section 3.1 and 3.2.

In this bibliometric and SLR, the researchers intended to find the following objectives:

1. To identify current research trends related to social commerce engagement.
2. To examine factors or measurements of social commerce user engagement.

Based on the above justification, it is clearly that social commerce is an area that still needs to be explored, especially the relationship between social commerce user engagement. In order to support the above objectives of this research there are several research questions of this study has been outlined:

1. What is the current research trend related to social commerce?

2. What topics or factors are classified based on visualization analysis of social commerce user engagement?

In answering research question 1 and research objective 1, the researchers used bibliometric analysis with the use of secondary data from several online databases. Meanwhile, for research question 2 for research objective 2, systematic literature review is used to future explore factors or measurements of SocComm user engagement.

2. Literature Review

2.1. Social Commerce

SocComm is an innovative addition to the e-commerce business model. It combines social media as a promotional medium to reach customers and facilitate interaction between consumers and sellers. This, in turn, can increase transactions and buying and selling activities. (Chen, 2022; Liu et al., 2022). There are three big themes discussed regarding social commerce, namely social (interaction, presence, support), commercial activities, and technological infrastructure. In the online transactional environment, the social element relates to serving and relating to customers. This can increase interest, trust and purchase decisions based on the recommendations provided. SocComm activities also involve commercial activities that can increase profits from the business side and be able to compete. On the other hand, technological infrastructure is also a concern in SocComm regarding how SocComm contrast and the features displayed can increase comfort and a good user experience when making transactions (Almahdi, 2022; Shadkam & Lumpur, 2013; Wang et al., 2022). SocComm is becoming popular because the business world is starting to realize the importance of utilizing social media platforms to build brand awareness, interact with customers, and drive sales in a more personal and social way, through which social commerce can harness the power of social interaction, user-generated content, and community engagement. to facilitate and enhance the shopping experience. The diffusion of innovation (DoI) theory can be used to measure technology adoption by exploring diffusion mechanisms that can influence consumer behavior towards SocComm from various perspectives. Where in the theory of diffusion of innovation identifies seven aspects such as relative advantage, ease of use, image, visibility, compatibility, ability to show results, voluntary use of an organization or in this case business actors, adopting and using technological innovation (Setiyani et al., 2023).

2.2. Social Commerce User Engagement

Customer engagement is related to the relationship between a company and someone who can participate in providing recommendations to other customers to generate purchasing activities or transactions that provide value for the company (Van Doorn et al., 2010; Vivek et al., 2012). Customer involvement can have an impact on the company in terms of consumer purchasing behavior, where it can increase customer purchasing behavior for life and can have a positive influence on purchasing interest (Ebrahimi et al., 2023). In addition, customer engagement in s-commerce helps customers find necessary product-related information (i.e., online communities/forum, ratings, reviews, and recommendations), which is expected to have positive social and economic impacts (A. Busalim et al., 2023). Customer involvement in social commerce will involve active participation from customers in providing recommendations, influencing purchasing activities, influencing long-term consumer behavior, and helping customers access important product-related information to obtain positive social and economic outcomes. The S-O-R (stimulus-organism-response) model is a model used to clarify individual emotions towards external stimuli and consumer behavior which is formed where in this model it is emphasized that environmental cues (stimuli) are an important element in influencing the cognitive and affective reactions (organism) of individual that will trigger behavior from that individual (response) (Min & Tan, 2023). Where Lim in his research believes that customer engagement is an organism that can cause individuals to want to continue and be involved in using the application (X. J. Lim, 2021).

2.3. Bibliometric

Bibliometric analysis is a quantitative research method that can be used to systematically identify trends and analyze research. It ensures that the quality of information and products produced have a positive research impact. Bibliometric analysis analyzes books and relevant published articles by mapping or grouping appropriate book references and scientific articles in a research field. Several software for bibliometric analysis that can be used include Gephi, Leximancer, and VOS Viewer (Donthu et al., 2021). The software used in this research for the bibliometric analysis process was VOS Viewer. This is because VOS Viewer is software that can be used to identify relationships between variables in publications from quotes and keywords where VOS Viewer will connect nodes in publications, journals, and so on into clusters which will form groups of interconnected nodes. This will provide a visual display that has meaning. Besides that, the VOS Viewer application can be used for free (Kirby, 2023).

2.4. Systematic Literature Review (SLR)

Systematic literature review (SLR) is a research method that identifies and analyzes data by collecting empirical evidence by predetermined inclusion criteria that can be used to answer research questions that have been formulated (Mengist & Soromessa, 2020; Snyder, 2019). There are several processes in systematic review such as defining the database, defining the keyword, defining the criteria inclusion and exclusion, extracting the data, and analyzing based on the literature found to answer questions from the research (Xiao & Watson, 2019). The systematic literature review technique is a theoretical basis that can achieve a deeper understanding with the aim of reducing bias and ensuring comprehensive literature integration, thereby increasing the validity and reliability of the information produced.

3. Methodology

3.1. Bibliometric Analysis

Figure 1 explains the bibliometric analysis process using VOS Viewer, by carrying out several steps as follows (Donthu et al., 2021):

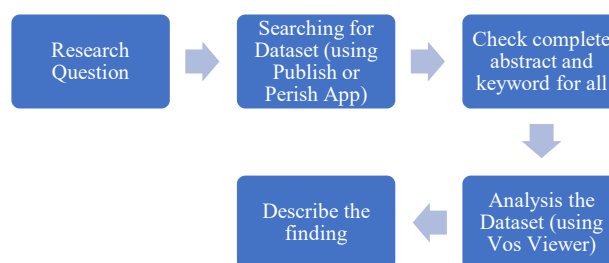


Fig.1: Bibliometric Research Stage

The bibliometric analysis process began based on the research questions retrieved based on the background of this study and it will be used to define keyword searches in electronic databases. The next step after knowing the research question and finding the keyword, the keyword will be used for collected datasets from previous studies using the Publish or Perish application and needs cleaning data based on a search for data conducted in the Scopus database using the keyword 'Social Commerce Engagement' and several criteria such as:

1. Published in Scopus between 2013-2022.
2. Focusing on e-commerce and social commerce.
3. Written in English.

After receiving the data set from the Publish or Perish application that already meets the requirement, the dataset should be checked that all datasets will be detected with complete abstract and keywords so the analysis and trend mapping can be performed using the VOS Viewer application, which processes the data based on the title and abstract. The data resulting from VOS Viewer were in the form of data visualization where the data would be presented in graphical data form to describe the finding

which could help us in understanding the results of visual analysis, and exploration and find new insights (Sajovic & Boh Podgornik, 2022).

3.2. Systematic Literature Review (SLR)

In this study, we conduct the SLR process based on Kitchenham guidelines (Kitchenham & Brereton, 2013) where the process started with step studies found where this step is for collecting the databases based on a keyword search that is already defined using the Publish or Perish application that were grouped into eleven sources databases, namely:

1. ACM (<https://www.acm.org/>)
2. AIS Electronic Library (<https://aisel.aisnet.org/>)
3. Emerald (<https://www.emerald.com/insight/>)
4. IEEE (<https://www.ieee.org/>)
5. Science Direct (<https://www.sciencedirect.com/>)
6. Springer (<https://www.springer.com/gp>)
7. Taylor & Francis online (<https://www.tandfonline.com/>)
8. Sage (<https://journals.sagepub.com/>)
9. Semantic (<https://www.semanticscholar.org/>)
10. Proquest (<https://www.proquest.com/>)
11. Google Scholar (<https://scholar.google.com/>)

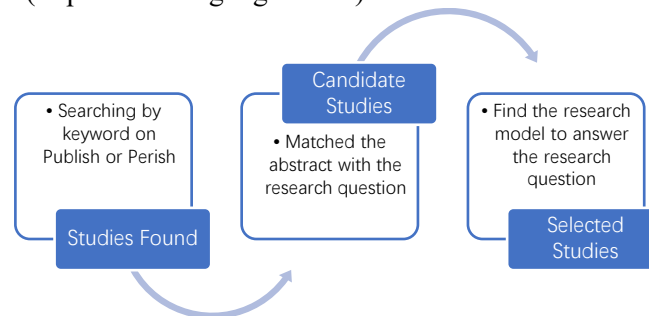


Fig.2: Searching step for SLR

From the 200 paper studies found based on the Publish or Perish application, the next step was to find a paper for candidate studies that matched and could answer the research question based on the abstract. After that, the elimination was carried out to find the selected paper that can contribute to the answer to the research question and can meet the expectations based on the findings of the paper that can help to create an interpretation of the SLR result. SLR process has exclusion criteria that have the same criteria as a bibliometric process.

The results were as follows: 68 articles met the criteria, as shown in Table 1.

Table 1: Data Extraction in Inclusion Criteria

Source	Studies Found	Candidate Studies	Selected Studies
ACM	9	5	1
AIS	4	3	2
Emerald	29	24	20
IEEE	5	1	1
Science Direct	82	43	29
Springer	12	4	4
Taylor & Francis	16	7	5
Sage	9	2	2
Sematic	14	1	1
Proquest	3	1	1

Google scholar	17	4	2
Grand Total	200	95	68

4. Result and Discussion

4.1. Bibliometric Analysis

Of the 200 Scopus-indexed papers related to social commerce engagement obtained through the Publish or Perish application, an article elimination process that included only conference proceedings and articles resulted in 197 candidate papers. Subsequently, a review process was conducted based on the abstracts of the papers. The study selected and used 150 papers.

A. Yearly Distribution of Contribution

Figure 3 explains the contribution based on the year of research to answer the question “What is the current research trend related to social commerce?”.

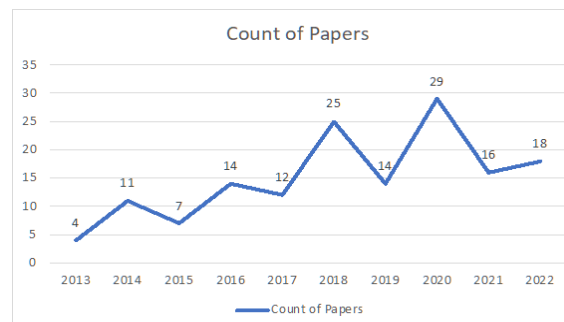


Fig.3: Yearly Publication Contribution

From figure 3 it can be seen that research related to e-commerce leads to social media and social commerce starting in 2013 which had 4 papers that researched social media which then continued in 2014 there were 11 studies that started discussing live streaming until finally in 2015 there were 7 studies say that social commerce will start to emerge until 2022. From this data it can be concluded that the topic of social commerce is currently a trending topic and has received the attention of many researchers.

B. Topic Classification

Bibliometric networks have symbols in the form of circles that represent keywords/nodes, while network nodes can represent keyword relationships. This bibliometric network can help in answering the research question: 'What topics or factors are classified based on social commerce user engagement visualization analysis?' Of the 555 keywords found and analyzed with a minimum of 1 occurrence using the VOS viewer application, it produced 3 clusters as shown in Figure 4, and Figure 5.

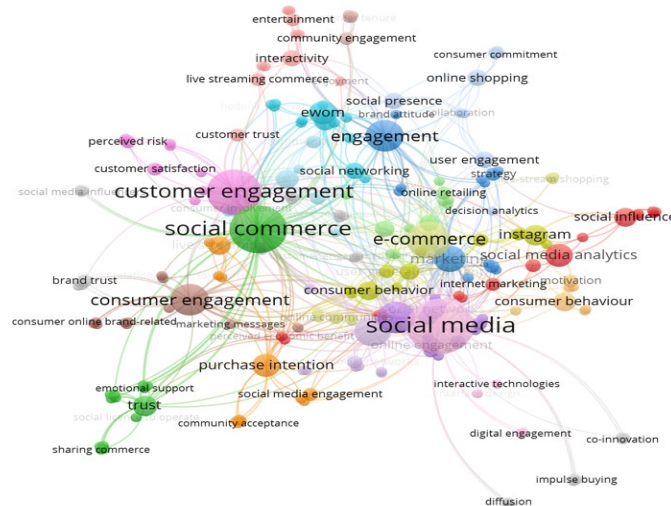


Fig.4: Network Analysis All

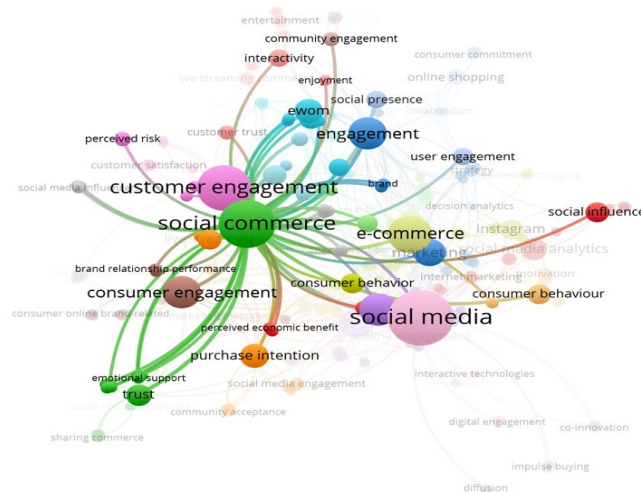


Fig.5: Network Analysis (correlation with Social Commerce)

In Figure 4, the network visualization analysis of co-occurrence explains the relationship of one keyword to other keywords in the research where each cluster shows the discussion groups frequently discussed by researchers regarding social commerce that pay the most attention and have a network of relationships with other nodes. The first cluster is light pink and includes terms such as social media, interactive technology, digital engagement, and online engagement. The second cluster in green includes terms related to social commerce, emotional support, trust, and shared commerce. The third final cluster in dark pink includes the terms customer engagement, customer satisfaction, perceived risk, customer trust, and consumer involvement.

Meanwhile for Figure 5 illustrates that social commerce nodes have a network of relationships with customer involvement, social media, trust, risk, social presence, emotional support, social influence, and behavior.

C. Overlay Visualization

Overlay visualization can display the latest research trends, providing an overview of current topics for discussion.

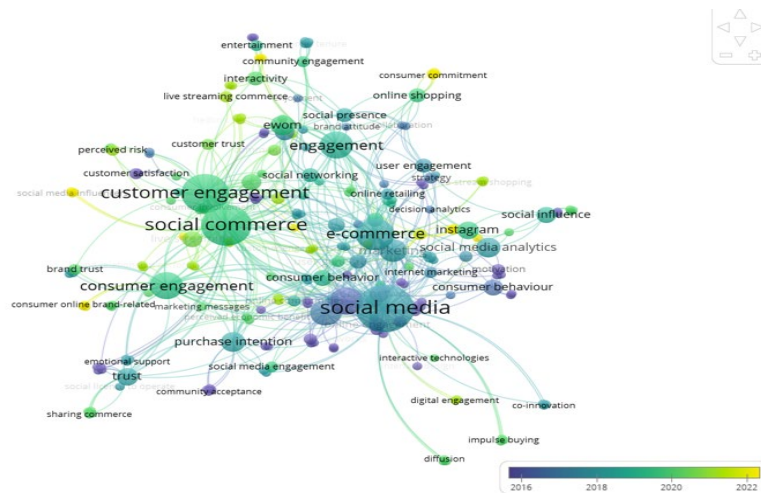


Fig.6: Overlay Visualization Trend

Figure 6 provides information regarding the distribution of research based on the year of publication. The lighter color, represented by green and yellow, indicates that the research is newer, which means that the research topic is still considered feasible. As you can see, topics such as social commerce, customer engagement, customer trust, consumer engagement, social media influence, and live streaming commerce have been hot topics in recent years.

D. Density Visualization

The density visualization shows the emphasis on research groups as seen in Figure 7 below.



Fig.7: Density Visualization Trend

In Figure 7, we can see those topics such as social commerce, customer engagement, and social media get light or bright colors. This further emphasizes that the topic is increasingly popular and the larger diameter means that the topic is getting more attention. Meanwhile, a faded color indicates that the topic is less popular and will probably receive less attention in the future. The density visualization results show that the social commerce topic of customer engagement will receive more attention because it is a topic that is currently being discussed.

4.2. Systematic Literature Review (SLR)

Based on 68 research articles that met the criteria and were included in selection studies, researchers grouped the findings into several categories as follows:

1) Measurement Factors

The table below displays frequently used research variables grouped into several sections:

Table 2: Table Measurement Factors

Group Measurement	Measurements	References	Count
Attitude	attitude, brand attitude, attitude towards ewom	(Y. Yang et al., 2017), (C. K. Coursaris, 2016), (Ali et al., 2020), (Yusuf et al., 2018), (Fen Crystal Yap & Kwai Choi Lee, 2014)	5
Commitment	brand community commitment, affective commitment to the broadcaster, affective commitment to the online marketplace, community commitment, consumer commitment	(Kumar & Kumar, 2020), (Escobar-Rodríguez, 2017), (Hu & Chaudhry, 2020), (Vohra & Bhardwaj, 2019), (Q. Xiao et al., 2022)	5
Trust	community trust, community member trust, trust, trust in products, trust in sellers, Perceived Trust of Community Page, Customer Trust, Trust in the brand's SNS, C2C Trust, C2M Trust, Brand Trust, Perceived trustworthiness of social commerce, perceived trustworthiness of other users, community trust, Brand Trust,	(Molinillo et al., 2020), (Algharabat, 2021), (C. Coursaris, 2016), (Wongkitrungrueng & Assarut, 2020), (Yasin, 2020), (Guo, 2021), (X.-J. Lim et al., 2020), (Lin, 2018), (Kong, 2020), (Ma, 2022), (Bianchi, 2017), (L. Liu et al., 2018), , (Vohra & Bhardwaj, 2019), (Huang et al., 2022), (Atiq et al., 2022), (C. H. Li et al., 2022)	16
IS Success Model	information quality, service quality, systems Quality, website quality	(Abdelsalam H. Busalim et al., 2021), (Kong, 2020), (Ali et al., 2020), (Yusuf et al., 2018)	4
WOM	WOM, E-wom, WOM Type, WOM Valence, positive word of mouth	(Akram et al., 2021), (Le, 2018), (Loureiro, 2017), (Zhang et al., 2017)	4
Continuous use	Continuous use	(X. J. Lim, 2021), (Kong, 2020)	2
Emotional	emotional, emotionality, emotional support, emotional content	(Lin, 2018), (Kemp et al., 2021), (Deng et al., 2021), (W.-K. Chen et al., 2022)	4
Community	community drivenness, community identification, community relationship investment, community involvement	(Molinillo et al., 2020), (Kumar & Kumar, 2020), (Shen et al., 2019)	3
Cognitive	cognitive value, cognitive (social presence, interactivity), cognitive processing, cognitive brand engagement	(Xi & Hamari, 2020), (Nadeem, 2021), (Herrando, 2017), (Molina-Prados et al., 2022)	4
Engagement	customer engagement, community engagement, engagement behavior, consumer engagement, emotional brand engagement, social brand engagement, fan-page engagement, social commerce engagement, engagement with community, brand engagement, social media engagement, engagement (number of like, comment, share, interaction duration, visit, chats, exposure time), e-wom engagement, engagement motivation	(Molinillo et al., 2020), (Algharabat, 2021), (Abdelsalam H. Busalim et al., 2021), (C. Coursaris, 2016), (C. Coursaris, 2016), (Cheung et al., 2014), (Xi & Hamari, 2020), (Rahman et al., 2018), (Wu, 2018), (Y. Wang et al., 2020), (Wongkitrungrueng & Assarut, 2020), (Yasin, 2020), (Nadeem, 2021), (X. J. Lim, 2021), (Kumar & Kumar, 2020), (Clement Addo et al., 2021), (Guo, 2021), (X.-J. Lim et al., 2020), (Braojos et al., 2019), (Le, 2018), (Pletikosa Cvijikj & Michahelles, 2013), (Ma, 2022), (Bento et al., 2018), (Y. A. K. Yang, 2014), (Levy, 2020), (Xue, 2020), (Kemp et al., 2021), (Deng et al., 2021), (Loureiro, 2017), (Escobar-Rodríguez, 2017), (Ho et al., 2020), (Zhang et al., 2017), (Ha, 2016), (Hu & Chaudhry, 2020), (Algharabat, 2021), (Kang et al., 2021), (J. Chen et al., 2020), (Song et al., 2021), (Yu et al., 2020), (Chmait et al., 2020), (Bazi et al., 2020), (Garg et al., 2020), (Cheung et al., 2015), (Shen et al., 2019), (Yusuf et al., 2018), (L. Liu et al., 2018), (F. Li et al., 2021), (Vohra & Bhardwaj, 2019), (Cao et al., 2022), (Huang et al., 2022), (Atiq et al., 2022), (C. H. Li et al., 2022)	52
Satisfaction	customer satisfaction, satisfaction with brand, Game satisfaction	(Abdelsalam H. Busalim et al., 2021), (Bianchi, 2017), (Cheung et al., 2015), (Barker et al., 2015), (Nadeem, 2021), (Loureiro, 2017)	6
Intention	stickiness intention, positive e-wom intention, repurchase intention, purchase intention, social commerce intention, social sharing intention, e-wom referral intention, online review intention, intention of engagement	(Molinillo et al., 2020), (C. Coursaris, 2016), (Rahman et al., 2018), (Sheikh et al., 2019), (Yasin, 2020), (Clement Addo et al., 2021), (X.-J. Lim et al., 2020), (Lin, 2018), (Le, 2018), (Ma, 2022), (Bento et al., 2018), (Y. Yang et al., 2017), (Bianchi, 2017), (C. K. Coursaris, 2016), (Bazi et al., 2020), (Yusuf et al., 2018), (Qin & Kong, 2015), (W.-K. Chen et al., 2022), (Q. Xiao et al., 2022)	19

Group Measurement	Measurements	References	Count
Motivation	utilitarian (value, motivation, features), Motives (fun, altruism, recognition from others, social connections, financial incentives), brand affiliation, conversation, entertainment, investigation, customer social media use motivation, hedonic features, hedonic motivation, hedonic value	(Bilgihan et al., 2016), (Abdelsalam H. Busalim et al., 2021), (Vilnai-Yavetz & Levina, 2018), (Wongkitrungrueng & Assarut, 2020), (Nadeem, 2021), (Akram et al., 2021), (Bento et al., 2018), (F. Li et al., 2021)	8
Social	social support (Emotional, informational), Social capital affinity, social interaction, social presence, social value, social shopping intention, Social referrals, social shopping, social values, social bonds, social support, Social support, social interaction, social support, Social influence, social connectedness, social presence, socioemotional support (copresence, empathy), Instrumental support (Functionality, convenience, media richness)	(Molinillo et al., 2020), (Barker et al., 2015), (Bilgihan et al., 2016), (Algharabat, 2021), (Abdelsalam H. Busalim et al., 2021), (C. Coursaris, 2016), (Xi & Hamari, 2020), (Y. Wang et al., 2020), (Sheikh et al., 2019), (Nadeem, 2021), (X. J. Lim, 2021), (Lin, 2018), (Kong, 2020), (Akram et al., 2021), (Ma, 2022), (Hu & Chaudhry, 2020), (Ali et al., 2020), (Bazi et al., 2020), (Cheung et al., 2015), (Yusuf et al., 2018), (Fen Crystal Yap & Kwai Choi Lee, 2014), (F. Li et al., 2021), (W.-K. Chen et al., 2022), (Q. Xiao et al., 2022)	24
Brand	brand awareness, brand loyalty, brand ownership, brand involvement, brand love, brand equity, brand image	(C. Coursaris, 2016), (Xi & Hamari, 2020), (Nadeem, 2021), (Kumar & Kumar, 2020), (Y. A. K. Yang, 2014), (Loureiro, 2017), (C. K. Coursaris, 2016), (Molina-Prados et al., 2022)	8
Willingness	willingness to co-create, willingness to share content	(Molinillo et al., 2020), (Vilnai-Yavetz & Levina, 2018)	2
Perceived	perceived usefulness, perceived ease of use, perceived value, perceived economic benefit, Perceived community benefits, perceived social influence, perceived risk, Perceived credibility of SNS messages, perceived helpfulness, perceived entertainment, Perceived utility	(Bilgihan et al., 2016), (Abdelsalam H. Busalim et al., 2021), (C. Coursaris, 2016), (Kumar & Kumar, 2020), (Y. Yang et al., 2017), (Xue, 2020), (Bianchi, 2017), (Qin & Kong, 2015), (Cao et al., 2022), (W.-K. Chen et al., 2022), (C. H. Li et al., 2022)	11
Social Commerce	Social commerce constructs, social commerce sales, social commerce platform, social commerce information sharing, social commerce value	(Algharabat, 2021), (Sheikh et al., 2019), (Kemp et al., 2021), (Yu et al., 2020), (Bazi et al., 2020)	5
Behavior	online wom behavior (review generation, review ratings), behavioral (swom), Usage Behaviour, customer social media behaviors	(Wu, 2018), (Herrando, 2017), (Fen Crystal Yap & Kwai Choi Lee, 2014), (F. Li et al., 2021)	4
Content	Message Characteristics (appeal, content, richness), Product Presentation, Content Type (Entertainment, information, renumeration), media type (vividness, interactivity), posting time (workday, peak hours), Message content, message format, Marketing message (informativeness), Digital content marketing social media, SMM Message Type (Customer Endorsement, Promotion Information), Storytelling content	(C. Coursaris, 2016), (Y. Wang et al., 2020), (Le, 2018), (Pletikosa Cvijikj & Michahelles, 2013), (Y. A. K. Yang, 2014), (Ha, 2016), (J. Chen et al., 2020), (Atiq et al., 2022), (C. H. Li et al., 2022)	9
Relationship Quality	relationship quality (trust, commitment, satisfaction)	(Abdelsalam H. Busalim et al., 2021), (Sheikh et al., 2019)	2

From these results, it can be seen that research related to social commerce is still related to trust, content, motivation, social, engagement (which measures more in terms of likes, shares and recommendations), as well as intention.

2) Theory/Framework

From the articles included in the selected studies, it appears that several theories/frameworks that we can use, such as:

Table 3: Theory/Framework

Theory/Framework	References	Count
SOR (Stimulus-Organism-Response)	(X. J. Lim, 2021), (Ma, 2022), (Hu & Chaudhry, 2020), (Kang et al., 2021), (Q. Xiao et al., 2022)	5
GST (Gender Schema Theory)	(X. J. Lim, 2021)	1

TAM (Technology Acceptance Model)	(Y. Yang et al., 2017)	1
TRA (Theory Reasoned Action)	(Ali et al., 2020)	1
SST (Social Support Theory)	(Ali et al., 2020)	1
VAM (Value-based Adoption Model)	(Cao et al., 2022)	1

From the table above, SLR found that previous studies mostly used the SOR (Stimulus-Organism-Response) theory in research related to social commerce as seen in the data. There are already 5 papers that use the SOR model to read consumer behavior which can influence customer engagement.

3) Platforms

The research found that social commerce research objects could use multiple platforms, such as:

Table 4: Platform

Platform	References	Count
AirBnB	(Kong, 2020)	1
Company website	(Yu et al., 2020)	1
Facebook	(Molinillo et al., 2020), (Barker et al., 2015), (C. Coursaris, 2016), (Wongkitrungrueng & Assarut, 2020), (Yasin, 2020), (Nadeem, 2021), (Braojos et al., 2019), (Le, 2018), (Pletikosa Cvijikj & Michahelles, 2013), (Bento et al., 2018), (Y. A. K. Yang, 2014), (Deng et al., 2021), (Loureiro, 2017), (C. K. Coursaris, 2016), (Kang et al., 2021), (J. Chen et al., 2020), (Song et al., 2021), (Yu et al., 2020), (Fen Crystal Yap & Kwai Choi Lee, 2014), (Huang et al., 2022), (W.-K. Chen et al., 2022)	21
Line	(Yu et al., 2020)	1
Blog	(Yu et al., 2020)	1
Mobile app	(Yu et al., 2020)	1
Linkedin	(Barker et al., 2015), (Y. A. K. Yang, 2014)	2
Twitter	(Barker et al., 2015), (Braojos et al., 2019), (Y. A. K. Yang, 2014), (J. Chen et al., 2020), (L. Liu et al., 2018), (Huang et al., 2022)	6
Weibo (Sina Weibo)	(Y. A. K. Yang, 2014), (Kang et al., 2021), (J. Chen et al., 2020), (Ha, 2016), (L. Liu et al., 2018), (Cao et al., 2022), (Huang et al., 2022)	7
Youtube	(Y. A. K. Yang, 2014)	1
Flickr	(Y. A. K. Yang, 2014)	1
Reddit	(Y. A. K. Yang, 2014)	1
Delicious	(Y. A. K. Yang, 2014)	1
Amazone	(Barker et al., 2015)	1
Mogujie	(Xue, 2020)	1
Taobao	(Clement Addo et al., 2021), (Guo, 2021), (Ma, 2022), (Hu & Chaudhry, 2020)	4
JD	(Clement Addo et al., 2021)	1
Tiktok	(Ma, 2022), (W.-K. Chen et al., 2022)	2
Wechat	(Lin, 2018), (Cao et al., 2022)	2
Douyin	(Cao et al., 2022)	1
Instagram	(Huang et al., 2022)	1

Social commerce research has mostly focused on Facebook, Twitter, Weibo and Taobao platforms.

5. Discussion and Conclusion

The bibliometric analysis reveals that trends in social commerce research can be classified into three cluster groups. The first cluster focuses on social media, interactive technology, digital engagement, and online engagement. This finding is consistent with the SLR findings where the findings include factors regarding customer engagement, engagement in social media, and social commerce engagement. The second cluster addresses social commerce, emotional support, trust, and shared commerce. This finding is consistent with the SLR findings where there are findings of factors related to social support (emotional, informational), social interaction and social presence. And the third cluster discusses customer engagement, customer satisfaction, perceived risk, customer trust, and consumer involvement. Where these results are the same as those found in the SLR process which found several factors in social commerce research related to trust, customer satisfaction which is also included in relationship quality, and also perceived risk and engagement.

However, by using SLR techniques, the author was able to conduct a deep analysis to find what

kind of engagement frequently discussed like to find the activity of engagement (like, share, and recommendation), brand engagement, behavior engagement, motivation engagement, etc. By using SLR, researchers were able to identify every dimension such as:

Table 5: The Summary of Dimension for the Independent Variable (IV)

Authors	Social Factor			Technology Factor			Relationship Quality			Motivational Factor	
	Social Support	Social Interaction	Social Presence	Information Quality	Service Quality	System Quality	Trust	Commitment	Satisfaction	Utilitarian	Hedonic
(Molinillo et al., 2020)	v						v				
(Algharabat, 2021)	v		v				v				
(Abdelsalam H. Busalim et al., 2021)	v	v	v	v	v	v	v	v	v	v	v
(Y. Wang et al., 2020)	v										
(Sheikh et al., 2019)	v						v	v	v		
(Bilgihan et al., 2016)		v								v	v
(Dabbous et al., 2020)		v					v				
(Xi & Hamari, 2020)		v									
(X.-J. Lim et al., 2020)							v				
(Lin, 2018)	v						v				
(Kong, 2020)				v			v				
(Ma, 2022)			v				v				
(Guo, 2021)							v				
(Akram et al., 2021)										v	v
(Ali et al., 2020)	v			v							
(Bazi et al., 2019)	v										
(Cheung et al., 2015)		v									
(Yusuf et al., 2018)	v						v				
(F. Li et al., 2021)		v									
(W.-K. Chen et al., 2022)		v	v								
(Atiq et al., 2022)							v				
(Barker et al., 2015)									v		
(Loureiro, 2017)									v		

Table 5: The Summary of Dimension for the Dependent Variable (DV)

Authors	Social Commerce Users' Engagement		
	Affective Engagement	Cognitive Engagement	Behavioral Engagement
(Herrando, 2017)	v	v	v
(A H Busalim, 2021)	v	v	v
(Molinillo et al., 2020)	v	v	v
(Y. Wang et al., 2020)	v	v	v
(Xi & Hamari, 2020)		v	
(Wongkitrungrueng & Assarut, 2020)			v
(Nadeem, 2021)	v	v	v
(Xue, 2020)	v	v	v

Based on a summary of the dimensions that have been found, researchers designed a conceptual framework that can be used to measure social commerce user engagement as illustrated below:

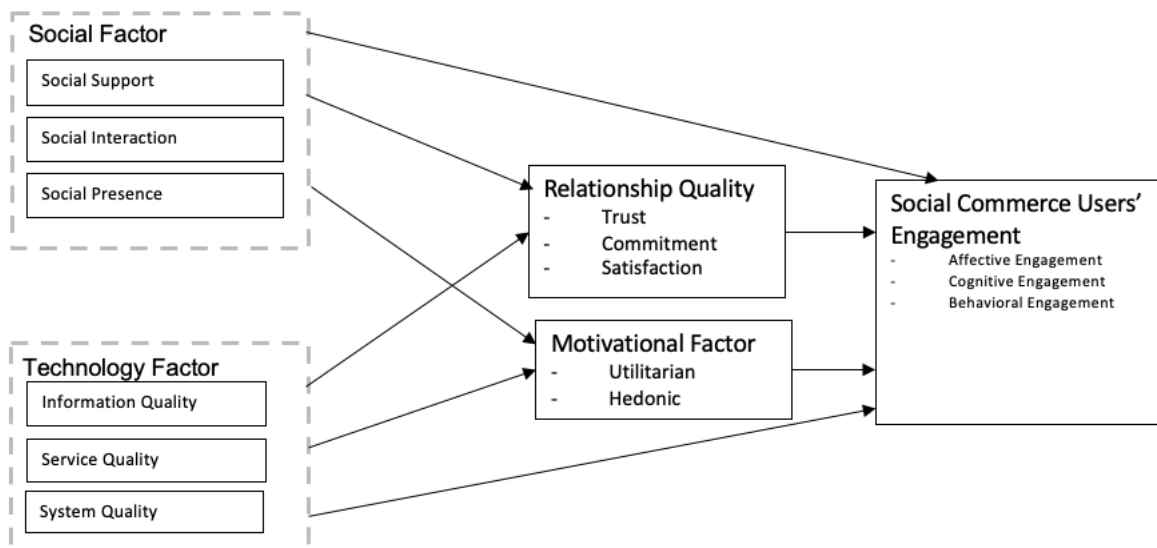


Fig. 8: Conceptual Framework

In addition, the SLR technique gives us another finding such as SOR theory was more widely used in previous researches, and the trend of social commerce platforms that are widely discussed such as Facebook, Twitter, Weibo, and Taobao.

There were several limitations to this research, such as the number of papers analyzed was only 150 papers out of 200 original paper sources, and the search term used was social commerce user involvement, which may be too specific. For further research, the researcher suggests conducting more in-depth research using a combination of the variables found, analyzing more deeply related issues that can be customer-centered in social commerce which includes cognitive, social, and relationship factors, analyzing more deeply the factors which can influence customer engagement, and measure the importance of user engagement centered on community building in social commerce and provide sharper insights.

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