A Comprehensive Literature Review of Acceptance and Usage Studies in the Social Commerce Field

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ABSTRACT

Different studies have considered social commerce as a new paradigm in the field of business and commerce for about a decade and addressed the identification of factors affecting its acceptance. The present study sought to thoroughly review previous research related to the adoption of social commerce. For this purpose, a systematic review of the literature was used with primary and secondary search strategies by utilizing two approaches. First, two hundred sources were reviewed using criteria such as business transactions, social commerce approach, the applied social media, customer engagement cycle, value creation and value co-creation methods, as well as the type of business based on product or service offerings, the innovation space, the employed fundamental theories, and the research method of the studies. Then, the trends and findings from the observed results in the quantitative approach were analysed, followed by distinguishing three generations of social commerce acceptance studies that were conducted over this decade. The results revealed that trust, perceived usefulness, and socialization skills have the greatest impact on social commerce acceptance. Among the various platforms, social networks and microblogs, as well as some e-commerce sites equipped with social constructs were the most used cases in social commerce. The applied theories and models in acceptance studies varied extensively while the technology acceptance model, and the theories related to the planned behaviour, rational action, and social support were frequently used. In addition, different studies focused on user behaviour and the cognitive space of innovation and business-to-customer transactions, which mainly evaluated the sale of goods through social commerce while the scope of service provision was less prominent. Regarding the research method, most of the studies were non-experimental, descriptive, and survey and the main sources of the dissemination of social commerce acceptance research were journal articles.

Keywords: Social Commerce, Acceptance, Systematic Literature Review
1. INTRODUCTION

The rapid advent and advancement of social media and Web 2.0 have provided a wonderful potential to convert e-commerce from a product-oriented environment to a social-based and customer-centered field [1]. Social media basically refers to Internet-based applications built on Web 2.0 while Web 2.0 refers to a concept and a platform for collective intelligence utilization [2]. In this context, social sciences and experiences are available for the customers, which support them for better understanding their online buying purposes, as well as making more conscious and correct purchase decisions [3]. Further, all online businesses can capture the customers’ behaviour, which gives them intuitions into their shopping experiences and expectations and help them to develop successful business guidelines [4]. Therefore, users should adopt social commerce as an innovation. The acceptance of innovation is considered as a process, which results in initiating the use of a product, process, or application.

The adoption of innovation typically involves a three-step process including its pre-acceptance, acceptance, and persistence, which is the output of the stage of decision-making and willingness for acceptance. So far, innovation research has been technology-centric in history since its origins are economic issues and technology management [5][6].

The motivation for the present study was to analyze the studies of social commerce acceptance. To this end, the sources of interest for the two groups of audience were evaluated based on the interest of the target audiences of the present study including the first category of audience seeking to gain commercial advantage through social commerce. Studies can open the door to these audiences and guide them through relevant research by analyzing the following issues.

- The type of social media under consideration;
- The type of applied business transaction;
- The thematic focus area;
- The type of social commerce focus on the customer engagement cycle;
- Value creation and value co-creation through social commerce;
- The focus of studies on function areas;
- The extent of the focus of studies on product buying or service provision;
- Social commerce approach;
- A focus on the geographical and temporal focus of social commerce

The second category belongs to the audience seeking methods to embrace innovation and view social commerce as an innovation needed for adoption. These people are normally the researchers who attempt to steer society toward the right alignment with innovation. The evaluation of adoption stages, innovation spaces, the applied basic theories, as well as effective and influential factors, the types of research methods, and research outputs can help the audience and guide them for research.

To this end, a systematic literature review (SLR) and the research were conducted based on research questions which were purposefully designed to address the interests of these two groups of audience. Furthermore, two quantitative and qualitative approaches were utilized to systematically review the resources. In the quantitative approach, the concerned metrics are typically categorized by the time or subject. Furthermore, the
qualitative approach attempts to describe the obtained trends and analyses in the three generations of studies related to social commerce acceptance. These three generations represent the rapid changes over the last decade regarding accepting social commerce. Finally, the research gaps were evaluated based on the observed trends and several implications were recommended as well.

The present exploratory systematic review aimed to find all the scientific studies which evaluated social commerce adoption during 2010-2018. During the planning phase of the present SLR and using a pilot study, the following questions were developed for data extractions.

Q1. What are the theoretical foundations of social commerce acceptance studies?
Q2. What is the approach taken in social commerce acceptance studies based on the applied platform?
Q3. What are the types of research methods used in social commerce acceptance studies?
Q4. What are the considerations for business, customers, and innovation space in social commerce acceptance studies?
Q5. What is the geographical focus of social commerce acceptance studies?

A quantitative and qualitative analysis approach was used to answer the above-mentioned questions. The quantitative analysis dealt with the multiplicity of components and the time distribution of applications and the qualitative analysis sought to discover the observed trends and the evolution of social media use in businesses.

The intended indicators in the quantitative analysis included the components which demonstrated the differentiation of studies such as the focus on the type of the applied media, business approach to media use, business transactions. Additionally, the other components encompassed the used basic theories, the type of focus on the adoption process, attention to the customer engagement cycle, and the stages of value creation and value co-creation.

The observed trends and the results were qualitatively analyzed after performing quantitative analysis. The gap analysis is considered as one of the important outputs of the analysis phase in this research, which can be considered in future studies.

2. SYSTEMATIC LITERATURE REVIEW PLAN

Based on the evidence-based software engineering (EBSE) policy, three phases were proposed for the systematic review of literature including planning, implementation, and reporting the results [7]. During the planning phase, an official protocol was created to conduct a systematic review of the literature. This protocol contained the details of the research strategy, which was based on research questions, inclusion/exclusion criteria, quality assessment criteria, data extraction strategy, along with data synthesis and analysis guidelines [8].

The protocol was pilot tested for evaluating the perfectness of the search string and the correctness of inclusion/exclusion criteria and data extraction guidelines of the present study [9]. After pilot testing, the updated version of the protocol was sent to two external reviewers who were considered as experts in the field. The reviewers recommended some changes regarding the research question, followed by incorporating inclusion/exclusion criteria related to the scope of SLR into the protocol. Then, the steps of the protocol were redefined during the implementation phase. The following subsections explain the planning phase of the review.
2.1. Primary Search Guidelines
The primary search guidelines included the following steps:

1. Extracting the main search terms based on research questions;
2. Performing a pilot study to extract relevant terms, as well as synonyms and substitution options which were used in some literature (Table 1);
3. Concatenating terminology using the Boolean operators to create a search string (Table 2);
4. Performing search based on the Boolean string obtained in a search engine like Google, leading to numerous scientific databases;
5. Hand-checking manually the results of the search until the density of the obtained results on each page was zero;
6. Selecting a range of online databases, journal archives, and conference proceedings for the initial analysis of the search results;
7. Retrieving the citations and abstracts of the results and managing these features using the EndNote.

Considering the research question, the following three major terms were identified for the searching process, including social commerce, adoption, and customer. Based on the major search terms, the alternative terms were identified (Table 1) and the terms were linked to formulating the search string. In addition, the string was customized for different online databases based on their interface requirements while keeping the logical order consistent.

Table 1. Search terms and their synonyms

| Search Terms       | Synonyms                        | Surrogates                        |
|--------------------|---------------------------------|-----------------------------------|
| Social Commerce    | Social Network Commerce         | Social Media Commerce             |
| Adoption           | Diffusion                       | Acceptance-Adaptation-Conformity  |
| Customer           | Consumer                        | End User-User                     |

On Abstract (Social Commerce OR Social Network Commerce OR Social Media Commerce) AND (Adoption OR Acceptance OR Adaptation OR Conformity) AND (Customer OR Consumer OR User OR End User)

It is worth noting that searching was not limited to the publication year during the primary search process. Regarding the search process, the meanings in the studies conducted before 2010 were extremely old and highly archaic studies were considered for the review. Therefore, 2010 was selected as the starting year in the present study.

2.1.1. Study on Selection Criteria
The obtained results based on the early search strategy were filtered by using criteria in order to eliminate unrelated studies. The search results were shifted based on the following steps:

Step 1. The results of the initial strategy were reviewed through their abstracts and studies with the following characteristics were sieved from the results.

- Non-English studies;
- In general, unrelated studies which were restored due to the poor performance of the search string by the search engine;
- Head articles, tutorials, poster sessions, centers, previews, and comments;
• Articles published before 2010.

**Step 2.** Based on the papers obtained from **Step 1**, the abstracts were evaluated only to exclude studies which had the following characteristics:

• Not directly or indirectly related to the field of social commerce or the adoption of social media in the business;
• Not following any empirical research method;
• Ph.D. dissertation and master theses published from the research covered by the theses were available and included in the review.

**Step 3.** Duplicate articles were removed from the previous citation by selecting the selected filter. However, the conferences and editions of the publications were reviewed for repetitive publications and only the articles of the journals or articles with more details of the study were selected, which included the final results.

Although the present study failed to review the quality of the articles at this stage, it determined and dealt with the quality of the evaluation and data extraction of articles which were of poor quality or scientific or literary theft.

### 2.2. Secondary Search Guidelines

To ensure not to lose any of the related studies, secondary search guidelines were designed by conducting the following steps:

**Step 1:** The references of all included studies were reviewed based on the retrieved results. Then, all the qualified citations were applied with the same selection criteria.

**Step 2:** Regarding the results in **Step 1** of the secondary search, the subject of social commerce was found more comprehensively published in Information Systems, Business and Management Research, and Electronic Commerce journals instead of Computer Science and Software Engineering. Therefore, the search scope was developed by using these journals. An online search was conducted on the archives of the journals including Information Management, Electronic Commerce Research and Applications, Technological Forecasting and Social Change, Information and Management, Electronic Commerce, Information Management, Business Research, Management Information Systems, Management Science, Decision Support Systems, and Management Research.

**Step 3:** Further, the DBLP publication profiles of some scholars (e.g., Hajli, Liang, Chen, Wang, Shanmugam, Zhang, Yadav, Zhao, and Benyoucef) were reviewed, who were highly cited for their research work on social commerce adoption. The DBLP computer science bibliography is the on-line reference for bibliographic information on major computer science publications. Furthermore, it has evolved from an early small experimental webserver to a popular open-data service for the entire computer science community. The mission of DBLP is to support computer science researchers in their daily efforts by providing free access to high-quality bibliographic meta-data and links to the electronic editions of publications.

**Step 4:** Finally, six published literature reviews in reputable journals and valid conferences during the last decades were selected to ensure the inclusion of all related papers [10-15]. Then, all references (from 2010 onward) in those literature reviews and papers were sought, which were qualified for consideration and treated with the same three-step selection criteria that were described in **Section 3.1.1**.
2.3. Quality Assessment
The quality of the qualified studies was evaluated based on the applied research method, as well as the quality of their reported results since these data were the only available alternative of quality assessment [16]. In general, quality assessment was performed based on three stages as follows.

Study Quality: In this step, the quality assessment checklist was used by considering the EBSE guidelines in the previously conducted SLR [9]. This checklist included general and special sections based on the research method encompassing a survey, case study, along with experiment and experience reports. All studies scored equal to or greater than 50% were considered in the present review and the remaining cases were eliminated accordingly.

Publication Quality: The journal impact factor was utilized based on the ranking of 2018 in order to appraise the quality of the outlet where the papers were published, followed by reviewing only those articles with an impact factor greater than 1.

Assessment of the Impact of the Paper: In this stage, article citations were checked through Google Scholar to evaluate the impact of the published papers.

Assessment of the Other Resources: Considering four types of sources including the journal article, conference paper, chapter book, and thesis, evaluating the quality of sources other than the journal article was necessary. Thus, the selection of the book chapters, the author, the publications, and the direct relation with the subject were considered as the criteria for selection. Additionally, the level of the science of respective universities was the criterion for selecting the theses. Eventually, conference selection criteria included conference organizer, scientific committee, conference internationality, valid conference index, and thematic relationship with social commerce.

2.4. Data Extraction
Three types of data including publication details, context description, and findings were extracted based on the guidance provided in the previous research [17]. In addition, publication details included titles, authors, journal/conference/book chapters/thesis information, and the impact factor of the journal, conference index, and the year of publication. Further, context description encompassed a research method, data collection method, social commerce approach, social media type, business transaction, adoption types, as well as the design of data collection methods and instruments. Finally, the findings included the relationship between social commerce parameters and intention to use, influential adoption parameters, customer characteristics, and social commerce characteristics, as well as the relationship between social commerce and customer, and the geographical distribution of social commerce adoption.

2.5. Data Synthesis and Analysis
To answer research questions, the findings of all 203 studies were analysed to extract their outcomes regarding the social commerce-adoption relationship. The results of the scientific inquiry into 203 studies were categorized into four segments. The first segment was related to the adoption stage with four areas including the paper title, pre-adoption stage, adoption stage, and post-adoption stage. The adoption type was identified based on the keywords in the abstract, introduction, and research model. The second segment belonged to the parameters affecting and being affected by social commerce.
commerce adoption. The third segment encompassed the fundamental theory, and finally, the fourth segment elaborated on the research method, data collection method, data analysis method, data analysis tools, and the sample size. The results including adoption phases, basic theories, social commerce approach, research methods and instruments, business transactions, geography focus, reference types, thematic focus, and the innovation space were extracted based on the evaluation of research works and data synthesis.

2.6. Database Creation
For the quantitative and qualitative analysis of the results, a database of 14 entities was used, which was created based on data from a systematic review. These entities included adoption stages, applied theories, research methods, as well as the statistical population of research, research publications, research geography, social commerce approach, business transactions, acceptance factors, value co-creation, customer engagement cycle, research focus, and innovation space. Each entity was created as a table containing the fields of interest based on the type of qualitative and quantitative analysis of a particular entity. The fields of each table were as follows.

*Adoption Stage Table:* The research title, year of research, pre-adoption, and adoption, post-adoption;
*Applied Theory Table:* The research title, year of research, along with applied theories, models, and frameworks;
*Research Method Table:* The research title, year of research, and the type of research (i.e., first, second, and third levels);
*Statistical Society Table:* The research title, year of research in addition to the applied statistical society, statistical sample, and social media;
*Research Publication Table:* The research title, year of research, type of publication, name of the publication, and author(s)’s name;
*Research Geography Table:* The research title, year of research, country of research, and research continent;
*Social Commerce Approach Table:* The research title, year of research, and social commerce approach;
*Business Transactions Table:* The research title, year of research, type of transaction, and type of business;
*Acceptance Factor Table:* The research title, year of research, affecting factors, and affective factors;
*Value Co-creation Table:* The research title, year of research, and value co-creation stage;
*Customer Engagement Cycle Table:* The research title, year of research, and customer engagement stage;
*Research Focus Table:* The research title, year of research, as well as focus on the user, transaction, business, environment, technology, and organization;
*Innovation Space Table:* The research title, year of research, along with cognitive, informational, and social spaces
3. RESULTS

3.1. Social Commerce Approach
In general, two approaches can be addressed to use social commerce. The first approach uses technology instruments through social media and incorporates business processes. The second approach is related to the time the social constructs are transferred to the electronic platform of business processes. However, both approaches are observed in the studies conducted on accepting social commerce. For example, social media such as Facebook, Twitter, LinkedIn, and the like are visible in the social media instruments which are employed for business and commerce processes, as well as commercial websites such as HP, Coca-Cola, Amazon, Groupon, and others cases which use the second approach. Table 2 presents the types of platforms in social commerce acceptance research based on the type of the applied approach and the extent of using each platform in the studies.

Table 2. Social commerce approaches based on the social commerce platform

| Social Commerce Platform | Type of Platform | Social Commerce Approach | Count | Percent |
|--------------------------|------------------|--------------------------|-------|---------|
| Fashion Bug              | Website          | Electronic Commerce + Social Constructs | 1     | 0.52    |
| Odel                     | Website          | Electronic Commerce + Social Constructs | 1     | 0.52    |
| Coupang                  | Website          | Electronic Commerce + Social Constructs | 3     | 1.56    |
| Wemakeprice              | Website          | Electronic Commerce + Social Constructs | 2     | 1.04    |
| Hellodc                  | Website          | Electronic Commerce + Social Constructs | 1     | 0.52    |
| Wal-Mart                 | Website          | Electronic Commerce + Social Constructs | 2     | 1.04    |
| Best Buy                 | Website          | Electronic Commerce + Social Constructs | 1     | 0.52    |
| Amazon                   | Website          | Electronic Commerce + Social Constructs | 4     | 2.08    |
| Tickmonster              | Website          | Electronic Commerce + Social Constructs | 3     | 1.56    |
| bj.jumei                 | Website          | Electronic Commerce + Social Constructs | 1     | 0.52    |
| GFlock                   | Website          | Electronic Commerce + Social Constructs | 1     | 0.52    |
| House of Fashion         | Website          | Electronic Commerce + Social Constructs | 1     | 0.52    |
| Nolimit                  | Website          | Electronic Commerce + Social Constructs | 1     | 0.52    |
| ZigZag.lk                | Website          | Electronic Commerce + Social Constructs | 1     | 0.52    |
| Kelly Felder             | Website          | Electronic Commerce + Social Constructs | 1     | 0.52    |
| TripAdvisor              | Website          | Electronic Commerce + Social Constructs | 3     | 1.56    |
| eBay                     | Website          | Electronic Commerce + Social Constructs | 3     | 1.56    |
| Target and Overstock     | Website          | Electronic Commerce + Social Constructs | 1     | 0.52    |
| Groupon                  | Website          | Electronic Commerce + Social Constructs | 4     | 2.08    |
| Librarything             | Website          | Electronic Commerce + Social Constructs | 1     | 0.52    |
| Target                   | Website          | Electronic Commerce + Social Constructs | 1     | 0.52    |
| Overstock                | Website          | Electronic Commerce + Social Constructs | 1     | 0.52    |
| Coca Cola                | Website          | Electronic Commerce + Social Constructs | 1     | 0.52    |
| HP                       | Website          | Electronic Commerce + Social Constructs | 1     | 0.52    |
| Dell                     | Website          | Electronic Commerce + Social Constructs | 1     | 0.52    |
| Orbits                   | Website          | Electronic Commerce + Social Constructs | 1     | 0.52    |
| 1800flowers              | Website          | Electronic Commerce + Social Constructs | 1     | 0.52    |
| Crutchfield              | Website          | Electronic Commerce + Social Constructs | 1     | 0.52    |
| Foresquare               | Website          | Electronic Commerce + Social Constructs | 2     | 1.04    |
| Ctrip                    | Website          | Electronic Commerce + Social Constructs | 1     | 0.52    |
| Hoteles                  | Website          | Electronic Commerce + Social Constructs | 1     | 0.52    |
| Starbooks                | Website          | Electronic Commerce + Social Constructs | 1     | 0.52    |
| Opensky                  | Social Network   | Social Media + Business Process | 1     | 0.52    |
| Facebook Starbucks       | Social Network   | Social Media + Business Process | 1     | 0.52    |
Table 2. Social commerce approaches based on the social commerce platform (cont.)

| Social Commerce Platform | Type of Platform | Social Commerce Approach                          | Count | Percent |
|--------------------------|------------------|--------------------------------------------------|-------|---------|
| Zing                     | Social Network   | Social Media + Business Process                  | 1     | 0.52    |
| t.dianping               | Social Network   | Social Media + Business Process                  | 1     | 0.52    |
| Cloob                    | Social Network   | Social Media + Business Process                  | 1     | 0.52    |
| Pinterest                | Social Network   | Social Media + Business Process                  | 2     | 1.04    |
| Facebook Lady Gaga       | Social Network   | Social Media + Business Process                  | 1     | 0.52    |
| LinkedIn                 | Social Network   | Social Media + Business Process                  | 8     | 4.16    |
| Meilishuo                | Social Network   | Social Media + Business Process                  | 1     | 0.52    |
| Myspace                  | Social Network   | Social Media + Business Process                  | 5     | 2.6     |
| Renren                   | Social Network   | Social Media + Business Process                  | 3     | 1.56    |
| Facebook Green Day       | Social Network   | Social Media + Business Process                  | 1     | 0.52    |
| Facebook                 | Social Network   | Social Media + Business Process                  | 46    | 23.92   |
| Kaixin001                | Social Network   | Social Media + Business Process                  | 1     | 0.52    |
| Friendster               | Social Network   | Social Media + Business Process                  | 2     | 1.04    |
| Orkut                    | Social Network   | Social Media + Business Process                  | 1     | 0.52    |
| Academia                 | Social Network   | Social Media + Business Process                  | 2     | 1.04    |
| Google+                  | Social Network   | Social Media + Business Process                  | 1     | 0.52    |
| MXit                     | Social Network   | Social Media + Business Process                  | 1     | 0.52    |
| Real                     | Social Network   | Social Media + Business Process                  | 1     | 0.52    |
| Telegram                 | Social Messenger | Social Media + Business Process                  | 1     | 0.52    |
| Hangout                  | Social Messenger | Social Media + Business Process                  | 1     | 0.52    |
| WhatsApp                 | Social Messenger | Social Media + Business Process                  | 1     | 0.52    |
| Yahoo                    | Social Messenger | Social Media + Business Process                  | 1     | 0.52    |
| SinaWeibo                | Microblog        | Social Media + Business Process                  | 8     | 4.16    |
| Instagarm                | Microblog        | Social Media + Business Process                  | 3     | 1.56    |
| Twitter                  | Microblog        | Social Media + Business Process                  | 24    | 12.48   |
| Xiaoei                   | Social Gaming    | Social Media + Business Process                  | 1     | 0.52    |
| GameFly                  | Social Gaming    | Social Media + Business Process                  | 1     | 0.52    |
| YouTube                  | Video Sharing    | Social Media + Business Process                  | 9     | 4.68    |
| Yelp                     | Online Communities| Social Media + Business Process               | 1     | 0.52    |
| Ning                     | Online Communities| Social Media + Business Process               | 1     | 0.52    |
| Snapshot                 | Image Sharing    | Social Media + Business Process                  | 1     | 0.52    |
| Flicker                  | Image Sharing    | Social Media + Business Process                  | 4     | 2.08    |
| Kikseen                  | Video Sharing    | Social Media + Business Process                  | 1     | 0.52    |
| LiveStream               | Video Sharing    | Social Media + Business Process                  | 1     | 0.52    |
| UStream                  | Video Sharing    | Social Media + Business Process                  | 1     | 0.52    |
| Netflix                  | Video Sharing    | Social Media + Business Process                  | 1     | 0.52    |

3.2. Types of Social Media

Considering the various types of social media, the level of attention and utilization of a diversity of social media are considered as the most remarkable points in the study of social media.

The types of applied social media in the research included the social network, microblog, blog, wiki, RSS, social tagging, podcast, virtual communities, video sharing, and image sharing. Figure 2 depicts the extent to which studies focus on a variety of social media. Social networks are the most commonly used social media, in which microblogs and blogs are at the forefront.
Figure 2. Temporal distribution of the types of social media used in different studies

In addition to the applied social media in commerce, another approach for social commerce encompasses sites related to social buying, social service, social gaming, and group buying, which provide goods and services with social commerce constructs such as forums and communities, rating and reviews, along with recommendation and referrals.

3.3. Thematic Focus Area

The use of the focus on subject area is considered as one of the methods for analysing studies, upon which some studies have focused solely on specialized business areas and the acceptance of social commerce in these areas. Some of these areas include marketing, entrepreneurship, product sales, service delivery, teamwork, and customer relationship management. Recently, several studies have addressed the user and issues such as shopping behaviour, adaptive behaviour, adoption patterns, and behavioural continuity. The third focal area is related to transaction studies including reviewing the interaction, information, social structures, and social media. Each of these domains has some sub-domains or focus areas. Figure 3 illustrates the focus area of studies, along with the number of studies conducted in each area.
It should be noted that some studies addressed several areas, especially at the second level, with more focused levels. Furthermore, some studies simultaneously focused on several areas, and thus the total number of studies conducted on each focus area was larger than the total number of studies.

### 3.4. Value Creation and Value Co-creation

The emergence of value creation and value co-creation through social media activities is regarded as one of the potentials of social media. The 5C categorization is based on the actions which are enabled by the social media instruments, including communicating, collaborating, connecting, completing, and combining. Given the purpose of the present study regarding evaluating the acceptance of social commerce, the 5C framework allows analysing the functions of social media in this area for value creation and co-creation. Table 3 presents the value creation and co-creation mechanisms [18]. Based on these mechanisms, various studies were evaluated and the impact of each study was determined on each of the stages of value co-creation. Accordingly, some studies focused on one of the functions while the other cases emphasized several co-creation functions. Figure 4 displays the degree of attention to each of the value co-creation stages in the studies of social commerce adoption.
Table 3. Examples of social media applications based on a 5C categorization

| 5C Function                  | Typical Social Media Applications Providing Functionality                                                                 | Purpose                                                                 |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| Collaborating: Collectively creating content | Wikis, shared workspaces                                                                                               | Create content together, collaborate, and share usage                   |
| Communicating: Publishing and sharing content | Blogs, media sharing systems, discussion forums, micro blogs, and instant messaging                                   | Publish, discuss, express oneself, show opinions, share, influence, and store |
| Completing: Adding, describing, and filtering | Tagging, social bookmarking, syndications, and add-ons                                                               | Add metadata, describe content, subscribe to updates, combine, and experience serendipity |
| Connecting: Networking       | Social networks, communities, and virtual worlds                                                                       | Socialize, network, and connect (sometimes play and entertain)           |
| Combining: Mixing and matching | Mash-ups and platforms                                                                                                  | Combine other instruments and technologies based on situations and needs |

Source: [19]

The aspects of the value creation and co-creation from the articles were analyzed based on the degree to which they described the mechanisms of value creation and co-creation, as well as the extent to which the articles of various media played the roles of social recognition. The second method belonged to the use of the 5C framework for analyzing social media functions in more detail and determining their provided evidence.

Figure 4. The extent of the studies conducted on each of the value creation mechanisms

Table 4 reports each of the value creation mechanisms by separate studies. As shown, a solid black circle is used to determine which studies identify the various social media roles and mechanisms for creating or co-creating value. Describing the studies in which the value creation or co-creation mechanisms of social media are mentioned is the sign of the empty circle although the half-full circle determines which studies evaluate the value creation or co-creation to some extent.
Given that social media is based on engagement, analysing studies based on the level of attention to each stage of the customer involvement and engagement cycle can indicate the importance of each of these steps in accepting social commerce. Customer engagement focuses on customer satisfaction by providing higher values for...
competitors in order to build trust and commitment to long-term relationships. The affected customers are considered as the partners who work with vendors in increasing the value in order to better meet their needs, as well as the needs of other customers. In addition, interactive social media greatly facilitates the process of creating sincere, durable relationships through trust and commitment between buyers and sellers. Further, client involvement engages the clients through emotional constraints in their relationship. The process of creating customer involvement is formed by the customer engagement cycle. Furthermore, the idea of the customer engagement cycle is used and referred to as the stages of awareness, attention, research, purchasing, and durability, indicating the stages of the procurement process. Additionally, this process is utilized to help the customers decide on a particular product for the feedback loop regarding their future purchases instead of engaging them, which may have been the first for a new customer to choose which products to buy. The stages of customer engagement include connecting, interacting, satisfying, durability, committing, supporting, and engaging. Figure 5 displays the results of evaluating studies, which were conducted in the field of social commerce acceptance and the focus on each stage of the customer engagement cycle. As shown, the stages of interaction, connectivity, and satisfaction have attracted the most attention in the acceptance of social commerce in the investigation.

**Figure 5.** The extent of studies conducted in each of the customer engagement cycles
3.6. Applied Area of Study

Studies have typically focused on one or more functional area(s). The studied areas of research extremely differ and include both the delivery of goods and the provision of services. In addition, some studies have covered both the provision of services and goods. Figure 6 exhibits the amount of attention paid to the study of the acceptance of social commerce to the delivery of goods and the provision of services. It is possible to determine the distribution of studies and precise application areas. Figure 7 depicts what type of application which was emphasized by the study.

![Figure 6](image)

**Figure 6.** The extent of the focus of studies on product buying or service provision

3.7. Business Transactions

The studies of social commerce adoption can be reviewed relying on the transactions in the electronic business. Transactions represent the parties which are involved in the business. Accordingly, studies were reviewed based on their focus on business transactions. Based on the results, B2C, C2C, and B2B transactions acquired the highest attention in the studies. The distribution of the types of studies on transactions is shown in Figure 7.

![Figure 7](image)

**Figure 7.** The focus of studies on business transaction types

3.8. The Geographical Focus of Studies

Based on the survey, adoption studies are normally conducted at the national level. Considering the evaluated studies and their geographic distribution, determining the countries which have received attention is possible. Figures 8 and 9 illustrate the study rates by country and continent and the studies related to each country, respectively.
Figure 8. Geographical distribution of social commerce adoption research based on country and continent.
3.9. Innovation Adoption

The comparison and classification are based on the technology-organization-environment (TOE) framework, which is developed in technology innovation processes by Tornatzky and Fleischer [20]. The TOE framework is considered as an organization-level theory, which addresses three different elements influencing organizational decisions. These three elements involve technological, organizational, and environmental contexts. All three cases are confirmed to be effective in technological innovation [20]. Based on this framework, the present review evaluated studies on the acceptance of social commerce and their focus on one of these three areas. Accordingly, 54% of studies focused on the field of environment and related issues in the field of social commerce acceptance. Technology and technological factors are considered as the second parameter and account for about 29% of the studies. Finally, organizational variables and factors involve 17% of all studies.

To determine the context of the studies, the technology context was divided into social media, platforms, electronic business, and information systems, followed by assigning the environmental context to individual, social, and cultural factors. Further,
organizational context included performance, value chain, readiness, strategy, and business models. Table 5 provides a distribution of studies based on context and sub-contexts. The dominant domain in the study was considered to determine the context of the studies. This is because studies related to the admission of social commerce typically cover different fields although the focus of studies and their dominant fields are considered for segmentation.

Table 5. The context of studies based on the TOE framework

| Context       | Sub-contexts       | Platforms | Electronic Business | Information Systems |
|---------------|--------------------|-----------|---------------------|---------------------|
| Technology    | Social Media       | R8,R13,R14,R23,R33, R35,R42,R48,R50,R53, R54,R58,R61,R64,R6, 7,R70,R82,R83,R99,R 126,R158,R164,R176, R180, | R15,R18,R19,R25,R2, R46,R75,R84,R102,R25,R148,R175,R185, R194,R195, | R24,R38,R45,R66,R1 103,R106,R117,R150, R155,R156,R157,R1, R81,R182,R189,R193, |
|               |                    | R74       | R8,R14,R24,R37,R38,R45,R66,R124,R25,R148,R175,R185, R194,R195, | R15,R18,R19,R25,R2, R46,R75,R84,R102,R25,R148,R175,R185, R194,R195, |
|               |                    |           | R74                 |                     |                     |
| Environment   | Individual Factors | R1,R4,R5,R10,R12,R16,R17,R20,R22,R27,R28,R34, R37,R39,R43,R44,R49,R51,R56,R57,R59,R60,R63, R65,R68,R69,R71,R77,R78,R80,R85,R86,R87,R88, R99,R90,R91,R92,R93,R94,R95,R96,R97,R100,R10, 1,R104,R109,R110,R112,R114,R115,R116,R118,R1, 19,R120,R121,R122,R123,R124,R127,R129,R132,R, 136,R146,R149,R151,R152,R154,R163,R167,R169, R170,R171,R172,R174,R178,R191,R192,R199, | R3,R6,R9,R11, R21,R31,R32,R, 47,R55,R62,R7, R9, 2,R73,R76,R79, R105,R107,R11, | R81,R138,R16, R2,R52,R98, R128,R137,R, 142,R159,R1, |
|               | Social Factors     | R13,R14,R39,R41,R42,R43,R44,R45,R46,R47,R48,R49,R50,R51,R52,R53,R54,R55,R56,R57,R58,R59,R60,R61,R62,R63,R64,R65,R66,R67,R68,R69,R70,R71,R72,R73,R74,R75,R76,R77,R78,R79,R80,R81,R82,R83,R84,R85,R86,R87,R88,R89,R90,R91,R92,R93,R94,R95,R96,R97,R98,R99,R100,R101,R102,R103,R104,R105,R106,R107,R108,R109,R110,R111,R112,R113,R114,R115,R116,R117,R118,R119,R120,R121,R122,R123,R124,R125,R126,R127,R128,R129,R130,R131,R132,R133,R134,R135,R136,R137,R138,R139,R140,R141,R142,R143,R144,R145,R146,R147,R148,R149,R150,R151,R152,R153,R154,R155,R156,R157,R158,R159,R160,R161,R162,R163,R164,R165,R166,R167,R168,R169,R170,R171,R172,R173,R174,R175,R176,R177,R178,R179,R180,R181,R182,R183,R184,R185,R186,R187,R188,R189,R190,R191,R192,R193,R194,R195,R196, | 3,R133,R135,R, 145,R168,R173, | R2,R52,R98, R128,R137,R, 142,R159,R1, |
|               | Cultural Factors   | R13,R14,R39,R41,R42,R43,R44,R45,R46,R47,R48,R49,R50,R51,R52,R53,R54,R55,R56,R57,R58,R59,R60,R61,R62,R63,R64,R65,R66,R67,R68,R69,R70,R71,R72,R73,R74,R75,R76,R77,R78,R79,R80,R81,R82,R83,R84,R85,R86,R87,R88,R89,R90,R91,R92,R93,R94,R95,R96,R97,R98,R99,R100,R101,R102,R103,R104,R105,R106,R107,R108,R109,R110,R111,R112,R113,R114,R115,R116,R117,R118,R119,R120,R121,R122,R123,R124,R125,R126,R127,R128,R129,R130,R131,R132,R133,R134,R135,R136,R137,R138,R139,R140,R141,R142,R143,R144,R145,R146,R147,R148,R149,R150,R151,R152,R153,R154,R155,R156,R157,R158,R159,R160,R161,R162,R163,R164,R165,R166,R167,R168,R169,R170,R171,R172,R173,R174,R175,R176,R177,R178,R179,R180,R181,R182,R183,R184,R185,R186,R187,R188,R189,R190,R191,R192,R193,R194,R195,R196, | 3,R133,R135,R, 145,R168,R173, | R2,R52,R98, R128,R137,R, 142,R159,R1, |
| Organization  | Performance        | R41,R111,R18, R108,R134,R139,R144,R161,R165,R166,R177,R183,R, 6,R188,R190,R197, | R7,R130,R131, R141,R147,R1, 53,R179,R200, | R2,R52,R98, R128,R137,R, 142,R159,R1, |
|               | Value Chain        | R18,R118, | R140,R143, | R2,R52,R98, R128,R137,R, 142,R159,R1, |
|               | Readiness          | R4,R201,  | 87, | 87, |
of social commerce are considered as post-adoption studies. Table 6 represents the usage rate of each keyword.

Table 6. Keywords identified for adoption phases

| Phase           | Keywords (percent use)                                                                 |
|-----------------|---------------------------------------------------------------------------------------|
| Pre-adoption    | Behavioural Intention (26%), intention to use (16%), intention to buy (48%), social commerce intention (14%), and word of mouth intention (8%) |
| Adoption        | Use and acceptance (38%), buy decision (31%), continues intention (13%), and other keywords such as value co-creation, customer perception, customer behaviour, and the like (18%) |
| Post-adoption   | Satisfaction (19%), loyalty (24%), continues behaviour (14%), continues use (10%), and the other keywords such as brand co-creation, knowledge sharing, and the like (33%) |

Figure 10 illustrates the distribution of time-dependent studies of each section based on the categorization of studies on the pre-adoption, adoption, and post-adoption stages.

Figure 10. Temporal distribution of social commerce adoption studies based on adoption phases

3.11. Basic Theory
The basic theory is discussed as one of the perspectives which can be used to evaluate the studies. The applied theory demonstrates a research orientation. Several theories are used in the study of the acceptance and use of social commerce, which are from different domains including the psychology (e.g., the attribution theory, stimulus-organism-response model, flow theory, and the like), information system (e.g., the model related to information system success and information model), mathematics (e.g., graph, game, and network theory), social science (e.g., social capital theory), and business transaction (e.g., customer value theory) domains, and the like. Figure 17 displays the temporal distribution of theories in the studies and Table 7 presents basic domains and theories based on their usage rate and perspective focus.
Figure 11. Temporal distribution of social commerce adoption studies based on basic theories
| Category of Theory | Theory                                                                 | Count | Percent | Perspective Focus |
|--------------------|------------------------------------------------------------------------|-------|---------|-------------------|
| Technology         | Acceptance                                                             |       |         |                   |
| Technology Acceptance | Technology Acceptance Model                                           | 24    | 8.05    | Customer          |
|                    | Theory of Planned Behaviour                                            | 15    | 5.03    | Customer          |
|                    | Theory of Rational Action                                              | 16    | 5.37    | Customer          |
|                    | Innovation Diffusion Theory                                            | 10    | 3.55    | Customer          |
|                    | Unified Theory of Acceptance and Use of Technology                     | 6     | 2.01    | Customer          |
|                    | TOE Theory                                                             | 2     | 0.67    | Business          |
| Social Science     | Social Identity Theory                                                 | 5     | 1.67    | Customer-Transaction |
|                    | Social Capital Theory                                                  | 7     | 2.35    | Customer-Transaction |
|                    | Social Support Theory                                                  | 17    | 5.70    | Customer-Transaction |
|                    | Social Influence Theory                                                | 11    | 3.69    | Customer-Transaction |
|                    | Social Presence Theory                                                 | 6     | 2.01    | Customer-Transaction |
|                    | Social Impact Theory                                                  | 2     | 0.67    | Customer-Transaction |
|                    | Social Cognitive Theory                                                | 2     | 0.67    | Customer-Transaction |
|                    | Social Learning Theory                                                 | 3     | 1.00    | Customer-Transaction |
|                    | Social Exchange Theory                                                 | 9     | 3.02    | Customer-Transaction |
| Information        | Science                                                                |       |         |                   |
| Information Model  |                                                                       | 4     | 1.34    | Customer-Business-Transaction |
| Information System Success Model |                                                                       | 3     | 1.00    | Customer-Business-Transaction |
| Mathematics        |                                                                       |       |         |                   |
| Graph Theory       |                                                                       | 3     | 1.00    | Transaction       |
| Network Theory     |                                                                       | 4     | 1.34    | Transaction       |
| Game Theory        |                                                                       | 4     | 1.34    | Transaction       |
| Psychology         |                                                                       |       |         |                   |
| Flow Theory        |                                                                       | 5     | 1.67    | Customer          |
| MOA Model          |                                                                       | 2     | 0.67    | Customer-Business |
| Expectancy Theory  |                                                                       | 6     | 2.01    | Customer          |
| Use and Gratification Theory |                                                                       | 7     | 2.35    | Customer          |
| S-O-R Model        |                                                                       | 4     | 1.34    | Customer          |
| Trust Transfer Theory |                                                                       | 4     | 1.34    | Customer          |
| Attribution Theory |                                                                       | 2     | 0.67    | Customer          |
| Value Chain        |                                                                       |       |         |                   |
| Value Co-Creation Cycle |                                                                       | 5     | 1.67    | Customer-Business-Transaction |
| Customer Value Theory |                                                                       | 3     | 1.00    | Customer-Business-Transaction |
| Social Commerce Constructs |                                                                   | 6     | 2.01    | Customer-Transaction |
| Organizational     | Science                                                                |       |         |                   |
| Institutional Theory |                                                                   | 4     | 1.34    | Business          |
| Porter’s Competitive Forces Model |                                                                   | 2     | 0.67    | Business          |
| Hofstede Cultural Model |                                                                   | 4     | 1.34    | Customer-Business |
### Table 7. Classification of fundamental theories of social commerce adoption

| Category of Theory | Theory                                                                 | Count | Percent | Perspective Focus          |
|--------------------|------------------------------------------------------------------------|-------|---------|----------------------------|
| Other              | Consumer Decision Making Model, Fit-Viability Model, Elaboration- Likelihood Model, Heuristic-Systematic Processing Model, Self-Determination Theory, User Experience Sharing behaviour Model, Co-Creative Consumer Motivation Model, Expectancy-Value Theory, Media Choice Theory, Media Richness Theory, Subjective Media Acceptance Theory, Rational Choice Model, Theory of Communicative Action, Rational Choice Theory, Social Role Theory, Trust Theory, Fisher Model, EKB Model, Social Inclusion Theory, Marketing Mix Model, Gap Model of Service Quality, Critical Mass Theory, Two-Step Flow of Communication Theory, Affect as Information Theory, Theory of Curiosity, Commitment Theory, Theory of Semiotics, TPE Framework, Theory of Performance, Communication Privacy Management Theory, Fairness in Exchange Theory, Multi-Agent Theory, Thompson’s Transaction Cost Theory, Critical Theory, Information System Continuance Theory, Communication Dynamics Theory, Lasswell’s Communication Theory, Self-presentation Theory, User Involvement Theory, Cognitive Dissonance Theory, Socio-Cognitive Theory, Mental Model Theory, behaviour Change Theory, Social Norms Theory, Direct Causation Theory, Affect Heuristic Theory, Skill Theory, Development of Cognition Theory, Theory of Consumer Preference Formation, Value-Belief-Norm Theory, Uncertainty Reduction Theory, Social Information Processing Theory, Theory of Homophily, Theory of Peer Pressure and Peer Communication, Theory of Network Externalities, Neural Network Model, Communicative Ecology Theory, Latent State-Trait Theory, Theory of Self-efficacy, Expectation Confirmation Theory, Communications Theory, Economic Theory, Opinion Leadership Theory, Theory of Psychological Ownership, PESTLE Framework, Disruptive Innovation Theory, Electronic Commerce Consumer Behaviour Model, Generic Purchasing Decision-Making Process, AIDA Model, Purchasing Decision Model, Construal Level Theory, Valence Theory, Two-Factor Theory, Resource Dependency Theory, Dual Coding Theory, Consumer Socialization Theory, Elaboration Likelihood Model, Socio-Technical Theory, Rational Choice Theory, Role Theory, Social Proof Theory, Motivational Models, Self-regulation Framework, Goal-Directed Behaviour Model, Social Resources Theory, Push-Pull-Mooring Framework, Consumer Value Theory, Web Usage Theory, Contingency Theory, Resource-Based View Theory. | 1     | 30.53   | Customer-Business-Transaction |

Note. TOE: Technology-organization-environment; EKB: Experiential Knowledge Base; EPE: Technological-personal-environmental framework; PESTLE: political, economic, socio-cultural, technological, legal, and environmental framework; AIDA: Attention or awareness, interest, desire, and Action.

### 3.12. Innovation Space

The innovation space was introduced by Badilescu in order to evaluate the distance between knowledge created by the introduction of innovation and to reduce and bridge the knowledge gap. This method includes informational, cognitive, and social spaces [22]. Ford considers cognitive space as a dark space [23]. In addition, cognitive space
is somehow related to the skills of the individuals. Considering the social space, the smallest social structure, which plays a dominant role in accepting innovation, is considered as a community of practice and is characterized by a close relationship between its members. Further, this community is of great importance for the first stage of the acceptance of the innovator regarding creating new methods of action. Furthermore, this social structure is critical for the diffusion of innovation since its members are the first to represent innovation application and discover how to overcome the initial problems. The members of this community are professionals who know each other and frequently meet face to face [24]. Information space like the social space uses practical and cognitive skills to acquire information. Additionally, queries, analyses, assessments of information needs, and the decisions are affected by the actual skills and information retrieved from both sources.

It is worth noting that some studies have addressed more than one area of innovation. In addition, the trend of using innovative spaces in the context of the acceptance of social commerce represents that primary studies have focused more on the cognitive space of innovation acceptance and sought to identify the individual characteristics, perceptions, and skills which led to the acceptance of social commerce. In the following section, the tendency toward information space is observed in the study (e.g., focusing on media types, their features, media attraction factors, and the like). Further, recent studies have highlighted the social dimensions of acceptance in social commerce, which are considered as the third wave of studies.

Attention to the considered factors in the studies is regarded as one of the applicable approaches for evaluating the innovation space in social entrepreneurship acceptance studies. Accordingly, the main influencing factors in all social commerce acceptance studies were identified and listed in terms of their application and area of influence. Each of these factors can represent a focus on an innovation space. Table 8 presents the concerned innovation space identified for each factor and the focus of each factor on each of the aspects of TOE theory.

**Table 8. Influencing factors in social commerce acceptance studies**

| Factor                       | Count | Percent | Area of Influence | Adoption Space | TOE Focus |
|------------------------------|-------|---------|-------------------|----------------|-----------|
| Trust                        | 69    | 6.51    | User behaviour    | Cognitive      | Environment|
| Perceived ease of use        | 37    | 3.49    | User perception   | Cognitive      | Environment|
| Perceived usefulness         | 48    | 4.53    | User perception   | Cognitive      | Environment|
| Emotional support            | 8     | 0.75    | User behaviour    | Cognitive      | Environment|
| Informational support        | 9     | 0.84    | User behaviour    | Informational  | Environment|
| Attitude                     | 31    | 2.93    | User perception   | Cognitive      | Environment|
| Subjective norms             | 7     | 0.66    | User perception   | Cognitive      | Environment|
| Perceived behavioural control| 7     | 0.66    | User perception   | Cognitive      | Environment|
| Beliefs                      | 3     | 0.28    | User perception   | Cognitive      | Environment|
| Expected performance         | 6     | 0.56    | User perception   | Cognitive      | Environment|
| Expected effort              | 6     | 0.56    | User perception   | Cognitive      | Environment|
| Social influence             | 17    | 1.60    | User behaviour    | Social         | Environment|
| Facilitating conditions      | 5     | 0.47    | Transaction status| Informational  | Technology |
| Network structure            | 6     | 0.56    | Transaction status| Social         | Technology |
| Position in the network      | 3     | 0.28    | User status       | Social         | Technology |
| Amount of centrality in the network | 4 | 0.38 | User status       | Social         | Technology |
| Control                      | 10    | 0.94    | User behaviour    | Cognitive      | Environment|
| Intention to socialize       | 10    | 0.94    | User behaviour    | Cognitive      | Environment|
| Mutual understanding         | 4     | 0.38    | User perception   | Social         | Environment|
| Visibility                   | 4     | 0.38    | Transaction status| Informational  | Technology |
| Customer engagement          | 7     | 0.66    | User behaviour    | Social         | Environment|
| Factor                                         | Count | Percent | Area of Influence | Adoption Space | TOE Focus  |
|-----------------------------------------------|-------|---------|-------------------|----------------|------------|
| Stimulus                                      | 4     | 0.38    | Transaction status| Cognitive      | Environment|
| Virtual communities                           | 4     | 0.38    | Transaction       | Social         | Environment|
| Shared hopes and aspirations                  | 4     | 0.38    | User perception   | Social         | Environment|
| Technology                                    | 10    | 0.94    | Transaction       | Informational  | Technology |
| Perceived benefits                            | 7     | 0.66    | User perception   | Cognitive      | Environment|
| Social structure                              | 3     | 0.28    | Transaction       | Social         | Environment|
| Compatibility                                 | 6     | 0.56    | Business behaviour| Cognitive      | Organization|
| Ability                                       | 4     | 0.38    | User behaviour    | Cognitive      | Environment|
| Organization and community                    | 22    | 2.07    | Business behaviour| Social         | Organization|
| Information                                   | 66    | 6.23    | Transaction       | Informational  | Technology |
| Tolerance of ambiguity and uncertainty        | 2     | 0.19    | User behaviour    | Informational  | Environment|
| Value of relationships                        | 43    | 4.06    | Transaction       | Social         | Environment|
| Field of activities                           | 3     | 0.28    | Transaction       | Cognitive      | Environment|
| Buyers power                                  | 16    | 1.51    | Business situation| Informational  | Organization|
| Value of pleasure                             | 4     | 0.38    | User perception   | Cognitive      | Environment|
| Number of sources of work applied             | 5     | 0.47    | Transaction       | Cognitive      | Environment|
| Motivation of pleasure                        | 6     | 0.56    | User perception   | Cognitive      | Environment|
| Habit                                         | 2     | 0.19    | User behaviour    | Cognitive      | Environment|
| Comparative advantage                         | 5     | 0.47    | Business behaviour| Cognitive      | Organization|
| Trialability                                  | 2     | 0.19    | Business behaviour| Cognitive      | Organization|
| Organization                                  | 9     | 0.85    | Business situation| Social         | Organization|
| Environment                                   | 5     | 0.47    | Business situation| Social         | Environment|
| Motivation                                    | 12    | 1.13    | User perception   | Cognitive      | Environment|
| Needs                                         | 9     | 0.85    | User perception   | Cognitive      | Environment|
| Gratifications                                | 30    | 2.83    | User perception   | Cognitive      | Environment|
| Expectations                                  | 18    | 1.70    | User perception   | Cognitive      | Environment|
| Information quality                           | 13    | 1.23    | Transaction       | Informational  | Technology |
| System quality                                | 4     | 0.38    | Transaction       | Informational  | Technology |
| Service quality                               | 10    | 0.94    | Transaction       | Informational  | Technology |
| Intrinsic interest                            | 7     | 0.66    | User perception   | Cognitive      | Environment|
| Group knowledge acquisition                   | 9     | 0.85    | Transaction       | Social         | Environment|
| Amount of network connections                 | 7     | 0.66    | Transaction       | Social         | Technology |
| Attention                                     | 4     | 0.38    | User behaviour    | Cognitive      | Environment|
| Group knowledge sharing                       | 9     | 0.85    | User behaviour    | Social         | Technology |
| Compatibility and adaptability                | 6     | 0.56    | Business behaviour| Cognitive      | Organization|
| Complexity                                    | 4     | 0.38    | Transaction       | Cognitive      | Organization|
| Structural bridging                           | 3     | 0.28    | User behaviour    | Social         | Environment|
| Organism                                      | 4     | 0.38    | Transaction       | Cognitive      | Environment|
| Forums                                        | 3     | 0.28    | Transaction       | Social         | Environment|
| Ratings                                       | 5     | 0.47    | User behaviour    | Informational  | Technology |
| Interaction                                   | 25    | 2.36    | User behaviour    | Social         | Environment|
| Social presence                               | 12    | 1.13    | User behaviour    | Social         | Environment|
| Recommendations                               | 6     | 0.56    | User behaviour    | Informational  | Technology |
| Identification                                | 13    | 1.28    | User perception   | Cognitive      | Environment|
| Peoples                                       | 7     | 0.66    | User status       | Social         | Environment|
| Position in the social network                | 2     | 0.19    | User status       | Social         | Technology |
| Collectivism                                  | 3     | 0.28    | User perception   | Cognitive      | Environment|
| Network relationships                         | 2     | 0.19    | Transaction       | Social         | Environment|
| Value of activities                           | 2     | 0.19    | Transaction       | Cognitive      | Environment|
| Power of suppliers                            | 4     | 0.38    | Business situation| Informational  | Organization|
| Functional value                              | 2     | 0.19    | User perception   | Cognitive      | Environment|
| Social value                                  | 4     | 0.38    | User perception   | Social         | Environment|
Table 8. Influencing factors in social commerce acceptance studies (Cont.)

| Factor                                | Count | Percent | Area of Influence          | Adoption Space | TOE Focus   |
|----------------------------------------|-------|---------|----------------------------|----------------|-------------|
| User satisfaction                      | 26    | 2.45    | User behaviour             | Cognitive      | Environment |
| Reciprocity                            | 3     | 0.28    | User behaviour             | Social         | Environment |
| Reputation and credibility             | 12    | 1.13    | User perception            | Cognitive      | Environment |
| Industry environment                   | 7     | 0.66    | Business situation         | Informational  | Environment |
| Environment-organization relationships | 1     | 0.09    | Business behaviour         | Informational  | Environment |
| Competitive value                      | 6     | 0.56    | Business situation         | Informational  | Environment |
| Power                                  | 10    | 0.94    | Business situation         | Cognitive      | Environment |
| Competitive market                     | 2     | 0.19    | Business situation         | Informational  | Organization |
| Normative expectations                 | 12    | 1.13    | Business behaviour         | Cognitive      | Environment |
| Opportunity                            | 3     | 0.28    | Transaction conditions     | Informational  | Environment |
| Imagine yourself                       | 2     | 0.19    | User perception            | Cognitive      | Environment |
| Self-esteem                            | 1     | 0.09    | User perception            | Cognitive      | Environment |
| Social identity                        | 8     | 0.75    | User perception            | Social         | Environment |
| Socialization skill                    | 42    | 3.96    | User behaviour             | Cognitive      | Environment |
| Socialization knowledge                | 35    | 3.30    | User behaviour             | Cognitive      | Environment |
| Internal determination against external reward | 3   | 0.28    | User perception            | Cognitive      | Environment |
| Curiosity                              | 3     | 0.28    | User behaviour             | Informational  | Environment |
| Common goals                           | 5     | 0.47    | User perception            | Social         | Environment |
| Social commerce platform               | 2     | 0.19    | Transaction infrastructure | Social         | Technology  |
| Opportunity to exchange ideas and benefits | 12   | 1.13    | Transaction conditions     | Informational  | Environment |
| Value co-creation                      | 9     | 0.85    | User behaviour             | Social         | Technology  |
| Response                               | 4     | 0.38    | User behaviour             | Informational  | Environment |
| Reviews                                | 10    | 0.94    | User behaviour             | Informational  | Technology  |
| Social ties                            | 19    | 1.79    | User behaviour             | Social         | Environment |
| Obligation                             | 10    | 0.94    | User behaviour             | Cognitive      | Environment |
| Social interaction                     | 6     | 0.56    | User behaviour             | Social         | Environment |
| Resource control                       | 4     | 0.38    | Business behaviour         | Informational  | Technology  |
| Internalization                        | 2     | 0.19    | User perception            | Cognitive      | Environment |
| Referrals                              | 4     | 0.38    | User behaviour             | Informational  | Technology  |
| Organizational resources                | 1     | 0.09    | Business situation         | Informational  | Organization |
| Individualism                          | 3     | 0.28    | User perception            | Cognitive      | Environment |
| Network activities                     | 3     | 0.28    | Transaction conditions     | Social         | Technology  |
| Field of relations                     | 5     | 0.47    | Transaction conditions     | Social         | Environment |
| Threats of alternative goods or services| 3     | 0.28    | Business situation         | Informational  | Organization |
| Source power of the work               | 4     | 0.38    | Business situation         | Informational  | Organization |
| Monetary and financial value           | 5     | 0.47    | User perception            | Cognitive      | Environment |

Note. TOE: Technology-organization-environment.

3.13. The Types of Research Methods Used in Studies
Based on the classification charts shown in Figure 18, the studies are divided into experimental and non-experimental categories, each of which has some sub-categories. Based on these categories, the type of applied research method in the study of social commerce was evaluated and classified into three levels by considering the number of studies.
Figure 12. Research method classification for evaluating social commerce adoption studies

Figures 13 and 14 display the first level results with a high percentage of non-experiment methods, as well as the higher contribution of descriptive research on the second level, respectively. As shown in Figure 15, the survey is the most used method in the third level.

Figure 13. The analysis of studies based on the first level research method classification

To review the applied methods accurately, Figure 16 depicts the extent of the use of applied methods based on time and method distribution.

Figure 14. The analysis of studies based on the second level research method classification
3.14. Research References

Various sources have published social commerce adoption studies. Some of these resources were discussed in the present study. In this regard, journal paper, conference paper, academic thesis, and book chapters were evaluated based on the strategies followed in the present study regarding selecting research resources. Figure 17 illustrates the temporal distribution of the results of different references.
Figure 17. Temporal distribution of studies based on resource types

The focus of various journals regarding the publication of studies related to the acceptance of social commerce is shown in Figure 18 and Table 9.
Table 9. The rate of study publication on social commerce acceptance in different journals

| Journal                                                                 | Count of Use | Journal                                                                 | Count of Use |
|------------------------------------------------------------------------|--------------|------------------------------------------------------------------------|--------------|
| Electronic Commerce Research and Applications                          | 11           | Electronic Commerce in Organizations                                    | 1            |
| Information and Management                                            | 8            | Internet and e-Business Studies                                         | 1            |
| Information Management                                                 | 7            | Communications of the Association for Information Systems              | 1            |
| Organizational Computing and Electronic Commerce                       | 5            | Human Resource Management Research                                      | 1            |
| Electronic Commerce                                                    | 4            | Information Technology                                                | 1            |
| Electronic Commerce Research                                          | 4            | Management Science                                                    | 1            |
| Computers in Human Behaviour                                           | 4            | DeReMa Journal Management                                             | 1            |
| Technological Forecasting and Social Change                            | 4            | Telematics and Informatics                                             | 1            |
| Interactive Marketing                                                 | 3            | U and e-Service, along with Science and Technology                    | 1            |
| Information Technology and People                                      | 3            | Indian Culture and Business Management                                 | 1            |
| International Marketing                                               | 3            | Information Development                                               | 1            |
| Management Information Systems                                         | 3            | Industrial and Business Management                                     | 1            |
| Internet Research                                                      | 3            | Transactions on Internet and Information Systems                       | 1            |
| Commerce and Social Sciences                                           | 2            | Management Research                                                   | 1            |
| Electron Markets                                                       | 2            | Hospitality and Tourism Research                                       | 1            |
| Information Sciences                                                   | 2            | Services Marketing                                                    | 1            |
| Market Research                                                        | 2            | Electronic Business                                                   | 1            |
| Decision Support Systems                                               | 2            | Internet Commerce                                                     | 1            |
| Business Research                                                      | 2            | Business Perspectives and Research                                     | 1            |
| Electronic Management Customer Relationship Management                 | 1            | Global Economics                                                      | 1            |
| Computer Science                                                       | 1            | Advanced Science Letters                                              | 1            |
| Cyber psychology, Behaviour, and Social Networking                    | 1            | Digital Convergence                                                   | 1            |
| Intercultural Communication Studies                                   | 1            | Enterprise Information Systems                                         | 1            |
| Information and Software Technology                                   | 1            | Data Analysis and Information Processing                               | 1            |
| Customer Behaviour                                                     | 1            | Modern Applied Science                                                | 1            |
| Asia-Pacific Business                                                  | 1            | Science and Technology                                                | 1            |
| Kybernetes                                                             | 1            | Marketing Theory and Practice                                         | 1            |
| Internet Marketing and Advertising                                     | 1            | Entrepreneurship in Emerging Economies                                 | 1            |
| MIS Quarterly                                                          | 1            | Human-Computer Interaction                                            | 1            |
| Communication Networks and Distributed Systems                         | 1            | Information Management and Computer Security                          | 1            |
| Retailing and Consumer Services                                        | 1            | Development Studies                                                   | 1            |
| Journal Title                                                      | Quantity |
|------------------------------------------------------------------|----------|
| U and e-Service, Science and Technology                         | 1        |
| Transactions on Internet and Information Systems                 | 1        |
| Telematics and Informatics                                       | 1        |
| Technological Forecasting & Social Change                        | 1        |
| Services Marketing                                               | 1        |
| Science and Technology                                           | 1        |
| Retailing and Consumer Services                                  | 1        |
| Organizational Computing and Electronic Commerce                 | 1        |
| Modern Applied Science                                           | 1        |
| MIS Quarterly                                                    | 1        |
| Marketing Theory and Practice                                    | 1        |
| Market Research                                                   | 2        |
| Management Science                                               | 1        |
| Management Research                                              | 1        |
| Management Information Systems                                   | 3        |
| Kybernetes                                                       | 1        |
| Internet Research                                                | 3        |
| Internet Marketing and Advertising                               | 1        |
| Internet Commerce                                               | 1        |
| Internet and e-Business Studies                                  | 1        |
| International Marketing                                          | 3        |
| Intercultural Communication Studies                              | 1        |
| Interactive Marketing                                            | 3        |
| Information Technology & People                                  | 3        |
| Information Technology                                          | 1        |
| Information Sciences                                             | 2        |
| Information Management                                          | 1        |
| Information Management & Computer Security                       | 7        |
| Information Development                                          | 1        |
| Information and Software Technology                              | 1        |
| Information and Software Technology                              | 1        |
| Information Management                                          | 1        |
| Indian and Business Management                                   | 1        |
| Industrial and Business Management                               | 1        |
| Indian Culture and Business Management                           | 1        |
| Human-Computer Interaction                                       | 1        |
| Human Resource Management Research                               | 1        |
| Hospitality & Tourism Research                                   | 1        |
| Global Economics                                                 | 1        |
| Entrepreneurship in Emerging Economies                           | 1        |
| Enterprise Information Systems                                   | 1        |
| Electronic Customer Relationship Management                      | 1        |
| Electronic Commerce                                             | 1        |
| Electronic Commerce in Organizations                            | 1        |
| Electronic Commerce Research and Applications                    | 4        |
| Electronic Commerce                                             | 1        |
| Electronic Business                                             | 1        |
| Electron Markets                                                 | 2        |
| Digital Convergence                                              | 1        |
| Development Studies                                              | 1        |
| DoReMa Jurnal Managemen                                          | 1        |
| Decision Support Systems                                         | 2        |
| Data Analysis and Information Processing                         | 1        |
| Cyber psychology, Behavior, and Social Networking                | 1        |
| Customer Behavior                                                | 1        |
| Computers in Human Behavior                                     | 1        |
| Computer Science                                                 | 1        |
| Communications of the Association for...                         | 1        |
| Communication Networks and Distributed Systems                   | 1        |
| Commerce and Social Sciences                                    | 2        |
| Business Research                                                | 2        |
| Business Perspectives and Research                               | 1        |
| Asia-Pacific Business                                           | 1        |
| Advanced Science Letters                                         | 1        |

**Note.** MIS: Management Information Systems.

**Figure 18.** Comparing the publication of social commerce adoption studies in various journals.
3.15. Research Output
The research outputs were reviewed to identify the types of research results. Figure 19 displays the research output mind map.

![Research Output Mind Map](image)

**Figure 19. Mind Map of Research Output**

4. CONCLUSIONS
Social commerce as a new paradigm in the field of commerce has experienced various trends from different perspectives over the short period of its life. More precisely, over the past decade, three evolutionary periods have been highlighted in social commerce acceptance studies. The first generation was related to studies in which the applied platform was considered as the social media that hosted business processes and relied on social media. A prime example is the Facebook social network which has the most studies, followed by the Twitter microblog. This generation of short-lived studies focused on business-to-customer transactions, especially the cognitive environment of innovation acceptance. Furthermore, these studies addressed user behaviour and the pre-acceptance stages of social commerce since they sought to find users who were attracted to social commerce. Value mechanisms relied solely on communication between the users and business activities were nearly exclusively marketed in this space. In the customer engagement cycle, their focus was on connecting the customer to the social space of the business and most studies were conducted using the surveys. The output of studies in this generation typically focused on identifying factors influencing customers’ willingness to embrace social commerce, especially those business activities which sought to sell the product. The basic applied theories in the studies of...
this generation were mainly theories of technology adoption such as the technology acceptance model, the theory of planned behaviour, and the theory of rational action. Additionally, factors used as the determinants of social commerce acceptance were individual factors which focused on the social commerce customer.

In addition, a new approach to social commerce was gradually considered in the second generation of social commerce acceptance studies, with businesses moving to an e-commerce platform toward using social structures in business. Companies such as Amazon, Groupon, Coupang, Wal-Mart, and eBay were included in these studies. Such companies used a second approach to e-commerce, in which business processes were considered as the core infrastructure and social structures were added to the infrastructure as well. In this generation, more diverse business transactions were considered, including business-to-customer and customer-to-customer transactions, as well as business-to-customer transactions which were significant in all three generations. Further, innovation acceptance studies that have now passed the pre-acceptance phase have focused on the innovation acceptance stage. At this stage, the acceptance of social commerce by businesses was considered in addition to paying attention to the customers, as well as the outputs of studies and the customer behaviour on business behaviour with components such as marketing, branding, teamwork, customer engagement, customer relationship management, and the like. This generation of studies addressed the delivery of services over social commerce and in some areas of services such as entertainment, education, and tourism. Furthermore, these studies focused on the information space of innovation in the field of social commerce in addition to the cognitive space and considered information enrichment, along with easy and inexpensive access to information on social media as one of the key components of acceptance. Additionally, studies were used in this generation of experimental, conceptual, and contextual studies and case studies in addition to surveying methods. Further, mathematical theories such as graph, network, and game theories were increasingly used in studies and particular attention was paid to social theories, especially social support and social influence theories. Furthermore, such studies typically provided the models of acceptance by customers and businesses and some studies sought to present policies, challenges, threats, and opportunities as well. Unlike the previous generation of studies which focused on individual factors such as perceived ease of use, perceived usefulness, attitude, this generation of studies emphasized interpersonal factors and relationships such as perceived trust, satisfaction, perceived privacy, experience, reputation, perceived value, and the like. Geographic focus unlike the first generation of studies focusing on countries such as China, the United Kingdom, and the United States, geographic diversity of studies has developed and different countries such as Germany, Australia, South Korea, Malaysia, Canada, Sweden, and Spain was added to the field of active countries in the social commerce development and studies.

Additionally, the third generation of social commerce studies, as a mature generation, focused on the stages of acceptance and after acceptance of social commerce by customers and businesses. This generation even pushed businesses which had a strong focus on the business process to social commerce. Studies of companies such as Fashion Bag, Yelp, Best Bay, House of Fashion, Hellodc, Meilishuo, and the like demonstrate a second approach to social commerce for businesses that have attempted to add social media instruments to their business processes. In this generation, a variety of business transactions were studied in the context of social commerce such as business transactions with employees and even with the government. It should be noted that
some state-owned businesses are joining the process and some third-generation studies focus on government transactions with customers, employees, and businesses in the context of social commerce platforms. In addition, government transactions are observed in the third generation, reflecting the analysis and risk-taking of state-owned companies in joining new trends in technology. In this generation, social media services such as product sales have received special attention. The focus on businesses and the adoption of social commerce are becoming more pronounced and even more attention is given to business models, service delivery, entrepreneurship, crowdsourcing, and crowdfunding although in limited studies. Further, customers are still the focus in this generation of studies and this time special attention is paid to social factors such as social presence, social capital, and social loafing although studies in this field are extremely rare. The two new added areas to the focus of studies are the focus of system studies and media studies. Factors such as system, platform, content, and service quality are evaluated in this area. The variety of theories used as the basic theories in this generation increases since theories such as attribution theory, information system success model, stimulus, organism, response model, institutional theory, Porter competitive forces model, Hofstede cultural model, social learning theory, expectation theory, customer value theory, and the like are concerned with different areas such as psychology, social psychology, information systems, organizational behaviour, and the like. Unlike the previous two generations, which emphasized the two stages of connectivity and interaction in the customer engagement cycle, studies of this generation focused on the stages of satisfaction, durability, commitment, support, and engagement. Furthermore, third-generation studies are looking at the value creation of networking, complementing, and combining methods which are considered as the main potentials of social media. The variety of studied media in this generation is enormous. Unlike the other two generations, with a major focus on social networks and microblogs, this generation addressed a variety of media including video sharing, image sharing, social messenger, group shopping sites, blogs, and social games, online communities, social services sites, and social shopping sites in addition to social networks and microblogs. Interesting transactions in the cognitive space of innovation from interpersonal transactions in the second generation became social transactions extensively based on the social space of innovation. The use of social factors in studies indicates this issue. Eventually, the methods of field studies and reviews are significant in this generation, as well as the method of surveying which has a special place in the studies of all three generations.

5. IMPLICATIONS

Several trends are evident in the studies concerning the business audience approach. Previous studies further addressed the first social commerce approach focusing on social media platforms (e.g., Facebook, LinkedIn, and Twitter) instead of the business processes platform-based approach with social constructs. In terms of the applied social media in studies, social networks and microblogs ranked the highest. Considering the three distinct areas of user or customer, business, and transaction as the three entities of social commerce, most studies focus on the user or customer and fall into the next category of transaction and business role issues have the least amount of studies. Additionally, the mechanisms of value creation through social commerce focus on the stages of collaboration and communication. In the customer engagement cycle, two stages of interaction and connectivity have the greatest potential for engagement in social commerce. In addition, most studies on the acceptance of social commerce
focused on the provision of goods. Among the business transactions, the business transaction with the customer (B2C) received the most attention. Geographically, continental, Asian, and country-by-country, the United States has the largest number of studies on social commerce acceptance. Concerning the researcher’s audience approach, several noteworthy trends emerged from the reviews. Most outputs of acceptance studies emphasized presenting an acceptance model which focuses on the role of the customer and the user. Journal articles addressed social commerce acceptance more than any other source. Further, trust was considered as one of the most important components which was used as an influencing variable on social commerce acceptance. Regarding research methods, surveying was one of the most widely used methods in all the studied years. Among the basic theories, the technology acceptance model, social support theory, reasoned action theory, and planned behaviour theory were the most widely applied theories. Among the acceptance stages, most studies, especially in recent years, have addressed the adoption stage. Finally, the cognitive space was considered as the innovation space in most studies.

6. FUTURE STUDIES

Based on observable trends in the resource review of business-oriented and research-based approaches, the following recommendations were provided based on the existing research gaps.

1. Focusing on the second approach of social commerce based on the business process platform with social structures;
2. Addressing service delivery in social commerce acceptance studies;
3. Highlighting different types of social media, a wide variety of which were studied in small quantities;
4. Emphasizing the use of empirical methods in studies;
5. Concentrating on content analysis, historical, and comparative methods for the analysis;
6. Focusing on various business-like transactions;
7. Using cross-cultural study methods for higher coverage and generalizability;
8. Addressing the organizational domain in studies on the acceptance of social commerce as an innovation;
9. Applying social variables as independent variables in presenting social commerce acceptance models;
10. Conducting a thematic and content review of the basic theories used in the studies.

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